



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)

2 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)



July 11, 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 – 2nd 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

Lindsay Rathnow
Geologist

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
Shannon Haney, Greensfelder, Hemker & Gale P.C.
Repositories – Roxana Public Works, Roxana Public Library, website
Project File

1001 Highland Plaza Drive West, Suite 300
St. Louis, MO 63110
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R E P O R T

INTERIM GROUNDWATER MONITORING PROGRAM – 2ND QUARTER 2014

Roxana, Illinois

Prepared for:

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

July 2014



URS Corporation
1001 Highlands Plaza Drive West, Suite 300
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Project 21562973.03002

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URS Corporation (URS) is submitting this report on behalf of Shell Oil Products US (SOPUS) for the 2nd Quarter 2014 (2Q14) 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 change in gauging frequencies for wells in the Interim Groundwater Monitoring Program. The list of wells to be gauged on a weekly basis was reduced, 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 3rd Quarter 2013 (3Q13) report.

Groundwater samples were collected and analyzed during 2Q14 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 2Q14 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 2Q14 sampling event:

- Monitoring well inspections were performed with repairs to well pads planned to be completed during 3rd Quarter 2014 (3Q14).

2.2 GROUNDWATER MONITORING WELL GAUGING AND SAMPLING

Groundwater Monitoring Well Gauging

The comprehensive quarterly groundwater monitoring well gauging event was conducted between April 1 and 7, 2014. The 2Q14 gauging activities were conducted in conjunction with the 2Q14 gauging event for the WRR to evaluate groundwater flow direction and identify possible separate phase LNAPL in the Investigation Area. Depth to LNAPL (if present) and depth to water were noted in electronic format using Panasonic Toughbook® technology (Toughbook®) and on groundwater field gauging sheets. The cumulative quarterly groundwater monitoring well gauging data can be found in **Table 1a**. Weekly and monthly gauging data is collected to assess the absence or presence of LNAPL. This gauging data for 2Q14 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 April 7 through April 21, 2014. Analytical 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 tubing³. 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 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**.

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

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 2Q14 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 followed by a distilled water rinse. Personnel and small equipment decontamination were performed at the sample locations.

Investigation Derived Waste

Investigative derived waste (IDW), such as purge water and decontamination water generated during groundwater sampling activities, was collected, stored, and disposed in accordance with

the Resource Conservation and Recovery Act (RCRA) and United States Department of Transportation (DOT) regulations. Expendable materials (e.g., disposable sampling equipment such as gloves and tubing) were decontaminated if necessary, collected in trash bags and disposed as municipal waste.

Decontamination fluids and purge water from groundwater monitoring wells MW-4, MW-7, 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 and 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 2Q14 groundwater gauging and sampling event.

3.1 GROUNDWATER MONITORING WELL GAUGING RESULTS

Comprehensive quarterly groundwater monitoring well gauging for the 2Q14 event was conducted between April 1 and 7, 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 0.5 feet since 1st Quarter 2014 (1Q14). Groundwater levels in most wells in the WRR have dropped approximately 1 to 3 feet since 1Q14. Water levels, however, continue to be above the top of the screens in many of the wells gauged during the 2Q14 event. The potentiometric surface observed during the 2Q14 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 2Q14. During the 2Q14 event, groundwater was encountered in P-60-12S, P-60-13S, and ROST-7-PZ; and groundwater was not encountered in ROST-5-PZ, ROST-10-PZ, or ROST-21-PZ. The 2Q14 gauging results for perched groundwater monitoring wells and piezometers can be found in **Table 1a**.

During the 2Q14 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 0.03 to 0.34 feet. LNAPL was observed within the screened intervals of P-55, P-60, P-60-S, and P-68. During the weekly and monthly gauging events throughout the 2Q14, LNAPL was detected in four groundwater monitoring wells located in the WRR (P-55, P-60, P-60-S, and P-68) and two groundwater monitoring wells located in the Village of Roxana (ROST-4-PZ and ROST-4-PZ(D)). This routine gauging data can be found in **Table 1b** and is summarized below.

Monitoring Well	Range in LNAPL Thickness (feet)	Comments
P-55	0.05-0.19	Observed each week
P-60	0.01-0.14	Observed each week
P-60-S	0.03-0.24	Observed in 11 of 12 weeks
P-68	0.06-0.34	Observed each week
ROST-4-PZ	0.02-0.11	Observed in 4 of 12 weeks
ROST-4-PZ(D)	0.01-0.16	Observed in 10 of 12 weeks

LNAPL observed in groundwater monitoring wells located on the WRR property was removed for on-site reprocessing by P66. Removal of LNAPL, if observed, 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 2Q14 gauging event.

3.2 DATA QUALITY REVIEW RESULTS

A total of ten sample delivery groups (SDGs) were prepared and sent to Accutest Laboratories in Marlborough, MA for the 2Q14 event. Forty different groundwater sample sets were prepared and analyzed for VOCs and SVOCs (including PAHs). This included 36 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 ten 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**. 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 2Q14 sampling event.

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

SVOCs	
Acenaphthene	Dibenzofuran
Acenaphthylene	Indeno(1,2,3-cd)pyrene
Anthracene	Fluoranthene
Benzo(a)anthracene	Fluorene
Benzo(a)pyrene	1-Methylnaphthalene
Benzo(b)fluoranthene	2-Methylnaphthalene
Benzo(g,h,i)perylene	3&4-Methylphenol (m&p-Cresol)
Benzo(k)fluoranthene	Phenanthrene
Chrysene (1,2-Benzphenanthracene)	Phenol
Dibenzo(a,h)anthracene	Pyrene

Constituents (VOC and SVOC) that were detected during 2Q14 have previously been detected. Analytical detections were compared to the concentration limits as provided in Condition IV(E) of the Permit for the WRB Refining LP Wood River Refinery⁵. These concentration limits include the Groundwater Quality Standards for Class I: Potable Resource Groundwater (35 IAC 620, Subpart D), the IEPA Tiered Approach to Corrective Action Objectives (TACO) Tier 1 Groundwater Remediation Objectives for the Groundwater Component of the Groundwater

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

⁵ IEPA requested that the Interim Groundwater Program be consistent with the RCRA Part B Permit.

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: sec-butylbenzene, tert-butylbenzene, chloromethane, 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, 1,2-dichloropropane, ethylbenzene, 2-hexanone (methyl n-butyl ketone), naphthalene, toluene, 1,3,5-trimethylbenzene, and xylenes (total). The laboratory analytical results for the following SVOCs exceeded their respective groundwater screening criteria in one or more samples this event: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, hexachlorobenzene, indeno(1,2,3-cd)pyrene, 2-methylnaphthalene, n-nitrosodimethylamine, 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 2Q14.

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 2Q14 Roxana Interim Groundwater Monitoring Program, and the following conclusions are based on the data and information collected as part of this program.

- During 2Q14, 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 0.5 feet lower than in the previous quarter. Groundwater levels observed in the WRR were 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, 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 2Q14 are generally similar to those from the previous quarter.

- 35 Illinois Administrative Code 620, Groundwater Quality. Subpart D. *Groundwater Quality Standards*.
- 35 Illinois Administrative Code 742, Tiered Approach to Corrective Action Objectives. Appendix B. *Table E – Tier 1 Groundwater Remediation Objectives for the Groundwater Component of the Groundwater Ingestion Route*.
- Illinois Environmental Protection Agency (IEPA) Toxicity Assessment Unit. *Chemicals Not in TACO, Tier 1 Tables*. <http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html>.
- Illinois Environmental Protection Agency (IEPA), 2010 (IEPA, 2010); *Letter providing approval with comments the SOPUS 2010 Delineation Report*. Issued to Shell Oil Products US (SOPUS), dated August 5, 2010.
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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS
MW-01											
3Q11	442.86	7/5/2011	NE	35.77	NA	NA	NA	407.09	399.45 - 384.45	NA	*
4Q11		10/5/2011	NE	35.48	NA	NA	NA	407.38	(43.41 - 58.41)	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	*
2Q14		4/1/2014	NE	43.17	NA	NA	NA	399.48		18.9	*
MW-02											
3Q11	443.93	7/5/2011	NE	37.04	NA	NA	NA	406.89	396.74 - 381.74	NA	*
4Q11		10/5/2011	NE	36.65	NA	NA	NA	407.28	(47.19 - 62.19)	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	*
2Q14		4/1/2014	NE	44.45	NA	NA	NA	399.32		50.0	*
MW-03											
3Q11	430.36	7/5/2011	NE	22.72	NA	NA	NA	407.64	399.38 - 384.38	NA	*
4Q11		10/5/2011	NE	22.76	NA	NA	NA	407.60	(30.98 - 45.98)	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	*
2Q14		4/1/2014	NE	30.30	NA	NA	NA	399.78		0.3	*
MW-04											
3Q11	441.58	7/5/2011	NE	34.15	NA	NA	NA	407.43	398.95 - 383.95	NA	*
4Q11		10/5/2011	NE	33.99	NA	NA	NA	407.59	(42.63 - 57.63)	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	*
2Q14		4/1/2014	NE	41.52	NA	NA	NA	399.62		75.0	*
MW-05											
3Q11	429.73	7/5/2011	NE	22.00	NA	NA	NA	407.73	398.60 - 383.60	NA	*
4Q11		10/5/2011	NE	22.06	NA	NA	NA	407.67	(31.13 - 46.13)	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	*
2Q14		4/1/2014	NE	29.96	NA	NA	NA	399.84		0.0	*

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
MW-06A													
3Q11	432.42	7/5/2011	NE	24.21	NA	NA	NA	408.21	400.44 - 385.44 (31.98 - 46.98)	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	*		
2Q14		4/1/2014	NE	32.03	NA	NA	NA	400.11		10.4	*		
MW-06B													
3Q11	432.29	7/5/2011	NE	24.08	NA	NA	NA	408.21	368.24 - 363.24 (64.05 - 69.05)	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	*		
2Q14		4/1/2014	NE	32.10	NA	NA	NA	400.19		4.8	*		
MW-06C													
3Q11		432.11	7/5/2011	NE	23.80	NA	NA	NA		408.31	347.16 - 342.16 (84.95 - 89.95)	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	*			
2Q14	4/1/2014		NE	31.89	NA	NA	NA	400.22	2.5	*			
MW-06D													
3Q11	431.99		7/5/2011	NE	23.67	NA	NA	NA	408.32	327.27 - 322.27 (104.72 - 109.72)		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		*		
2Q14		4/1/2014	NE	31.73	NA	NA	NA	400.26	1.6		*		
MW-07													
3Q11		443.10	7/5/2011	NE	35.65	NA	NA	NA	407.45		400.18 - 390.18 (42.92 - 52.92)	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	*			
2Q14	4/3/2014		NE	43.41	NA	NA	NA	399.69	6.2	*			

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		
MW-08													
3Q11	434.11	7/5/2011	NE	26.55	NA	NA	NA	407.56	400.51 - 390.51 (33.60 - 43.60)	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	*		
2Q14		4/3/2014	NE	34.36	NA	NA	NA	399.75		2.8	*		
MW-09													
3Q11		445.20	7/5/2011	NE	38.06	NA	NA	NA		407.14	398.75 - 388.75 (46.45 - 56.45)	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	*			
2Q14	4/1/2014		NE	44.95	NA	NA	NA	400.25	1.7	*			
MW-10													
3Q11	445.03		7/5/2011	NE	38.01	NA	NA	NA	407.02	400.60 - 390.60 (44.43 - 54.43)		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		*		
2Q14		4/1/2014	NE	44.99	NA	NA	NA	400.04	177.6		*		
MW-11													
3Q11		442.33	7/5/2011	NE	35.46	NA	NA	NA	406.87		400.67 - 390.67 (41.66 - 51.66)	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	*			
2Q14	4/1/2014		NE	42.55	NA	NA	NA	399.78	0.0	*			
MW-12													
3Q11	442.60		7/5/2011	NE	35.55	NA	NA	NA	407.05	400.68 - 390.68 (41.92 - 51.92)		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		*		
2Q14		4/2/2014	NE	42.97	NA	NA	NA	399.63	0.7		*		

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
MW-13													
3Q11	430.27	7/5/2011	NE	21.67	NA	NA	NA	408.60	404.70 - 394.70 (25.57 - 35.57)	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			
2Q14		4/4/2014	NE	30.11	NA	NA	NA	400.16		0.2			
MW-14													
1Q12		434.44	1/1/2012	NM	NM	NA	NA	NA		NA	401.02 - 391.02 (33.42 - 43.42)	NM	
2Q12	5/10/2012		NM	NM	NA	NA	NA	NA	NM				
3Q12	7/5/2012		NE	29.87	NA	NA	NA	404.57	0.0	*			
4Q12	10/2/2012		NE	31.86	NA	NA	NA	402.58	17.8	*			
1Q13	1/7/2013		NE	32.71	NA	NA	NA	401.73	26.0	*			
2Q13	4/2/2013		NE	33.68	NA	NA	NA	400.76	44.3				
3Q13	7/2/2013		NE	30.69	NA	NA	NA	403.75	7.4	*			
4Q13	10/2/2013		NE	30.58	NA	NA	NA	403.86	20.5	*			
1Q14	2/11/2014		NE	33.67	NA	NA	NA	400.77	45.1				
2Q14	4/4/2014		NE	34.21	NA	NA	NA	400.23	50.2				
MW-16													
1Q13	443.39	1/23/2013	NE	43.05	NA	NA	NA	400.34	406.33 - 396.33 (37.06 - 47.06)	0.0	Installed during 4Q12		
2Q13		4/1/2013	NE	43.55	NA	NA	NA	399.84		0.0			
3Q13		7/1/2013	NE	40.86	NA	NA	NA	402.53		0.0			
4Q13		10/1/2013	NE	41.43	NA	NA	NA	401.96		0.0			
1Q14		2/10/2014	NE	43.76	NA	NA	NA	399.63		0.5			
2Q14		4/1/2014	NE	44.19	NA	NA	NA	399.20		0.6			
MW-17													
1Q13	441.57	2/11/2013	NE	41.75	NA	NA	NA	399.82	407.28 - 392.28 (34.29 - 49.29)	0.2	Installed during 4Q12		
2Q13		4/1/2013	NE	41.85	NA	NA	NA	399.72		0.5			
3Q13		7/1/2013	NE	39.42	NA	NA	NA	402.15		0.0			
4Q13		10/1/2013	NE	40.18	NA	NA	NA	401.39		0.0			
1Q14		2/10/2014	NE	42.25	NA	NA	NA	399.32		0.0			
2Q14		4/3/2014	NE	42.76	NA	NA	NA	398.81		2.1			
MW-18													
1Q13	442.04	2/11/2013	NE	42.25	NA	NA	NA	399.79	407.12 - 392.12 (34.92 - 49.92)	0.0	Installed during 4Q12		
2Q13		4/1/2013	NE	42.38	NA	NA	NA	399.66		0.0			
3Q13		7/1/2013	NE	39.89	NA	NA	NA	402.15		0.0			
4Q13		10/1/2013	NE	40.85	NA	NA	NA	401.19		0.0			
1Q14		2/11/2014	NE	42.85	NA	NA	NA	399.19		0.0			
2Q14		4/1/2014	NE	43.41	NA	NA	NA	398.63		0.0			
MW-19													
1Q13	442.77	2/11/2013	NE	42.88	NA	NA	NA	399.89	406.43 - 391.43 (36.34 - 51.34)	0.9	Installed during 4Q12		
2Q13		4/1/2013	NE	43.04	NA	NA	NA	399.73		10.3			
3Q13		7/1/2013	NE	40.50	NA	NA	NA	402.27		0.0			
4Q13		10/2/2013	NE	41.24	NA	NA	NA	401.53		0.0			
1Q14		2/10/2014	NE	43.41	NA	NA	NA	399.36		0.9			
2Q14		4/1/2014	NE	43.92	NA	NA	NA	398.85		0.0			
MW-20													
1Q13	443.67	2/11/2013	NE	43.66	NA	NA	NA	400.01	407.79 - 392.79 (35.88 - 50.88)	0.0	Installed during 4Q12		
2Q13		4/1/2013	NE	43.89	NA	NA	NA	399.78		0.1			
3Q13		7/1/2013	NE	41.23	NA	NA	NA	402.44		0.0			
4Q13		10/1/2013	NE	41.77	NA	NA	NA	401.90		0.0			
1Q14		2/10/2014	NE	44.09	NA	NA	NA	399.58		1.4			
2Q14		4/2/2014	NE	44.65	NA	NA	NA	399.02		0.0			
MW-21													
1Q13	443.81	2/11/2013	NE	43.53	NA	NA	NA	400.28	408.80 - 393.80 (35.01 - 50.01)	0.1	Installed during 4Q12		
2Q13		4/1/2013	NE	43.79	NA	NA	NA	400.02		0.3			
3Q13		7/1/2013	NE	41.05	NA	NA	NA	402.76		0.0			
4Q13		10/2/2013	NE	41.40	NA	NA	NA	402.41		0.0			
1Q14		2/10/2014	NE	43.91	NA	NA	NA	399.90		32.5			
2Q14		4/3/2014	NE	44.38	NA	NA	NA	399.43		1.8			
MW-22													
1Q13	442.16	1/23/2013	NE	41.80	NA	NA	NA	400.36	404.28 - 394.28 (37.88 - 47.88)	2.0	Installed during 4Q12		
2Q13		4/1/2013	NE	42.31	NA	NA	NA	399.85		2.8			
3Q13		7/5/2013	NE	39.60	NA	NA	NA	402.56		0.6			
4Q13		10/1/2013	NE	40.23	NA	NA	NA	401.93		0.0			
1Q14		2/10/2014	NE	42.49	NA	NA	NA	399.67		0.3			
2Q14		4/3/2014	NE	42.90	NA	NA	NA	399.26		0.2			

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS
MW-24											
2Q13	443.42	4/1/2013	NE	43.44	NA	NA	NA	399.98	404.53 - 394.53 (38.89 - 48.89)	0.5	Installed during 1Q13
3Q13		7/3/2013	NE	40.59	NA	NA	NA	402.83		0.0	
4Q13		10/1/2013	NE	41.08	NA	NA	NA	402.34		134.4	
1Q14		2/10/2014	NE	43.47	NA	NA	NA	399.95		14.2	
2Q14		4/1/2014	NE	43.86	NA	NA	NA	399.56		4.9	
P-01											
3Q11	442.56	7/5/2011	NE	25.51	NA	NA	NA	417.05	380.61 - 375.61 (61.95 - 66.95)	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		2/10/2013	NE	33.96	NA	NA	NA	408.60		0.0	*
2Q13		4/1/2013	NE	33.68	NA	NA	NA	408.88		0.4	*
3Q13		7/3/2013	NE	30.60	NA	NA	NA	411.96		0.0	*
4Q13		10/1/2013	NE	33.13	NA	NA	NA	409.43		0.6	*
1Q14		2/12/2014	NE	35.21	NA	NA	NA	407.35		0.1	*
2Q14		4/2/2014	NE	35.61	NA	NA	NA	406.95		0.0	*
P-4U											
3Q11	442.50	7/5/2011	NE	27.02	NA	NA	NA	415.48	361.35 - 359.35 (81.15 - 83.15)	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		2/10/2013	NE	35.10	NA	NA	NA	407.40		0.0	*
2Q13		4/1/2013	NE	35.95	NA	NA	NA	406.55		0.5	*
3Q13		7/3/2013	NE	32.80	NA	NA	NA	409.70		0.0	*
4Q13		10/1/2013	NE	34.72	NA	NA	NA	407.78		0.2	*
1Q14		2/12/2014	NE	36.76	NA	NA	NA	405.74		51.0	*
2Q14		4/4/2014	NE	39.91	NA	NA	NA	402.59		0.2	*
P-5L											
3Q11	443.79	7/5/2011	NE	25.87	NA	NA	NA	417.92	303.39 - 301.39 (140.40 - 142.40)	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		2/10/2013	NE	35.17	NA	NA	NA	408.62		0.0	*
2Q13		4/1/2013	NE	35.84	NA	NA	NA	407.95		0.0	*
3Q13		7/3/2013	NE	31.51	NA	NA	NA	412.28		0.0	*
4Q13		10/1/2013	NE	34.35	NA	NA	NA	409.44		0.4	*
1Q14		2/12/2014	NE	36.88	NA	NA	NA	406.91		0.2	*
2Q14		4/4/2014	NE	41.40	NA	NA	NA	402.39		2.0	*
P-5U											
3Q11	444.15	7/5/2011	NE	27.80	NA	NA	NA	416.35	313.52 - 311.52 (130.63 - 132.63)	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		2/10/2013	NE	36.41	NA	NA	NA	407.74		0.0	*
2Q13		4/1/2013	NE	37.24	NA	NA	NA	406.91		0.0	*
3Q13		7/3/2013	NE	33.53	NA	NA	NA	410.62		0.0	*
4Q13		10/1/2013	NE	35.88	NA	NA	NA	408.27		0.0	*
1Q14		2/12/2014	NE	38.00	NA	NA	NA	406.15		0.5	*
2Q14		4/4/2014	NE	50.04	NA	NA	NA	394.11		0.2	*
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		2/10/2013	NE	35.00	NA	NA	NA	408.20		0.0	*
2Q13		4/1/2013	NE	35.19	NA	NA	NA	408.01		0.0	*
3Q13		7/3/2013	NE	31.66	NA	NA	NA	411.54		0.0	*
4Q13		10/1/2013	NE	33.97	NA	NA	NA	409.23		0.1	*
1Q14		2/12/2014	NE	36.27	NA	NA	NA	406.93		21.8	*
2Q14		4/4/2014	NE	36.88	NA	NA	NA	406.32		0.2	*

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
P-6U													
3Q11	443.35	7/5/2011	NE	27.35	NA	NA	NA	416.00	362.85 - 360.85 (80.50 - 82.50)	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	*		
2Q14		4/4/2014	NE	42.10	NA	NA	NA	401.25		1.5	*		
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	*			
2Q14	4/2/2014		NE	37.76	NA	NA	NA	405.66	29.9	*			
P-7U													
3Q11	443.80		7/5/2011	NE	27.30	NA	NA	NA	416.50	382.72 - 380.72 (61.08 - 63.08)		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		*		
2Q14		4/2/2014	NE	43.67	NA	NA	NA	400.13	0.2		*		
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	*			
2Q14	4/1/2014		NE	37.59	NA	NA	NA	405.51	0.0	*			
P-8U													
3Q11	441.87		7/5/2011	NE	28.20	NA	NA	NA	413.67	382.35 - 380.35 (59.52 - 61.52)		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		*		
2Q14		4/1/2014	NE	38.43	NA	NA	NA	403.44	0.0		*		
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	*			
2Q14	4/1/2014		NE	42.15	NA	NA	NA	402.26	0.0	*			

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
P-9U													
3Q11	444.91	7/5/2011	NE	34.92	NA	NA	NA	409.99	344.32 - 342.32 (100.59 - 102.59)	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	*		
2Q14		4/1/2014	NE	42.28	NA	NA	NA	402.63		0.0	*		
P-11L													
3Q11		442.80	7/5/2011	NE	29.34	NA	NA	NA		413.46	332.59 - 330.59 (110.21 - 112.21)	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	*			
2Q14	4/4/2014		NE	42.89	NA	NA	NA	399.91	7.1	*			
P-11U													
3Q11	443.09		7/5/2011	NE	29.95	NA	NA	NA	413.14	343.17 - 341.17 (99.92 - 101.92)		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		*		
2Q14		4/4/2014	NE	39.74	NA	NA	NA	403.35	0.2		*		
P-14													
3Q11		442.65	7/5/2011	NE	25.57	NA	NA	NA	417.08		395.32 - 385.32 (47.33 - 57.33)	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	*			
2Q14	4/2/2014		NE	35.67	NA	NA	NA	406.98	0.0	*			
P-15													
3Q11	443.35		7/5/2011	NE	27.75	NA	NA	NA	415.60	397.90 - 387.90 (45.45 - 55.45)		NA	*
4Q11		10/6/2011	NE	29.93	NA	NA	NA	413.42	NA		*		
1Q12		1/3/2012	31.05	31.06	412.29	412.3	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		*		
2Q14		4/4/2014	NE	39.02	NA	NA	NA	404.33	0.3		*		

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
P-16													
3Q11	442.31	7/5/2011	NE	26.34	NA	NA	NA	415.97	396.57 - 386.57 (45.74 - 55.74)	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	*		
2Q14		4/3/2014	NE	37.82	NA	NA	NA	404.49		42.2	*		
P-43													
3Q11		444.07	7/5/2011	NE	30.78	NA	NA	NA		413.29	380.51 - 370.51 (63.56 - 73.56)	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	*			
2Q14	4/4/2014		NE	41.35	NA	NA	NA	402.72	0.2	*			
P-53													
3Q11	446.23		7/5/2011	NE	38.28	NA	NA	NA	407.95	407.73 - 382.73 (38.50 - 63.50)		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	NM				
4Q12		10/1/2012	NE	41.88	NA	NA	NA	404.35	0.0				
1Q13		1/2/2013	NE	43.06	NA	NA	NA	403.17	0.0				
2Q13		4/1/2013	NE	44.29	NA	NA	NA	401.94	0.1				
3Q13		7/2/2013	NE	42.84	NA	NA	NA	403.39	0.4				
4Q13		10/2/2013	NE	42.20	NA	NA	NA	404.03	0.0				
1Q14		2/10/2014	NE	43.66	NA	NA	NA	402.57	0.0				
2Q14		4/1/2014	NE	44.32	NA	NA	NA	401.91	0.3				
P-54													
3Q11		442.18	7/5/2011	NE	35.38	NA	NA	NA	406.80		404.18 - 379.18 (38.00 - 63.00)	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				
2Q14	4/3/2014		NE	42.59	NA	NA	NA	399.59	0.2				
P-55													
3Q11	445.95		7/5/2011	39.41	39.42	406.53	406.54	0.01	406.54	406.13 - 381.13 (39.82 - 64.82)		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		4/2/2013	NE	43.87	NA	NA	NA	399.91	202.0		Replaced during 4Q12		
3Q13		7/5/2013	NE	41.43	NA	NA	NA	402.35	136.4				
4Q13		10/2/2013	NE	41.58	NA	NA	NA	402.20	52.4				
1Q14		2/13/2014	43.24	43.37	400.41	400.54	0.13	400.51	93.3				
2Q14		4/4/2014	44.32	44.37	399.41	399.46	0.05	399.45	29.1				

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
P-56													
3Q11	446.02	7/5/2011	NE	39.63	NA	NA	NA	406.39	405.20 - 380.20 (40.82 - 65.82)	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			
2Q14		4/4/2014	NE	47.32	NA	NA	NA	398.70		0.3			
P-57													
3Q11		446.53	7/5/2011	NE	39.48	NA	NA	NA		407.05	406.07 - 381.07 (40.46 - 65.46)	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				
2Q14	4/7/2014		NE	47.27	NA	NA	NA	399.26	4.1				
P-58													
3Q11	444.92		7/5/2011	NE	37.42	NA	NA	NA	407.50	404.70 - 379.70 (40.21 - 65.21)		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				
2Q14		4/4/2014	NE	45.39	NA	NA	NA	399.53	0.3		*		
P-59													
3Q11		446.78	7/5/2011	NE	41.44	NA	NA	NA	405.34		398.87 - 373.87 (47.91 - 72.91)	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	*			
2Q14	4/4/2014		NE	49.04	NA	NA	NA	397.74	0.3				
P-60													
3Q11	446.57		7/5/2011		40.41	40.77	405.80	406.16	0.36	406.09		403.12 - 383.12 (43.45 - 63.45)	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			
2Q14		4/4/2014		47.74	47.77	398.80	398.83	0.03	398.83	25.1			

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
P-60-11													
3Q11	446.18	7/5/2011	NE	39.97	NA	NA	NA	406.21	413.03 - 383.03 (33.15 - 63.15)	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			
2Q14		4/4/2014	NE	45.58	NA	NA	NA	400.60		0.2			
P-60-12													
3Q11		443.31	7/5/2011	NE	37.27	NA	NA	NA		406.04	383.31 - 373.31 (60.00 - 70.00)	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	*			
2Q14	4/4/2014		NE	44.54	NA	NA	NA	398.77	43.5	*			
P-60-12S													
3Q11	443.33		7/5/2011	21.10	21.11	422.22	422.23	0.01	422.23	429.49 - 419.49 (13.84 - 23.84)		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				
2Q14		4/4/2014	NE	19.03	NA	NA	NA	424.30	0.5				
P-60-13													
3Q11		442.43	7/5/2011	36.85	36.99	405.44	405.58	0.14	405.55		402.43 - 382.43 (40.00 - 60.00)	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				
2Q14	4/4/2014		NE	42.81	NA	NA	NA	399.62	0.7				
P-60-13S													
3Q11	442.39		7/5/2011	NE	17.08	NA	NA	NA	425.31	432.39 - 422.39 (10.00 - 20.00)		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				
2Q14		4/4/2014	NE	17.16	NA	NA	NA	425.23	0.3				

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
P-60-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	1.9	402.66		0.3			
1Q13		1/4/2013	45.34	45.95	401.03	401.64	0.61	401.52		0.0			
2Q13		4/2/2013	46.33	46.39	400.59	400.65	0.06	400.64		0.1			
3Q13		7/5/2013	NE	44.45	NA	NA	NA	402.53		0.0			
4Q13		10/2/2013	43.56	44.49	402.49	403.42	0.93	403.23		0.2			
1Q14		2/13/2014	45.48	45.86	401.12	401.50	0.38	401.42		0.3			
2Q14		4/4/2014	46.38	46.57	400.41	400.60	0.19	400.56		0.2			
P-61													
3Q11		444.27	7/5/2011	37.58	37.59	406.68	406.69	0.01		406.69	398.59 - 373.59 (45.68 - 70.68)	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	*			
2Q14	4/4/2014		45.80	45.81	398.46	398.47	0.01	398.47	13.0				
P-62													
3Q11	442.32		7/5/2011	35.62	35.63	406.69	406.70	0.01	406.70	400.85 - 375.85 (41.47 - 66.47)		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		*		
2Q14		4/4/2014	43.51	45.28	397.04	398.81	1.77	398.46	0.8				
P-63													
3Q11		445.75	7/5/2011	NE	38.56	NA	NA	NA	407.19		398.46 - 373.46 (47.29 - 72.29)	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	400.69	22.9	*			
2Q14	4/4/2014		47.98	48.14	397.61	397.77	0.16	397.74	0.3				
P-64													
3Q11	446.52		7/5/2011	39.25	39.42	407.1	407.27	0.17	407.24	399.29 - 374.29 (47.23 - 72.23)		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	400.9	0.06	400.89	34.5		*		
1Q13		1/4/2013	NE	47.84	NA	NA	NA	398.68	103.0		*		
2Q13		4/1/2013	NE	48.23	NA	NA	NA	398.29	0.0		*		
3Q13		7/5/2013	46.95	46.97	399.55	399.57	0.02	399.57	96.5		*		
4Q13		10/2/2013	46.25	46.31	400.21	400.27	0.06	400.26	41.4		*		
1Q14		2/12/2014	47.93	47.94	398.58	398.59	0.01	398.59	114.2		*		
2Q14		4/4/2014	49.60	49.68	396.84	396.92	0.08	396.90	6.8				

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
P-65													
3Q11	444.53	7/5/2011	NE	36.87	NA	NA	NA	407.66	396.91 - 371.91 (47.62 - 72.62)	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		10/2/2013	NE	43.11	NA	NA	NA	401.49		21.2	*Well repaired during 3Q13. Resurveyed during 4Q13.		
1Q14	2/12/2014	NE	44.91	NA	NA	NA	399.69	2.3	*				
2Q14	4/4/2014	NE	46.68	NA	NA	NA	397.92	0.6	*				
P-66													
3Q11	436.70	7/5/2011	NE	28.87	NA	NA	NA	407.83	401.98 - 376.98 (34.72 - 59.72)	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			
2Q14		4/4/2014	NE	36.99	NA	NA	NA	399.71		0.2			
P-67													
3Q11		444.13	7/5/2011	NE	35.17	NA	NA	NA		408.96	402.16 - 377.16 (41.98 - 66.98)	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	401.5	401.53	0.03	401.52	60.9				
2Q14	4/4/2014		NE	43.35	NA	NA	NA	400.78	1.2				
P-68													
3Q11	445.07		7/5/2011	39.06	39.13	405.94	406.01	0.07	406.00	399.81 - 374.81 (45.26 - 70.26)		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		*		
2Q14		4/7/2014	45.94	46.28	398.79	399.13	0.34	399.06	9.3				
P-69													
3Q11		443.18	7/5/2011	NE	37.41	NA	NA	NA	405.77		402.36 - 377.36 (40.82 - 65.82)	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				
2Q14	4/7/2014		NE	44.88	NA	NA	NA	398.30	0.2				

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
P-70													
3Q11	442.83	7/5/2011	36.42	36.43	406.40	406.41	0.01	406.41	398.16 - 373.16 (44.67 - 69.67)	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	*		
2Q14		4/4/2014	NE	44.21	45.35	397.48	398.62	1.14		398.39	200.7	*	
P-71													
3Q11		444.83	7/5/2011	NE	37.91	NA	NA	NA		406.92	402.22 - 377.22 (42.61 - 67.61)	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		NE	42.69	42.75	402.08	402.14	0.06	402.13	23.0		*	
1Q13	1/4/2013		NE	43.83	NA	NA	NA	401.00	1.1	*			
2Q13	4/2/2013		NE	44.54	NA	NA	NA	400.29	1.2	*			
3Q13	7/5/2013		NE	42.65	NA	NA	NA	402.18	82.5	*			
4Q13	10/2/2013		NE	42.53	NA	NA	NA	402.30	53.0	*			
1Q14	2/13/2014		NE	44.35	NA	NA	NA	400.48	0.0	*			
2Q14	4/4/2014		NE	45.48	NA	NA	NA	399.35	0.8	*			
P-72													
3Q11	444.43		7/5/2011	37.02	37.03	407.4	407.41	0.01	407.41	398.66 - 373.66 (45.77 - 70.77)		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		*		
2Q14		4/4/2014	NE	45.12	NA	NA	NA	399.31	2.2		*		
P-73													
3Q11		443.76	7/5/2011	NE	36.88	NA	NA	NA	406.88		402.17 - 377.17 (41.60 - 66.60)	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	*			
2Q14	4/7/2014		NE	44.82	NA	NA	NA	398.94	0.4	*			
P-74													
3Q11	442.63		7/5/2011	NE	36.51	NA	NA	NA	406.12	398.20 - 373.20 (44.43 - 69.43)		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		1/14/2014	NE	43.18	NA	NA	NA	399.45	2.8		*		
2Q14		4/7/2014	NE	43.86	NA	NA	NA	398.77	7.5		*		

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
P-75													
3Q11	446.32	7/5/2011	38.57	38.59	407.73	407.75	0.02	407.75	403.19 - 378.19 (43.13 - 68.13)	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			
2Q14		4/4/2014	NE	46.69	NA	NA	NA	399.63		0.3			
P-82A													
3Q11		434.69	7/5/2011	NE	23.01	NA	NA	NA		411.68	401.48 - 386.48 (33.21 - 48.21)	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	*			
2Q14	4/4/2014		NE	32.21	NA	NA	NA	402.48	0.0	*			
P-82B													
3Q11	434.44		7/5/2011	NE	22.71	NA	NA	NA	411.73	370.84 - 368.84 (63.60 - 65.60)		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		*		
2Q14		4/4/2014	NE	32.93	NA	NA	NA	401.51	0.0		*		
P-82C													
3Q11		434.16	7/5/2011	NE	22.75	NA	NA	NA	411.41		351.39 - 349.39 (82.77 - 84.77)	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	*			
2Q14	4/4/2014		NE	28.42	NA	NA	NA	405.74	0.1	*			
P-82D													
3Q11	434.85		7/5/2011	NE	23.54	NA	NA	NA	411.31	323.43 - 321.43 (111.42 - 113.42)		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		*		
2Q14		4/4/2014	NE	35.40	NA	NA	NA	399.45	0.2		*		

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
P-83A													
3Q11	445.23	7/5/2011	NE	36.25	NA	NA	NA	408.98	398.58 - 383.58 (46.65 - 61.65)	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		2/1/2014	NE	44.72	NA	NA	NA	400.51		0.6	*		
2Q14		4/1/2014	NE	45.74	NA	NA	NA	399.49		0.0	*		
P-83B													
3Q11		445.47	7/5/2011	NE	36.57	NA	NA	NA		408.90	375.82 - 373.82 (69.65 - 71.65)	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	2/1/2014		NE	44.97	NA	NA	NA	400.50	0.3	*			
2Q14	4/1/2014		NE	46.01	NA	NA	NA	399.46	0.0	*			
P-83C													
3Q11	445.64		7/5/2011	NE	37.02	NA	NA	NA	408.62	353.25 - 351.25 (92.39 - 94.39)		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		2/1/2014	NE	45.43	NA	NA	NA	400.21	13.7		*		
2Q14		4/1/2014	NE	46.40	NA	NA	NA	399.24	0.0		*		
P-83D													
3Q11		445.55	7/5/2011	NE	36.98	NA	NA	NA	408.57		311.84 - 309.84 (133.71 - 135.71)	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	2/1/2014		NE	45.40	NA	NA	NA	400.15	0.4	*			
2Q14	4/1/2014		NE	46.36	NA	NA	NA	399.19	0.0	*			
P-84A													
3Q11	446.39		7/5/2011	NE	38.58	NA	NA	NA	407.81	397.89 - 382.89 (48.50 - 63.50)		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		*		
2Q14		4/4/2014	NE	46.73	NA	NA	NA	399.66	0.3		*		

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
P-84B													
3Q11	446.10	7/5/2011	NE	38.32	NA	NA	NA	407.78	372.60 - 370.60 (73.50 - 75.50)	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	*		
2Q14		4/4/2014	NE	46.45	NA	NA	NA	399.65		0.0	*		
P-84C													
3Q11		446.13	7/5/2011	NE	38.64	NA	NA	NA		407.49	352.08 - 350.08 (94.05 - 96.05)	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	*			
2Q14	4/4/2014		NE	49.46	NA	NA	NA	396.67	0.7	*			
P-84D													
3Q11	446.14		7/5/2011	NE	38.68	NA	NA	NA	407.46	324.99 - 322.99 (121.15 - 123.15)		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		*		
2Q14		4/4/2014	NE	49.46	NA	NA	NA	396.68	0.0		*		
P-88A													
3Q11		443.12	7/5/2011	NE	29.78	NA	NA	NA	413.34		404.72 - 389.72 (38.40 - 53.40)	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	*			
2Q14	4/4/2014		NE	37.98	NA	NA	NA	405.14	0.1	*			
P-88B													
3Q11	443.17		7/5/2011	NE	29.71	NA	NA	NA	413.46	371.17 - 369.17 (72.00 - 74.00)		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		*		
2Q14		4/4/2014	NE	38.04	NA	NA	NA	405.13	0.5		*		

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
P-88C													
3Q11	443.16	7/5/2011	NE	30.02	NA	NA	NA	413.14	350.86 - 348.86 (92.30 - 94.30)	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		2/1/2014	NE	36.45	NA	NA	NA	406.71		0.2	*		
2Q14		4/4/2014	NE	41.00	NA	NA	NA	402.16		0.2	*		
P-88D													
3Q11		443.23	7/5/2011	NE	30.08	NA	NA	NA		413.15	329.53 - 327.53 (113.70 - 115.70)	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	2/1/2014		NE	36.59	NA	NA	NA	406.64	1.7	*			
2Q14	4/4/2014		NE	41.45	NA	NA	NA	401.78	0.1	*			
P-89B													
3Q11	447.35		7/5/2011	NE	35.99	NA	NA	NA	411.36	369.99 - 367.99 (77.36 - 79.36)		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		*		
2Q14		4/1/2014	NE	45.09	NA	NA	NA	402.26	0.0		*		
P-89C													
3Q11		447.68	7/5/2011	NE	36.33	NA	NA	NA	411.35		350.05 - 348.05 (97.63 - 99.63)	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	*			
2Q14	4/1/2014		NE	45.47	NA	NA	NA	402.21	0.0	*			
P-89D													
3Q11	447.54		7/5/2011	NE	36.23	NA	NA	NA	411.31	307.20 - 305.20 (140.34 - 142.34)		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		*		
2Q14		4/1/2014	NE	45.45	NA	NA	NA	402.09	0.0		*		

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
P-91A													
3Q11	447.19	7/5/2011	NE	40.42	NA	NA	NA	406.77	395.68 - 380.68 (51.52 - 66.52)	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	*		
2Q14		4/4/2014	50.20	55.10	392.09	396.99	4.90	396.01		15.9	*		
P-91B													
3Q11		447.26	7/5/2011	NE	40.62	NA	NA	NA		406.64	372.57 - 370.57 (74.69 - 76.69)	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	*			
2Q14	4/4/2014		NE	51.19	NA	NA	NA	396.07	0.4	*			
P-91C													
3Q11	447.02		7/5/2011	NE	40.35	NA	NA	NA	406.67	352.29 - 350.29 (94.73 - 96.73)		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		*		
2Q14		4/4/2014	NE	51.00	NA	NA	NA	396.02	0.2		*		
P-91D													
3Q11		447.02	7/5/2011	NE	40.27	NA	NA	NA	406.75		278.70 - 276.70 (168.32 - 170.32)	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	*			
2Q14	4/4/2014		NE	51.02	NA	NA	NA	396.00	6.9	*			
P-92A													
3Q11	446.12		7/5/2011	38.55	38.59	407.53	407.57	0.04	407.56	398.55 - 383.55 (47.57 - 62.57)		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		*		
2Q14		4/4/2014	49.06	49.16	396.96	397.06	0.10	397.04	0.9		*		

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
P-92B													
3Q11	446.07	7/5/2011	NE	38.51	NA	NA	NA	407.56	372.42 - 370.42 (73.65 - 75.65)	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	*		
2Q14		4/4/2014	NE	49.03	NA	NA	NA	397.04		0.2	*		
P-92C													
3Q11		445.98	7/5/2011	NE	38.33	NA	NA	NA		407.65	352.54 - 350.54 (93.44 - 95.44)	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	*			
2Q14	4/4/2014		NE	48.80	NA	NA	NA	397.18	0.4	*			
P-92D													
3Q11	445.90		7/5/2011	NE	38.33	NA	NA	NA	407.57	304.90 - 302.90 (141.00 - 143.00)		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		*		
2Q14		4/4/2014	NE	48.94	NA	NA	NA	396.96	0.3		*		
P-93A													
3Q11		446.58	7/5/2011	NE	39.40	NA	NA	NA	407.18		398.41 - 383.41 (48.17 - 63.17)	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	*			
2Q14	4/4/2014		NE	47.28	NA	NA	NA	399.30	1.3	*			
P-93B													
3Q11	446.46		7/5/2011	NE	39.44	NA	NA	NA	407.02	371.86 - 369.86 (74.60 - 76.60)		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		*		
2Q14		4/4/2014	NE	47.33	NA	NA	NA	399.13	0.5		*		

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
P-93C													
3Q11	446.51	7/5/2011	NE	39.32	NA	NA	NA	407.19	352.26 - 350.26 (94.26 - 96.26)	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	*		
2Q14		4/4/2014	NE	47.20	NA	NA	NA	399.31		0.0	*		
P-93D													
3Q11		446.89	7/5/2011	NE	39.46	NA	NA	NA		407.43	321.14 - 319.14 (125.75 - 127.75)	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	*			
2Q14	4/4/2014		NE	47.36	NA	NA	NA	399.53	3.1	*			
P-94													
3Q11	444.65		7/5/2011	NE	32.14	NA	NA	NA	412.51	398.80 - 383.80 (45.85 - 60.85)		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		*		
2Q14		4/1/2014	NE	41.85	NA	NA	NA	402.80	0.0		*		
P-95													
3Q11		443.44	7/5/2011	NE	28.12	NA	NA	NA	415.32		406.92 - 391.92 (36.52 - 51.52)	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	*			
2Q14	4/4/2014		NE	36.19	NA	NA	NA	407.25	0.0	*			
P-102													
3Q11	444.91		7/5/2011	NE	30.91	NA	NA	NA	414.00	402.16 - 382.16 (42.75 - 62.75)		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		*		
2Q14		4/4/2014	NE	38.55	NA	NA	NA	406.36	7.5		*		

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
P-114													
3Q11	432.41	7/5/2011	NE	23.48	NA	NA	NA	408.93	399.73 - 379.73 (32.67 - 52.67)	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	*		
2Q14		4/4/2014	NM	NM	NA	NA	NA	NA		NM			
P-115													
3Q11		433.31	7/5/2011	NM	NM	NA	NA	NA		NA	401.01 - 381.01 (32.30 - 52.30)	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				
2Q14	4/7/2014		NE	33.10	NA	NA	NA	400.21	57.2				
P-116													
3Q11	436.45		7/5/2011	NE	27.41	NA	NA	NA	409.04	399.01 - 379.01 (37.44 - 57.44)		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		*		
2Q14		4/4/2014	NE	36.91	NA	NA	NA	399.54	0.1		*		
P-117													
3Q11		432.67	7/5/2011	NE	23.54	NA	NA	NA	409.13		399.74 - 379.74 (32.93 - 52.93)	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	*			
2Q14	4/4/2014		NE	33.14	NA	NA	NA	399.53	0.0				
P-118													
3Q11	431.32		7/5/2011	NE	22.11	NA	NA	NA	409.21	400.20 - 384.27 (31.12 - 47.05)		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				
2Q14		4/4/2014	NE	32.11	NA	NA	NA	399.21	0.0				

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
P-119													
3Q11	431.92	7/5/2011	NE	23.06	NA	NA	NA	408.86	401.25 - 385.32 (30.67 - 46.60)	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			
2Q14		4/4/2014	NE	31.55	NA	NA	NA	400.37		0.0			
P-120													
3Q11		432.78	7/5/2011	NE	22.85	NA	NA	NA		409.93	401.40 - 385.47 (31.38 - 47.31)	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				
2Q14	4/4/2014		NE	32.01	NA	NA	NA	400.77	0.0				
P-129													
3Q11	432.46		7/5/2011	NE	22.74	NA	NA	NA	409.72	400.49 - 384.56 (31.97 - 47.90)		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				
2Q14		4/4/2014	NE	34.27	NA	NA	NA	398.19	0.0				
GP-9-PZ													
3Q11		442.41	7/5/2011	NM	NM	NA	NA	NA	NA		404.81 - 394.81 (37.60 - 47.60)	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	NA	NA	NA	NA	NA	NM				
2Q14	4/4/2014		NE	44.86	NA	NA	NA	397.55	0.5				
ROST-3-MW (ROST-3-PZ)													
3Q11	442.29		7/5/2011	NE	35.83	NA	NA	NA	406.46	402.29 - 392.29 (40.00 - 50.00)		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			
2Q14		4/1/2014	NE	42.68	NA	NA	NA	399.61		1.2			

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
ROST-4-PZ													
3Q11	442.13	7/5/2011	NE	35.85	NA	NA	NA	406.28	407.20 - 397.20 (34.93 - 44.93)	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	NE	37.81	37.84	404.29	404.32	0.03		404.31	0.0		
3Q12		7/2/2012	NE	38.24	NA	NA	NA	NA		403.89	0.0		
4Q12		10/1/2012	NE	39.52	NA	NA	NA	NA		402.61	0.0		
1Q13		1/2/2013	NE	40.52	NA	NA	NA	NA		401.61	0.0		
2Q13		4/1/2013	NE	41.38	41.46	400.67	400.75	0.08		400.73	0.3		
3Q13		7/1/2013	NE	39.60	NA	NA	NA	NA		402.53	0.0		
4Q13		10/1/2013	NE	38.88	NA	NA	NA	NA		403.25	38.9		
1Q14		2/10/2014	NE	40.97	NA	NA	NA	NA		401.16	1.2		
2Q14		4/1/2014	NE	41.22	NA	NA	NA	NA		400.91	0.3		
ROST-4-PZ(A)													
3Q11		442.11	7/5/2011	NE	35.21	NA	NA	NA		406.90	407.34 - 397.34 (34.77 - 44.77)	NA	
4Q11	10/1/2011		NM	NM	NA	NA	NA	NA	NM				
1Q12	1/3/2012		NE	35.92	NA	NA	NA	NA	406.19	0.0			
2Q12	4/2/2012		NE	37.17	NA	NA	NA	NA	404.94	0.0			
3Q12	7/2/2012		NE	38.64	NA	NA	NA	NA	403.47	0.0			
4Q12	10/1/2012		NE	38.95	NA	NA	NA	NA	403.16	0.0			
1Q13	1/2/2013		NE	40.60	NA	NA	NA	NA	401.51	0.0			
2Q13	4/1/2013		NE	41.86	NA	NA	NA	NA	400.25	0.7			
3Q13	7/1/2013		NE	39.66	NA	NA	NA	NA	402.45	0.2			
4Q13	10/1/2013		NE	38.76	NA	NA	NA	NA	403.35	0.0			
1Q14	2/10/2014		NE	41.29	NA	NA	NA	NA	400.82	0.6			
2Q14	4/1/2014		NE	41.81	NA	NA	NA	NA	400.30	0.4			
ROST-4-PZ(B)													
3Q11	442.38		7/5/2011	NE	35.93	NA	NA	NA	406.45	407.33 - 397.33 (35.05 - 45.05)		NA	
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA	NM				
1Q12		1/3/2012	NE	36.65	NA	NA	NA	NA	405.73		0.0		
2Q12		4/2/2012	NE	37.87	NA	NA	NA	NA	404.51		0.0		
3Q12		7/2/2012	NE	38.28	NA	NA	NA	NA	404.10		0.0		
4Q12		10/1/2012	NE	39.62	NA	NA	NA	NA	402.76		0.0		
1Q13		1/2/2013	NE	40.61	NA	NA	NA	NA	401.77		0.0		
2Q13		4/1/2013	NE	41.55	NA	NA	NA	NA	400.83		0.5		
3Q13		7/1/2013	NE	39.52	NA	NA	NA	NA	402.86		0.0		
4Q13		10/1/2013	NE	38.58	NA	NA	NA	NA	403.80		1.1		
1Q14		2/10/2014	NE	40.84	NA	NA	NA	NA	401.54		0.3		
2Q14		4/1/2014	NE	41.18	NA	NA	NA	NA	401.20		0.0		
ROST-4-PZ(C)													
3Q11		442.66	7/5/2011	NE	36.62	NA	NA	NA	406.04		407.71 - 397.71 (34.95 - 44.95)	NA	
4Q11	10/1/2011		NM	NM	NA	NA	NA	NA	NM				
1Q12	1/3/2012		NE	37.40	NA	NA	NA	NA	405.26	0.0			
2Q12	4/2/2012		NE	38.62	NA	NA	NA	NA	404.04	0.0			
3Q12	7/2/2012		NE	39.09	NA	NA	NA	NA	403.57	0.0			
4Q12	10/1/2012		NE	40.43	NA	NA	NA	NA	402.23	0.0			
1Q13	1/2/2013		NE	41.42	NA	NA	NA	NA	401.24	0.0			
2Q13	4/1/2013		NE	42.34	NA	NA	NA	NA	400.32	0.0			
3Q13	7/1/2013		NE	40.57	NA	NA	NA	NA	402.09	0.2			
4Q13	10/1/2013		NE	39.77	NA	NA	NA	NA	402.89	0.0			
1Q14	2/10/2014		NE	41.92	NA	NA	NA	NA	400.74	0.2			
2Q14	4/1/2014		NE	42.19	NA	NA	NA	NA	400.47	0.0			
ROST-4-PZ(D)													
3Q11	442.98		7/5/2011	NE	36.58	NA	NA	NA	406.40	408.01 - 398.01 (34.97 - 44.97)		NA	
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA	NM				
1Q12		1/3/2012	NE	37.23	37.68	405.3	405.75	0.45	405.66		0.0		
2Q12		4/2/2012	NE	38.57	38.59	404.39	404.41	0.02	404.41		0.0		
3Q12		7/2/2012	NE	39.99	NA	NA	NA	NA	402.99		0.0		
4Q12		10/1/2012	NE	NE	NA	NA	NA	NA	NA		0.0	Well Dry	
1Q13		1/2/2013	NE	NE	NA	NA	NA	NA	NA		0.0	Well Dry	
2Q13		4/1/2013	NE	NE	NA	NA	NA	NA	NA		3.4	Well Dry	
3Q13		7/1/2013	NE	NE	NA	NA	NA	NA	NA		0.0	Well Dry	
4Q13		10/1/2013	NE	39.63	NA	NA	NA	NA	403.35		0.0		
1Q14		2/10/2014	NE	41.78	NA	NA	NA	NA	401.20		0.6		
2Q14		4/1/2014	NE	42.10	NA	NA	NA	NA	400.88		0.6		

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
ROST-4-PZ(E)													
3Q11	441.96	7/5/2011	NE	35.81	NA	NA	NA	406.15	407.21 - 397.21 (34.75 - 44.75)	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			
2Q14		4/1/2014	NE	40.38	NA	NA	NA	401.58		0.0			
ROST-4-PZ(F)													
3Q11		442.12	7/5/2011	NE	35.99	NA	NA	NA		406.13	407.59 - 397.59 (34.53 - 44.53)	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				
2Q14	4/1/2014		NE	40.45	NA	NA	NA	401.67	1.0				
ROST-4-PZ(G)													
3Q11	442.13		7/5/2011	NE	35.76	NA	NA	NA	406.37	407.85 - 397.85 (34.28 - 44.28)		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				
2Q14		4/1/2014	NE	42.79	NA	NA	NA	399.34	0.5				
ROST-5-PZ													
3Q11		442.22	7/5/2011	NE	NE	NA	NA	NA	NA		429.02 - 419.02 (13.20 - 23.20)	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			
2Q14	4/3/2014		NE	NE	NA	NA	NA	NA	5.1	Well Dry			
ROST-7-PZ													
3Q11	442.19		7/5/2011	NE	22.05	NA	NA	NA	420.14	422.19 - 412.19 (20.00 - 30.00)		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				
2Q14		4/3/2014	NE	23.88	NA	NA	NA	418.31	1.4				

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
ROST-10-PZ													
3Q11	444.51	7/5/2011	NE	19.67	NA	NA	NA	424.84	434.51 - 424.51 (10.00 - 20.00)	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		
2Q14		4/2/2014	NE	NE	NA	NA	NA	NA		0.1	Well Dry		
ROST-21-PZ													
3Q11		443.72	7/5/2011	NE	18.37	NA	NA	NA		425.35	433.72 - 423.72 (10.00 - 20.00)	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			
2Q14	4/1/2014		NE	NE	NA	NA	NA	NA	0.5	Well Dry			
S-1													
3Q11	443.79		7/5/2011		36.50	36.54	407.25	407.29	0.04	407.28		Unknown	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		
2Q14		4/4/2014	NE		45.28	NA	NA	NA	398.51	0.2			
T-1													
3Q11		444.55	7/5/2011	NE		35.99	NA	NA	NA	408.56	398.40 - 388.40 (43.91 - 53.91)		NA
4Q11	10/6/2011		NE		50.83	NA	NA	NA	393.72	NA			
1Q12	1/3/2012		NM	NM	NA	NA	NA	NA	NA	NM		Well replaced during 4Q11	
2Q12	4/2/2012		NE		40.09	NA	NA	NA	405.31	0.6		*	
3Q12	7/2/2012		NE		41.19	NA	NA	NA	404.21	0.3		*	
4Q12	10/1/2012		NE		42.90	NA	NA	NA	402.50	0.2		*	
1Q13	1/3/2013		NE		44.17	NA	NA	NA	401.23	0.0		*	
2Q13	4/2/2013		NE		44.94	NA	NA	NA	400.46	0.3		*	
3Q13	7/3/2013		NE		42.85	NA	NA	NA	402.55	4.2		*	
4Q13	10/1/2013		NE		42.61	NA	NA	NA	402.79	1.5		*	
1Q14	2/11/2014		NE		44.35	NA	NA	NA	401.05	1.1		*	
2Q14	4/1/2014		NE		44.84	NA	NA	NA	400.56	0.0		*	
T-2													
3Q11	443.13		7/5/2011	NE		35.89	NA	NA	NA	407.24		392.63 - 372.48 (50.50 - 70.65)	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	*		
2Q14		4/1/2014	NE		43.69	NA	NA	NA	399.44	0.0	*		

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
T-3													
3Q11	450.91	7/5/2011	NE	43.85	NA	NA	NA	407.06	403.65 - 388.65 (47.26 - 62.26)	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	*		
2Q14		4/1/2014	NE	53.18	NA	NA	NA	397.73		0.0	*		
T-4													
3Q11		447.95	7/5/2011	NE	39.83	NA	NA	NA		408.12	398.24 - 383.24 (49.71 - 64.71)	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	*			
2Q14	4/4/2014		NE	52.42	NA	NA	NA	395.53	0.3	*			
T-5													
3Q11	443.46		7/5/2011	NE	35.28	NA	NA	NA	408.18	395.13 - 378.58 (48.33 - 64.88)		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		*		
2Q14		4/4/2014	NE	44.53	NA	NA	NA	398.93	8.0		*		
T-6													
3Q11		446.55	7/5/2011	NE	39.58	NA	NA	NA	406.97		394.79 - 380.54 (51.76 - 66.01)	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	*			
2Q14	4/4/2014		NE	47.43	NA	NA	NA	399.12	2.3	*			
T-7													
3Q11	444.01		7/5/2011	35.08	35.16	408.85	408.93	0.08	408.91	395.29 - 380.29 (48.72 - 63.72)		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	NE	38.45	NA	NA	NA	405.56	0.0		*		
3Q12		7/2/2012	38.90	38.96	405.05	405.11	0.06	405.10	0.0		*		
4Q12		10/2/2012	40.80	40.83	403.18	403.21	0.03	403.20	0.3		*		
1Q13		1/2/2013	41.66	41.67	402.34	402.35	0.01	402.35	2.4		*		
2Q13		4/2/2013	NE	42.78	NA	NA	NA	401.23	9.2		*		
3Q13		7/2/2013	NE	40.21	NA	NA	NA	403.80	0.0		*		
4Q13		10/2/2013	NE	39.72	NA	NA	NA	404.29	5.1		*		
1Q14		2/11/2014	NE	42.60	NA	NA	NA	401.41	4.7		*		
2Q14		4/4/2014	NE	43.34	NA	NA	NA	400.67	2.5		*		

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
T-12													
3Q11	444.69	7/5/2011	NE	39.07	NA	NA	NA	405.62	398.23 - 372.23 (46.46 - 72.46)	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	*		
2Q14		4/4/2014	NE	46.38	NA	NA	NA	398.31		5.1	*		
T-13													
3Q11		443.46	7/5/2011	NM	NM	NA	NA	NA		NA	396.46 - 370.46 (47.00 - 73.00)	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	NM	*			
3Q12	7/2/2012		NM	NM	NA	NA	NA	NA	NM	*			
4Q12	10/2/2012		NE	40.81	NA	NA	NA	402.65	2.9	*			
1Q13	1/2/2013		NE	41.96	NA	NA	NA	401.50	0.0	*			
2Q13	4/3/2013		NE	42.96	NA	NA	NA	400.50	0.0	*			
3Q13	7/5/2013		NE	40.79	NA	NA	NA	402.67	0.0	*			
4Q13	10/3/2013		NE	40.72	NA	NA	NA	402.74	0.0	*			
1Q14	2/10/2014		NE	42.54	NA	NA	NA	400.92	0.0	*			
2Q14	4/4/2014		NE	43.19	NA	NA	NA	400.27	0.4	*			
T-15													
3Q11	445.03		7/5/2011	NE	37.35	NA	NA	NA	407.68	396.99 - 370.99 (48.04 - 74.04)		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		*		
2Q14		4/1/2014	NE	45.69	NA	NA	NA	399.34	0.0		*		
T-17													
3Q11		445.90	7/5/2011	NE	35.17	NA	NA	NA	410.73		401.80 - 375.80 (44.10 - 70.10)	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	*			
2Q14	4/1/2014		NE	45.04	NA	NA	NA	400.86	0.0	*			
T-19													
3Q11	446.71		7/5/2011		38.47	38.50	408.21	408.24	0.03	408.23		395.94 - 369.94 (50.77 - 76.77)	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	*		
2Q14		4/4/2014	NE	50.98		NA	NA	NA	395.73	11.7	*		

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
T-21													
3Q11	444.00	7/5/2011	NE	28.17	NA	NA	NA	415.83	412.04 - 386.04 (31.96 - 57.96)	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			
2Q14		4/4/2014	NE	35.28	NA	NA	NA	408.72		0.2			
T-22													
3Q11		442.21	7/5/2011	NE	29.00	NA	NA	NA		413.21	410.66 - 384.96 (31.55 - 57.25)	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				
2Q14	4/4/2014		NE	36.61	NA	NA	NA	405.60	0.2				
T-23													
3Q11	432.64		7/5/2011	NE	21.22	NA	NA	NA	411.42	405.41 - 379.41 (27.23 - 53.23)		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				
2Q14		4/4/2014	NE	29.45	NA	NA	NA	403.19	0.0				
T-24													
3Q11		443.72	7/5/2011	NE	37.53	NA	NA	NA	406.19		402.22 - 376.57 (41.50 - 67.15)	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				
2Q14	4/4/2014		44.95	45.44	398.28	398.77	0.49	398.67	0.4				
T-28													
3Q11	444.22		7/5/2011	NE	34.89	NA	NA	NA	409.33	Unknown		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				
2Q14		4/1/2014	NE	44.84	NA	NA	NA	399.38	0.0				

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
T-37													
3Q11	447.15	7/5/2011	NE	35.84	NA	NA	NA	411.31	398.30 - 378.30 (48.86 - 68.86)	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	*		
2Q14		4/1/2014	NE	44.91	NA	NA	NA	402.24		0.0	*		
T-38													
3Q11		445.62	7/5/2011	NM	NM	NA	NA	NA		NA	396.48 - 376.48 (49.14 - 69.14)	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	*			
2Q14	4/3/2014		NE	41.38	NA	NA	NA	404.24	0.0	*			
T-62													
3Q11	431.73		7/5/2011	NE	22.37	NA	NA	NA	409.36	412.02 - 382.02 (19.71 - 49.71)		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				
2Q14		4/7/2014	NE	31.37	NA	NA	NA	400.36	0.0				
T-63													
3Q11		431.24	7/5/2011	NM	NM	NA	NA	NA	NA		411.26 - 381.26 (19.98 - 49.98)	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				
2Q14	4/7/2014		NE	30.80	NA	NA	NA	400.45	0.1				
T-64													
3Q11	428.80		7/5/2011	NE	19.06	NA	NA	NA	409.74	408.99 - 378.99 (19.81 - 49.81)		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				
2Q14		4/4/2014	NE	29.29	NA	NA	NA	399.51	0.0				

TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS		
PZ-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		NM			
4Q12		10/1/2012	NE	43.06	NA	NA	NA	402.44		0.0	*		
1Q13		1/3/2013	NE	44.35	NA	NA	NA	401.15		0.0	*		
2Q13		4/1/2013	NE	45.12	NA	NA	NA	400.38		0.6	*		
3Q13		7/1/2013	NE	42.68	NA	NA	NA	402.82		0.0	*		
4Q13		10/1/2013	NE	42.63	NA	NA	NA	402.87		1.5	*		
1Q14		2/10/2014	NE	44.82	NA	NA	NA	400.68		1.9	*		
2Q14		4/1/2014	NE	45.30	NA	NA	NA	400.20		3.3	*		
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	*			
2Q14	4/1/2014		NE	45.17	NA	NA	NA	400.35	0.0	*			
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		*		
2Q14		4/2/2014	NE	43.53	NA	NA	NA	399.62	44.6		*		
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	*			
2Q14	4/2/2014		NE	43.47	NA	NA	NA	399.65	0.0	*			

NOTES:

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

TABLE 1b
2Q14 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	5/6/2014	NE	43.35	NA	NA	NA	399.30	393.85 - 383.85 (48.80 - 58.80)	0.0	*
		6/2/2014	NE	42.90	NA	NA	NA	399.75		0.3	*
MW-02											
Monthly	443.77	5/6/2014	NE	44.60	NA	NA	NA	399.17	393.90 - 383.90 (49.87 - 59.87)	102.0	*
		6/2/2014	NE	44.13	NA	NA	NA	399.64		163.3	*
MW-03											
Monthly	430.08	5/6/2014	NE	30.35	NA	NA	NA	399.73	395.41 - 385.41 (34.67 - 44.67)	0.6	*
		6/2/2014	NE	29.96	NA	NA	NA	400.12		0.6	*
MW-04											
Monthly	441.14	5/6/2014	NE	41.61	NA	NA	NA	399.53	395.08 - 385.08 (46.06 - 56.06)	82.1	*
		6/2/2014	NE	41.20	NA	NA	NA	399.94		72.4	*
MW-05											
Monthly	429.80	5/6/2014	NE	30.00	NA	NA	NA	399.80	395.83 - 385.83 (33.97 - 43.97)	0.2	*
		6/2/2014	NE	29.61	NA	NA	NA	400.19		0.4	*
MW-06A											
Monthly	432.14	5/6/2014	NE	31.98	NA	NA	NA	400.16	397.31 - 387.31 (34.83 - 44.83)	0.0	*
		6/2/2014	NE	31.62	NA	NA	NA	400.52		0.4	*
MW-06B											
Monthly	432.29	5/6/2014	NE	32.01	NA	NA	NA	400.28	368.24 - 363.24 (64.05 - 69.05)	0.5	*
		6/2/2014	NE	31.65	NA	NA	NA	400.64		0.7	*
MW-06C											
Monthly	432.11	5/6/2014	NE	31.79	NA	NA	NA	400.32	347.16 - 342.16 (84.95 - 89.95)	2.6	*
		6/2/2014	NE	31.46	NA	NA	NA	400.65		0.4	*
MW-06D											
Monthly	431.99	5/6/2014	NE	31.66	NA	NA	NA	400.33	327.27 - 322.27 (104.72 - 109.72)	19.4	*
		6/2/2014	NE	31.31	NA	NA	NA	400.68		0.4	*
MW-07											
Monthly	443.10	5/6/2014	NE	43.50	NA	NA	NA	399.60	400.18 - 390.18 (42.92 - 52.92)	0.3	
		6/2/2014	NE	43.11	NA	NA	NA	399.99		1.5	
MW-08											
Monthly	434.11	5/6/2014	NE	34.43	NA	NA	NA	399.68	400.51 - 390.51 (33.60 - 43.60)	0.3	
		6/3/2014	NE	34.07	NA	NA	NA	400.04		0.0	
MW-09											
Monthly	445.20	5/6/2014	NE	45.28	NA	NA	NA	399.92	398.75 - 388.75 (46.45 - 56.45)	0.0	*
		6/2/2014	NE	44.95	NA	NA	NA	400.25		0.6	*
MW-10											
Monthly	445.03	5/6/2014	NE	45.25	NA	NA	NA	399.78	400.60 - 390.60 (44.43 - 54.43)	0.0	
		6/2/2014	NE	44.94	NA	NA	NA	400.09		0.0	
MW-11											
Monthly	442.33	5/6/2014	NE	42.86	NA	NA	NA	399.47	400.67 - 390.67 (41.66 - 51.66)	1.2	
		6/2/2014	NE	42.49	NA	NA	NA	399.84		1.0	
MW-12											
Monthly	442.60	5/6/2014	NE	43.18	NA	NA	NA	399.42	400.68 - 390.68 (41.92 - 51.92)	0.2	
		6/2/2014	NE	42.74	NA	NA	NA	399.86		0.7	
MW-14											
Monthly	434.44	5/7/2014	NE	34.06	NA	NA	NA	400.38	401.02 - 391.02 (33.42 - 43.42)	45.0	
		6/3/2014	NE	33.69	NA	NA	NA	400.75		74.4	
MW-16											
Monthly	443.39	5/6/2014	NE	44.43	NA	NA	NA	398.96	406.33 - 396.33 (37.06 - 47.06)	0.0	
		6/2/2014	NE	43.97	NA	NA	NA	399.42		0.2	
MW-17											
Monthly	441.57	5/6/2014	NE	43.67	NA	NA	NA	397.90	407.28 - 392.28 (34.29 - 49.29)	0.1	
		6/2/2014	NE	42.48	NA	NA	NA	399.09		0.1	
MW-18											
Monthly	442.04	5/6/2014	NE	43.63	NA	NA	NA	398.41	407.12 - 392.12 (34.92 - 49.92)	0.6	
		6/2/2014	NE	43.08	NA	NA	NA	398.96		0.1	
MW-19											
Weekly	442.77	4/14/2014	NE	44.37	NA	NA	NA	398.40	406.43 - 391.43 (36.34 - 51.34)	0.2	
		4/22/2014	NE	44.44	NA	NA	NA	398.33		0.3	
4/29/2014		NE	44.36	NA	NA	NA	398.41	0.1			
Monthly		5/6/2014	NE	44.13	NA	NA	NA	398.64		0.0	
		5/12/2014	NE	43.98	NA	NA	NA	398.79		0.1	
Weekly		5/19/2014	NE	43.91	NA	NA	NA	398.86		0.0	
		5/27/2014	NE	43.65	NA	NA	NA	399.12		0.0	
Monthly		6/2/2014	NE	43.61	NA	NA	NA	399.16		0.1	
		6/9/2014	NE	43.45	NA	NA	NA	399.32		0.5	
Weekly		6/16/2014	NE	43.27	NA	NA	NA	399.50		0.0	
		6/23/2014	NE	43.09	NA	NA	NA	399.68		0.3	
MW-20											
Monthly	443.67	5/6/2014	NE	44.78	NA	NA	NA	398.89	407.79 - 392.79 (35.88 - 50.88)	0.4	
		6/2/2014	NE	44.28	NA	NA	NA	399.39		0.2	

TABLE 1b
2Q14 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-21												
Monthly	443.81	5/6/2014	NE	44.49	NA	NA	NA	399.32	408.80 - 393.80 (35.01 - 50.01)	0.3		
		6/2/2014	NE	44.05	NA	NA	NA	399.76		0.6		
MW-22												
Weekly	442.16	4/14/2014	NE	43.29	NA	NA	NA	398.87	404.28 - 394.28 (37.88 - 47.88)	0.0		
		4/22/2014	NE	43.42	NA	NA	NA	398.74		0.0		
Monthly		4/29/2014	NE	43.33	NA	NA	NA	398.83		0.1		
		5/6/2014	NE	43.22	NA	NA	NA	398.94		0.0		
Weekly		5/13/2014	NE	43.16	NA	NA	NA	399.00		0.1		
		5/20/2014	NE	42.94	NA	NA	NA	399.22		0.0		
Monthly		5/27/2014	NE	42.82	NA	NA	NA	399.34		0.0		
		6/2/2014	NE	42.74	NA	NA	NA	399.42		0.1		
Weekly		6/9/2014	NE	42.61	NA	NA	NA	399.55		0.3		
		6/16/2014	NE	42.52	NA	NA	NA	399.64		0.1		
			6/23/2014	NE	42.33	NA	NA	399.83		0.0		
MW-24												
Monthly	443.42	5/6/2014	NE	44.14	NA	NA	NA	399.28	404.53 - 394.53 (38.89 - 48.89)	2.9		
		6/2/2014	NE	43.73	NA	NA	NA	399.69		1.0		
P-54												
Monthly	442.18	5/6/2014	NE	42.85	NA	NA	NA	399.33	404.18 - 379.18 (38.00 - 63.00)	1.6		
		6/2/2014	NE	42.45	NA	NA	NA	399.73		0.2		
P-55												
Weekly	443.78	4/14/2014		44.47	44.66	399.12	399.31	0.19	399.27	403.35 - 393.35 (40.43 - 50.43)	87.9	
		4/22/2014		44.58	44.66	399.12	399.20	0.08	399.18		107.7	
Monthly		4/29/2014		44.50	44.63	399.15	399.28	0.13	399.25		116.8	
		5/7/2014		44.40	44.47	399.31	399.38	0.07	399.37		25.1	
Weekly		5/12/2014		44.37	44.45	399.33	399.41	0.08	399.39		23.8	
		5/19/2014		44.21	44.31	399.47	399.57	0.10	399.55		57.0	
Monthly		5/27/2014		44.13	44.18	399.60	399.65	0.05	399.64		47.1	
		6/3/2014		44.06	44.12	399.66	399.72	0.06	399.71		9.7	
Weekly		6/9/2014		43.90	43.97	399.81	399.81	0.07	399.87		146.7	
		6/16/2014		43.93	44.02	399.76	399.76	0.09	399.83		17.5	
			6/23/2014		43.73	43.82	399.96	399.96	0.09		400.03	46.1
P-56												
Monthly	446.02	5/7/2014	NE	47.29	NA	NA	NA	398.73	405.20 - 380.20 (40.82 - 65.82)	0.1		
		6/3/2014	NE	46.77	NA	NA	NA	399.25		0.0		
P-57												
Monthly	446.53	5/7/2014	NE	47.30	NA	NA	NA	399.23	406.07 - 381.07 (40.46 - 65.46)	0.8		
		6/3/2014	NE	46.82	NA	NA	NA	399.71		0.0		
P-58												
Monthly	444.92	5/7/2014	NE	45.35	NA	NA	NA	399.57	404.70 - 379.70 (40.21 - 65.21)	0.0		
		6/3/2014	NE	44.88	NA	NA	NA	400.04		0.0		
P-59												
Monthly	446.78	5/7/2014	NE	48.30	NA	NA	NA	398.48	398.87 - 373.87 (47.91 - 72.91)	0.0		
		6/3/2014	NE	47.79	NA	NA	NA	398.99		0.0	*	
P-60												
Weekly	446.57	4/15/2014		47.96	47.98	398.59	398.61	0.02	398.61	403.12 - 383.12 (43.45 - 63.45)	12.3	
		4/22/2014		48.03	48.07	398.50	398.54	0.04	398.53		44.8	
Monthly		4/29/2014		47.94	47.97	398.60	398.63	0.03	398.63		15.8	
		5/7/2014		47.80	47.84	398.73	398.77	0.04	398.77		10.3	
Weekly		5/12/2014		47.70	47.79	398.78	398.87	0.09	398.85		73.2	
		5/19/2014		47.52	47.65	398.92	399.05	0.13	399.03		59.7	
Monthly		5/27/2014		47.41	47.54	399.03	399.16	0.13	399.14		68.7	
		6/3/2014		47.33	47.47	399.10	399.24	0.14	399.22		74.9	
Weekly		6/9/2014		47.15	47.27	399.30	399.42	0.12	399.40		149.7	
		6/16/2014		47.16	47.28	399.29	399.41	0.12	399.39		33.8	
			6/23/2014		46.96	47.06	399.51	399.61	0.10		399.59	238.4
P-60-11												
Monthly	446.18	5/7/2014	NE	46.00	NA	NA	NA	400.18	413.03 - 383.03 (33.15 - 63.15)	0.4		
		6/3/2014	NE	45.99	NA	NA	NA	400.19		0.0		
P-60-12												
Monthly	443.31	5/7/2014	NE	44.61	NA	NA	NA	398.70	383.31 - 373.31 (60.00 - 70.00)	3.4	*	
		6/3/2014	NE	44.16	NA	NA	NA	399.15		12.4	*	
P-60-12S												
Monthly	443.33	5/7/2014	NE	18.37	NA	NA	NA	424.96	429.49 - 419.49 (13.84 - 23.84)	0.6		
		6/3/2014	NE	18.24	NA	NA	NA	425.09		0.0		
P-60-13												
Monthly	442.43	5/7/2014	NE	42.99	NA	NA	NA	399.44	402.43 - 382.43 (40.00 - 60.00)	0.0		
		6/3/2014	NE	42.81	NA	NA	NA	399.62		0.0		
P-60-13S												
Monthly	442.39	5/7/2014	NE	17.32	NA	NA	NA	425.07	432.39 - 422.39 (10.00 - 20.00)	0.0		
		6/3/2014	NE	17.09	NA	NA	NA	425.30		0.4		

TABLE 1b
2Q14 WEEKLY/MONTHLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & EVENT	TOP OF CASING (elev. ¹)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev. ¹)	PRODUCT (elev. ¹)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ² (elev. ¹)	SCREENED INTERVAL (elev. ¹) (ft btoc)	WELL HEAD PID ³ (ppm)	COMMENTS
P-60-S											
Weekly	446.98	4/14/2014	46.45	46.69	400.29	400.53	0.24	400.48	410.50 - 395.50 (36.48 - 51.48)	0.1	
		4/22/2014	46.63	46.70	400.28	400.35	0.07	400.34		2.6	
4/29/2014		NE	46.66	NA	NA	NA	400.32	1.4			
Monthly		5/7/2014	46.71	46.82	400.16	400.27	0.11	400.25		0.0	
		5/12/2014	46.76	46.79	400.19	400.22	0.03	400.21		0.3	
Weekly		5/19/2014	46.69	46.73	400.25	400.29	0.04	400.28		0.1	
		5/27/2014	46.66	46.72	400.26	400.32	0.06	400.31		0.0	
Monthly		6/3/2014	46.64	46.70	400.28	400.34	0.06	400.33		0.5	
		6/9/2014	46.51	46.60	400.38	400.47	0.09	400.45		0.3	
Weekly		6/16/2014	46.59	46.66	400.32	400.39	0.07	400.38		0.5	
		6/23/2014	46.42	46.47	400.51	400.56	0.05	400.55		0.0	
P-66											
Monthly	436.70	5/7/2014	NE	36.92	NA	NA	NA	399.78	401.98 - 376.98	0.3	
		6/3/2014	NE	36.50	NA	NA	NA	400.20	(34.72 - 59.72)	0.0	
P-68											
Weekly	445.07	4/15/2014	46.26	46.60	398.47	398.81	0.34	398.74	399.81 - 374.81 (45.26 - 70.26)	128.4	
		4/22/2014	46.25	46.40	398.67	398.82	0.15	398.79		168.9	
4/29/2014		46.32	46.53	398.54	398.75	0.21	398.71	92.3			
Monthly		5/7/2014	46.15	46.35	398.72	398.92	0.20	398.88		107.0	
		5/12/2014	45.97	46.11	398.96	399.10	0.14	399.07		70.2	
Weekly		5/19/2014	45.77	45.83	399.24	399.30	0.06	399.29		146.7	
		5/27/2014	45.71	45.79	399.28	399.36	0.08	399.34		182.7	
Monthly		6/3/2014	45.65	45.74	399.33	399.42	0.09	399.40		151.1	
		6/9/2014	45.39	45.48	399.59	399.68	0.09	399.66		18.0	
Weekly		6/16/2014	45.47	45.56	399.51	399.60	0.09	399.58		148.3	
		6/23/2014	45.31	45.43	399.64	399.76	0.12	399.74		208.2	
P-93A											
Monthly	446.58	5/7/2014	NE	47.25	NA	NA	NA	399.33	398.41 - 383.41	1.8	*
		6/3/2014	NE	46.79	NA	NA	NA	399.79	(48.17 - 63.17)	0.0	*
P-93B											
Monthly	446.46	5/7/2014	NE	47.30	NA	NA	NA	399.16	371.86 - 369.86	0.0	*
		6/3/2014	NE	46.81	NA	NA	NA	399.65	(74.60 - 76.60)	1.3	*
P-93C											
Monthly	446.51	5/7/2014	NE	47.18	NA	NA	NA	399.33	352.26 - 350.26	0.2	*
		6/3/2014	NE	46.81	NA	NA	NA	399.70	(94.26 - 96.26)	0.0	*
P-93D											
Monthly	446.89	5/7/2014	NE	47.32	NA	NA	NA	399.57	321.14 - 319.14	1.1	*
		6/3/2014	NE	46.84	NA	NA	NA	400.05	(125.75 - 127.75)	0.0	*
GP-9-PZ											
Monthly	442.41	5/7/2014	NE	43.78	NA	NA	NA	398.63	404.81 - 394.81	1.1	
		6/3/2014	NE	43.19	NA	NA	NA	399.22	(37.60 - 47.60)	0.1	
ROST-3-MW											
Weekly	442.29	4/14/2014	NE	43.03	NA	NA	NA	399.26	404.48 - 394.48 (37.81 - 47.81)	1.0	
		4/22/2014	NE	43.10	NA	NA	NA	399.19		0.0	
4/29/2014		NE	43.08	NA	NA	NA	399.21	1.7			
Monthly		5/6/2014	NE	43.02	NA	NA	NA	399.27		0.0	
		5/12/2014	NE	42.91	NA	NA	NA	399.38		0.3	
Weekly		5/19/2014	NE	42.85	NA	NA	NA	399.44		0.0	
		5/27/2014	NE	42.69	NA	NA	NA	399.60		45.9	
Monthly		6/2/2014	NE	42.65	NA	NA	NA	399.64		0.0	
		6/9/2014	NE	42.50	NA	NA	NA	399.79		0.2	
Weekly		6/16/2014	NE	42.39	NA	NA	NA	399.90		0.3	
		6/23/2014	NE	42.24	NA	NA	NA	400.05		1.0	
ROST-4-PZ											
Weekly	442.13	4/14/2014	41.54	41.62	400.51	400.59	0.08	400.57	407.20 - 397.20 (34.93 - 44.93)	2.5	
		4/22/2014	41.63	41.71	400.42	400.50	0.08	400.48		2.4	
4/29/2014		41.72	41.83	400.30	400.41	0.11	400.39	0.2			
Monthly		5/6/2014	NE	41.88	NA	NA	NA	400.25		0.1	
		5/12/2014	NE	41.89	NA	NA	NA	400.24		0.2	
Weekly		5/19/2014	41.91	41.93	400.20	400.22	0.02	400.22		0.2	
		5/27/2014	NE	41.79	NA	NA	NA	400.34		0.0	
Monthly		6/2/2014	NE	41.81	NA	NA	NA	400.32		0.1	
		6/9/2014	NE	41.71	NA	NA	NA	400.42		0.2	
Weekly		6/16/2014	NE	41.67	NA	NA	NA	400.46		1.4	
		6/23/2014	NE	41.54	NA	NA	NA	400.59		6.2	

TABLE 1b
2Q14 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(A)												
Weekly	442.11	4/14/2014	NE	42.43	NA	NA	NA	399.68	407.34 - 397.34 (34.77 - 44.77)	1.9		
		4/22/2014	NE	42.58	NA	NA	NA	399.53		3.2		
Monthly		4/29/2014	NE	42.49	NA	NA	NA	399.62		0.0		
		5/6/2014	NE	42.43	NA	NA	NA	399.68		0.3		
Weekly		5/12/2014	NE	42.35	NA	NA	NA	399.76		0.3		
		5/19/2014	NE	42.25	NA	NA	NA	399.86		0.0		
Monthly		5/27/2014	NE	42.14	NA	NA	NA	399.97		0.0		
		6/2/2014	NE	42.04	NA	NA	NA	400.07		0.1		
Weekly		6/9/2014	NE	41.22	NA	NA	NA	400.89		0.2		
		6/16/2014	NE	40.43	NA	NA	NA	401.68		0.0		
		6/23/2014	NE	39.55	NA	NA	NA	402.56		0.0		
ROST-4-PZ(B)												
Weekly	442.38	4/14/2014	NE	42.05	NA	NA	NA	400.33	407.33 - 397.33 (35.05 - 45.05)	1.6		
		4/22/2014	NE	42.55	NA	NA	NA	399.83		0.6		
Monthly		4/29/2014	NE	42.55	NA	NA	NA	399.83		0.0		
		5/6/2014	NE	42.55	NA	NA	NA	399.83		0.3		
Weekly		5/12/2014	NE	42.48	NA	NA	NA	399.90		0.4		
		5/19/2014	NE	42.40	NA	NA	NA	399.98		0.0		
Monthly		5/27/2014	NE	42.23	NA	NA	NA	400.15		0.0		
		6/2/2014	NE	42.13	NA	NA	NA	400.25		0.2		
Weekly		6/9/2014	NE	41.94	NA	NA	NA	400.44		0.2		
		6/16/2014	NE	41.81	NA	NA	NA	400.57		0.1		
		6/23/2014	NE	41.60	NA	NA	NA	400.78		0.0		
ROST-4-PZ(C)												
Weekly	442.66	4/14/2014	NE	42.57	NA	NA	NA	400.09	407.71 - 397.71 (34.95 - 44.95)	1.0		
		4/22/2014	NE	42.68	NA	NA	NA	399.98		0.8		
Monthly		4/29/2014	NE	42.78	NA	NA	NA	399.88		0.2		
		5/6/2014	NE	42.84	NA	NA	NA	399.82		0.0		
Weekly		5/12/2014	NE	42.85	NA	NA	NA	399.81		0.3		
		5/19/2014	NE	42.88	NA	NA	NA	399.78		0.1		
Monthly		5/27/2014	NE	42.76	NA	NA	NA	399.90		0.0		
		6/2/2014	NE	42.77	NA	NA	NA	399.89		0.1		
Weekly		6/9/2014	NE	42.69	NA	NA	NA	399.97		0.2		
		6/16/2014	NE	42.62	NA	NA	NA	400.04		0.0		
		6/23/2014	NE	42.51	NA	NA	NA	400.15		0.0		
ROST-4-PZ(D)												
Weekly	442.98	4/14/2014		42.39	42.48	400.50	400.59	0.09	400.57	408.01 - 398.01 (34.97 - 44.97)	0.8	
		4/22/2014		42.46	42.62	400.36	400.52	0.16	400.49		0.3	
Monthly		4/29/2014		42.60	42.65	400.33	400.38	0.05	400.37		0.2	
		5/6/2014		42.68	42.69	400.29	400.30	0.01	400.30		0.9	
Weekly		5/12/2014		42.67	42.72	400.26	400.31	0.05	400.30		0.3	
		5/19/2014		42.69	42.76	400.22	400.29	0.07	400.28		0.4	
Monthly		5/27/2014		42.58	42.63	400.35	400.40	0.05	400.39		0.0	
		6/2/2014		42.58	42.64	400.34	400.40	0.06	400.39		0.1	
Weekly		6/9/2014		42.50	42.53	400.45	400.48	0.03	400.47		0.1	
		6/16/2014		42.45	42.47	400.51	400.53	0.02	400.53		0.1	
		6/23/2014	NE	42.34		NA	NA	NA	400.64		0.0	
ROST-4-PZ(E)												
Weekly	441.96	4/14/2014	NE	40.62	NA	NA	NA	401.34	407.21 - 397.21 (34.75 - 44.75)	1.7		
		4/22/2014	NE	40.60	NA	NA	NA	401.36		1.1		
Monthly		4/29/2014	NE	40.65	NA	NA	NA	401.31		0.2		
		5/6/2014	NE	41.10	NA	NA	NA	400.86		0.4		
Weekly		5/12/2014	NE	40.81	NA	NA	NA	401.15		0.2		
		5/19/2014	NE	40.82	NA	NA	NA	401.14		0.0		
Monthly		5/27/2014	NE	40.83	NA	NA	NA	401.13		0.0		
		6/2/2014	NE	40.91	NA	NA	NA	401.05		0.3		
Weekly		6/9/2014	NE	40.93	NA	NA	NA	401.03		0.2		
		6/16/2014	NE	40.80	NA	NA	NA	401.16		0.0		
		6/23/2014	NE	40.69	NA	NA	NA	401.27		0.0		
ROST-4-PZ(F)												
Weekly	442.12	4/14/2014	NE	40.59	NA	NA	NA	401.53	407.59 - 397.59 (34.53 - 44.53)	0.9		
		4/22/2014	NE	40.63	NA	NA	NA	401.49		0.3		
Monthly		4/29/2014	NE	40.68	NA	NA	NA	401.44		0.3		
		5/6/2014	NE	40.69	NA	NA	NA	401.43		0.4		
Weekly		5/12/2014	NE	40.71	NA	NA	NA	401.41		0.1		
		5/19/2014	NE	40.75	NA	NA	NA	401.37		0.0		
Monthly		5/27/2014	NE	40.70	NA	NA	NA	401.42		3.7		
		6/2/2014	NE	40.73	NA	NA	NA	401.39		0.1		
Weekly		6/9/2014	NE	40.71	NA	NA	NA	401.41		0.4		
		6/16/2014	NE	40.68	NA	NA	NA	401.44		0.4		
		6/23/2014	NE	40.60	NA	NA	NA	401.52		0.2		

TABLE 1b
2Q14 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	4/14/2014	NE	43.23	NA	NA	NA	398.90	407.85 - 397.85 (34.28 - 44.28)	1.1	
		4/22/2014	NE	43.30	NA	NA	NA	398.83		0.1	
4/29/2014		NE	43.25	NA	NA	NA	398.88	16.8			
Monthly		5/6/2014	NE	44.53	NA	NA	NA	397.60		0.0	
		5/12/2014	NE	42.98	NA	NA	NA	399.15		0.4	
Weekly		5/19/2014	NE	42.90	NA	NA	NA	399.23		0.3	
		5/27/2014	NE	42.69	NA	NA	NA	399.44		0.0	
Monthly		6/2/2014	NE	42.65	NA	NA	NA	399.48		0.5	
		6/9/2014	NE	42.51	NA	NA	NA	399.62		0.1	
Weekly		6/16/2014	NE	42.40	NA	NA	NA	399.73		0.1	
		6/23/2014	NE	42.21	NA	NA	NA	399.92		0.0	
ROST-5-PZ											
Monthly	442.22	5/6/2014	NE	NE	NA	NA	NA	NA	429.02 - 419.02	2.9	Well dry
		6/2/2014	NE	NE	NA	NA	NA	NA	(13.20 - 23.20)	0.1	Well dry
ROST-7-PZ											
Monthly	442.19	5/6/2014	NE	23.85	NA	NA	NA	418.34	422.19 - 412.19	0.0	
		6/2/2014	NE	23.47	NA	NA	NA	418.72	(20.00 - 30.00)	0.0	
ROST-10-PZ											
Monthly	444.51	5/6/2014	NE	NE	NA	NA	NA	NA	434.51 - 424.51	0.1	Well dry
		6/2/2014	NE	NE	NA	NA	NA	NA	(10.00 - 20.00)	0.9	Well dry
ROST-21-PZ											
Monthly	443.72	5/6/2014	NE	19.68	NA	NA	NA	424.04	433.72 - 423.72	0.2	
		6/2/2014	NE	19.41	NA	NA	NA	424.31	(10.00 - 20.00)	0.1	
T-12											
Monthly	444.69	5/7/2014	NE	46.39	NA	NA	NA	398.30	398.29 - 372.29	0.5	*
		6/3/2014	NE	45.87	NA	NA	NA	398.82	(46.46 - 72.46)	0.5	*
PZ-1-101											
Monthly	445.52	5/6/2014	NE	45.49	NA	NA	NA	400.03	354.52 - 344.52	0.0	*
		6/2/2014	NE	45.14	NA	NA	NA	400.38	(91.00 - 101.00)	1.2	*
PZ-1-85											
Monthly	445.50	5/6/2014	NE	45.61	NA	NA	NA	399.89	369.70 - 359.70	0.0	*
		6/2/2014	NE	45.30	NA	NA	NA	400.20	(75.80 - 85.80)	0.0	*
PZ-2-70.5											
Monthly	443.15	5/6/2014	NE	43.74	NA	NA	NA	399.41	382.65 - 372.65	84.4	*
		6/2/2014	NE	43.31	NA	NA	NA	399.84	(60.50 - 70.50)	0.7	*
PZ-2-84											
Monthly	443.12	5/6/2014	NE	43.56	NA	NA	NA	399.56	371.12 - 359.12	0.1	*
		6/2/2014	NE	43.13	NA	NA	NA	399.99	(72.00 - 84.00)	1.6	*

NOTES:

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

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

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-01							
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	
2Q14	6.73	18.29	1.145	4.81	0.07	20	
MW-02							
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	
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	
2Q14	6.68	20.81	1.280	16.03	0.09	-105	
MW-03							
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	
2Q14	6.85	19.35	1.267	1.91	0.64	-137	
MW-04							
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	
2Q14	6.81	18.59	1.434	7.85	0.00	-99	

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

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-05							
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	
2Q14	6.77	20.42	1.165	8.64	0.00	-126	
MW-06A							
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	
2Q14	6.58	19.29	1.852	9.74	0.05	-128	
MW-06B							
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	
2Q14	6.93	18.42	1.203	1.60	0.14	-117	
MW-06C							
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	
2Q14	7.01	17.94	1.102	11.44	0.17	-136	

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

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-06D							
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	
2Q14	7.05	17.34	1.424	8.46	0.06	-147	
MW-07							
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	
2Q14	6.87	18.98	1.610	8.87	0.07	-89	
MW-08							
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	
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	
2Q14	6.56	18.82	1.777	9.15	0.02	-65	
MW-09							
3Q11	6.68	22.67	*	*	0.00	-0.08	
4Q11	6.66	18.84	1.012	366.20	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	
2Q14	6.75	17.34	1.273	1.20	0.42	-48	

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

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-10							
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	
2Q14	6.83	17.96	1.734	9.43	0.06	-162	
MW-11							
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	
2Q14	6.74	17.19	1.677	9.63	0.08	-116	
MW-12							
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	
4Q12	6.81	19.19	2.515	6.47	0.00	90	
1Q13	6.79	17.34	1.006	5.83	0.06	1	
2Q13	6.86	19.24	0.958	1.01	0.09	-285	
3Q13	6.85	19.61	1.003	4.21	0.13	261	
4Q13	6.83	18.87	1.030	7.86	0.01	69	
1Q14	6.79	17.15	0.977	4.91	0.14	56	
2Q14	6.80	18.59	0.969	3.00	0.19	98	
MW-13							
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	
2Q14	6.71	20.02	1.459	3.40	0.00	-115	

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

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-14							
4Q11	6.71	18.41	0.966	1783.00	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	
3Q12	6.61	22.82	1.058	5.78	0.00	-63	
4Q12	6.61	19.59	1.137	7.69	0.03	-129	
1Q13	6.65	18.92	0.804	8.18	0.06	-100	
2Q13	6.48	19.09	1.138	5.68	0.03	-129	
3Q13	6.73	20.30	1.076	4.75	0.24	-113	
4Q13	6.70	19.37	1.262	1.83	0.05	-109	
1Q14	6.66	16.71	1.156	3.11	0.03	-90	
2Q14	6.74	19.27	1.371	2.17	0.65	-107	
MW-16							
1Q13	*	19.17	0.851	7.03	0.00	-98	Added to Interim GW Monitoring Program in 1Q13
2Q13	6.57	19.56	0.826	0.96	0.03	-288	
3Q13	6.56	21.37	0.986	9.33	0.28	-63	
4Q13	6.49	18.69	1.283	8.13	0.00	-42	
1Q14	6.55	16.61	1.579	9.95	0.05	-66	
2Q14	6.47	19.14	1.466	4.29	0.04	-95	
MW-22							
1Q13	11.15	17.69	1.096	9.20	0.00	-111	Added to Interim GW Monitoring Program in 1Q13
2Q13	6.76	19.91	1.150	1.64	0.07	-282	
3Q13	6.74	21.40	1.101	21.29	0.01	-105	
4Q13	6.72	20.53	1.171	9.24	0.02	-107	
1Q14	6.78	19.54	1.115	7.57	0.04	-104	
2Q14	6.75	21.83	1.066	8.03	0.05	-108	
MW-24							
2Q13	6.73	18.63	1.203	3.04	0.24	-219	Added to Interim GW Monitoring Program in 2Q13
3Q13	6.75	19.12	1.169	9.18	0.34	207	
4Q13	6.75	18.59	1.371	9.32	1.62	74	
1Q14	6.75	16.98	1.338	8.15	0.08	91	
2Q14	6.69	18.35	1.264	1.63	1.34	98	
P-54							
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	
4Q12	6.72	17.62	1.167	4.76	0.17	146	
1Q13	6.75	17.50	1.061	4.97	0.11	-23	
2Q13	6.70	18.08	1.105	2.88	0.11	-96	Initial Sample
	6.73	17.51	1.035	4.36	0.63	165	Confirmation Sample
3Q13	6.80	18.42	1.091	8.66	4.22	293	
4Q13	6.80	18.09	1.475	6.74	2.46	68	
1Q14	6.74	16.08	1.147	7.53	1.40	108	
2Q14	6.69	17.89	1.065	2.80	2.28	140	

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

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
P-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.
2Q14	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample taken.
P-56							
4Q11	6.68	18.24	1.063	1286.00	0.00	-0.12	Added to Interim GW Monitoring Program in 4Q11
1Q12	6.53	16.08	1.012	4.68	0.04	-5	
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	
1Q13	*	20.98	1.106	4.56	0.00	-47	
2Q13	6.61	22.69	1.218	3.00	0.00	-122	
3Q13	6.70	25.57	1.395	6.56	0.02	-115	
4Q13	6.63	24.88	1.319	1.79	0.01	-91	
1Q14	6.66	21.79	1.248	1.13	0.05	-100	
2Q14	6.68	20.97	1.227	1.79	0.00	-92	
P-57							
4Q11	6.60	18.87	1.220	220.70	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	
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	
2Q14	6.61	21.26	1.309	19.65	0.04	-106	
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	
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	
2Q14	6.53	19.72	1.187	11.10	0.11	-65	

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

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
P-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	
2Q14	6.61	18.96	1.514	17.69	0.18	-92	
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	
2Q14	6.45	21.06	1.203	7.90	0.00	-83	
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	
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	
2Q14	7.36	16.48	0.316	10.22	4.52	-3	
P-93A							
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	
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	
2Q14	7.02	20.74	2.104	18.21	4.97	-60	

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

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
P-93B							
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	
1Q13	6.80	17.81	1.731	2.92	0.12	-116	
2Q13	6.84	17.21	1.666	3.54	0.97	-99	
3Q13	6.80	20.05	1.644	1.56	0.05	-117	
4Q13	6.85	18.53	1.928	9.70	1.75	-0.10	
1Q14	6.84	15.74	1.605	4.53	1.62	-87	
2Q14	6.93	18.96	1.454	3.43	3.47	-76	
P-93C							
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	
2Q14	6.89	18.31	1.308	4.81	0.95	-57	
P-93D							
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	
2Q14	6.97	17.61	1.378	4.61	0.00	-103	
P-114							
4Q11	7.16	20.29	1.287	12.60	3.19	-118.0	Added to Interim GW Monitoring Program in 4Q11
1Q12	7.02	19.70	1.155	7.81	4.25	-6.0	
2Q12	7.01	21.38	1.212	8.60	1.33	-0.06	
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	
2Q14	7.36	20.07	1.245	18.06	1.85	-91	
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	

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

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
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	
2Q14	6.89	18.62	0.974	5.54	0.00	-127	
ROST-4-PZ(C)							
2Q12	6.77	20.00	2.128	0.40	0.00	-1	Added to Interim GW Monitoring Program 2Q12
3Q12	6.74	21.56	0.976	6.67	0.04	-94	
4Q12	6.75	18.50	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	
2Q14	6.61	20.07	2.351	5.94	0.09	-80	
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	
1Q13	6.93	15.73	1.075	2.11	0.00	-117	
2Q13	6.81	18.64	1.177	10.67	0.00	-122	
3Q13	7.06	20.34	1.200	5.39	0.01	-164	
4Q13	6.65	19.39	1.324	6.84	0.00	-97	
1Q14	6.91	16.38	1.183	1.47	0.03	-111	
2Q14	6.94	17.65	1.176	6.70	0.00	-128	

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.

**TABLE 2b
CUMMULATIVE 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
2Q14	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
P-60-13S							
2Q12	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
3Q12	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
4Q12	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
1Q13	NM	NM	NM	NM	NM	NM	Well is dry.
2Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
3Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
4Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
2Q14	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
ROST-5-PZ							
2Q12	NM	NM	NM	NM	NM	NM	Well is dry.
3Q12	NM	NM	NM	NM	NM	NM	Well is dry.
4Q12	NM	NM	NM	NM	NM	NM	Well is dry.
1Q13	NM	NM	NM	NM	NM	NM	Well is dry.
2Q13	NM	NM	NM	NM	NM	NM	Well is dry.
3Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
4Q13	NM	NM	NM	NM	NM	NM	Well is dry.
1Q14	NM	NM	NM	NM	NM	NM	Well is dry.
2Q14	NM	NM	NM	NM	NM	NM	Well is dry.
ROST-7-PZ							
2Q12	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
3Q12	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
4Q12	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
1Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
2Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
3Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
4Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
1Q14	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
2Q14	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
ROST-10-PZ							
2Q12	NM	NM	NM	NM	NM	NM	Well is dry.
3Q12	NM	NM	NM	NM	NM	NM	Well is dry.
4Q12	NM	NM	NM	NM	NM	NM	Well is dry.
1Q13	NM	NM	NM	NM	NM	NM	Well is dry.
2Q13	NM	NM	NM	NM	NM	NM	Well is dry.
3Q13	NM	NM	NM	NM	NM	NM	Well is dry.
4Q13	NM	NM	NM	NM	NM	NM	Well is dry.
1Q14	NM	NM	NM	NM	NM	NM	Well is dry.
2Q14	NM	NM	NM	NM	NM	NM	Well is dry.
ROST-21-PZ							
2Q12	NM	NM	NM	NM	NM	NM	Well is dry.
3Q12	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
4Q12	NM	NM	NM	NM	NM	NM	Well is dry.
1Q13	NM	NM	NM	NM	NM	NM	Well is dry.
2Q13	NM	NM	NM	NM	NM	NM	Well is dry.
3Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
4Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
1Q14	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
2Q14	NM	NM	NM	NM	NM	NM	Well is dry.

NOTES:
1) NM = Not Measured

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

						VOCs																						
Screening Values (mg/L)						Acetone ⁵	Benzene	Butane ⁶	p-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			
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	6.3 ¹	0.005 ¹		4.2 ¹	0.35 ³			0.7 ¹	0.005 ¹	0.1 ¹				0.07 ¹				1.4 ¹	0.005 ²	0.001 ²	0.0077 ¹	0.7 ¹	
						Analytical Results (mg/L)																						
MW-01	MW1-ROX-072711	7/27/2011	43.41 - 58.41	35.77	NE	<0.005	0.0053		<0.005	<0.005	<0.005	<0.005	<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		
	MW1-ROX-120511	12/5/2011		37.10	NE	<0.005 UJ	0.00097		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
	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			
	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			
	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			
	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			
	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			
	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			
	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			
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					
MW1-ROX-011414	1/14/2014	42.77	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001					
MW1-ROX-040714	4/7/2014	48.80 - 58.80	43.28	NE	<0.01	0.00066		<0.005	<0.005	<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					
MW-02	MW2-ROX-072711	7/27/2011	47.19 - 62.19	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			
	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			
	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	<0.001	0.503		
	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			
	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			
	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			
	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			
	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			
	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			
	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			
	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			
	MW2-ROX-012014	1/20/2014		44.00	NE	<0.01	0.0238		<0.005	0.0254	0.0096	0.0015 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0106	0.0043	<0.002	<0.0005	<0.025	0.426			
MW2-ROX-041014	4/10/2014	49.87 - 59.87	44.66	NE	<0.01	0.0214		0.0136	0.0208	0.0077	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.009	<0.001	<0.002	<0.0005	<0.025	0.478				
MW-03	MW3-ROX-080311	8/3/2011	30.98 - 45.98	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			
	MW3-ROX-112911	11/29/2011		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			
	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				
	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				
	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				
	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	<0.001	<0.001	<0.002 UJ	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005		<0.001				
	MW3-ROX-102512	10/25/2012	28.39	NE	<0.005 UJ	0.0017		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001				
	MW3-ROX-010913	1/9/2013	29.35	NE	<0.005	0.0014		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001				
	MW3-ROX-040813	4/8/2013	29.74	NE	<0.005 UJ	0.008		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001				
	MW3-ROX-071113	7/11/2013	26.32	NE	<0.01 UJ	0.0059		<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005		<0.001				
	MW3-ROX-100813	10/8/2013	27.38	NE	<0.01	0.00057		<0.005	<0.0																			

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

						VOCs																								
Screening Values (mg/L)						Acetone ⁵	Benzene	Butane ⁶	p-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					
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	6.3 ¹	0.005 ¹		4.2 ¹	0.35 ³			0.7 ¹	0.005 ¹	0.1 ¹				0.07 ¹				1.4 ¹	0.005 ²	0.001 ²	0.0077 ¹	0.7 ¹			
						Analytical Results (mg/L)																								
MW-04	MW4-ROX-072611	7/26/2011	42.63 - 57.63	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					
	MW4-ROX-072611-DUP	7/26/2011		34.15	NE	<0.005	0.108		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0021				
	MW4-ROX-121511	12/15/2011		33.99	NE	<0.005	0.0381		<0.005	<0.005	<0.005	<0.005	<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				
	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					
	MW4-ROX-050312	5/3/2012		37.45	NE	<0.005	0.0941		<0.005	<0.005	<0.005	<0.005	<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				
	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					
	MW4-ROX-072512	7/25/2012		37.63	NE	<0.005	0.191		<0.005	<0.005	<0.005	<0.005	<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				
	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					
	MW4-ROX-102912	10/29/2012		39.45	NE	<0.01 UJ	0.354		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<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				
	MW4-ROX-011113	1/11/2013		40.20	NE	<0.005	9.04 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<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				
	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	<0.005	<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				
	MW4-ROX-030413	3/4/2013		40.20	NE	<0.5	21.4		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.01	<0.2	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	MW4-ROX-040913	4/9/2013		40.90	NE	<0.02	64.2		<0.01	<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				
	MW4-ROX-040913-DUP	4/9/2013	40.90	NE	<0.01	72.9		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<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					
	MW4-ROX-071713	7/17/2013	37.61	NE	<0.01	12.2		<0.005	<0.005	0.0016 J	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.001	<0.05	0.0015					
	MW4-ROX-101613	10/16/2013	38.80	NE	<0.1	1.7		<0.05	<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					
MW4-ROX-013014	1/30/2014	41.09	NE	<0.01	2.01		<0.005	0.00058 J	<0.005	<0.005	<0.005	<0.005	<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						
MW4-ROX-041614	4/16/2014	41.91	NE	<0.01	0.553		<0.005	<0.005	<0.005	<0.005	<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						
MW-05	MW5-ROX-072611	7/26/2011	31.13 - 46.13	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					
	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					
	MW5-ROX-112111	11/21/2011		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	<0.025	<0.001					
	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						
	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						
	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						
	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						
	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						
	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						
	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	<0.025	<0.001						
	MW5-ROX-100813	10/8/2013	26.97	NE	<0.01	0.0016		<0.005	<0.005	<0.005	0.0064	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001						
MW5-ROX-011714	1/17/2014	29.59	NE	<0.01	0.002		<0.005	<0.005	0.002 J	0.0064	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001							
MW5-ROX-041014	4/10/2014	33.97 - 43.97	30.09	NE	0.021 J	0.0037		<0.005	<0.005	0.0017 J	0.0062	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001						
MW-06A	MW6A-ROX-072611	7/26/2011	31.98 - 46.98	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					
	MW6A-ROX-112111	11/21/2011		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	<0.025	<0.001					
	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	<0.025	<0.001					
	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																

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

						VOCs																							
Screening Values (mg/L)						Acetone ⁵	Benzene	Butane ⁶	p-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				
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	6.3 ¹	0.005 ¹		4.2 ¹	0.35 ³			0.7 ¹	0.005 ¹	0.1 ¹			0.07 ¹			1.4 ¹	0.005 ²	0.001 ²	0.0077 ¹	0.7 ¹				
						Analytical Results (mg/L)																							
MW-06B	MW6B-ROX-072311	7/23/2011	64.05 - 69.05	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	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
	MW6B-ROX-110311	11/3/2011		24.67	NE	<0.05	0.961		<0.05	<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	<0.025	<0.01			
	MW6B-ROX-011712	1/17/2012		26.77	NE	<0.005	0.0013		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001	
	MW6B-ROX-050212	5/2/2012		27.82	NE	<0.005	0.00086		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001	
	MW6B-ROX-080112	8/1/2012		28.39	NE	<0.0032 U	0.00045 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001	
	MW6B-ROX-102412	10/24/2012		30.11	NE	<0.005 UJ	0.0015		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001	
	MW6B-ROX-011713	1/17/2013		31.11	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001	
	MW6B-ROX-040313	4/3/2013		31.68	NE	<0.005 UJ	0.00043 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001	
	MW6B-ROX-070913	7/9/2013		28.25	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001	
	MW6B-ROX-100713	10/7/2013		28.93	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001	
MW6B-ROX-011614	1/16/2014	31.67	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001			
MW6B-ROX-040814	4/8/2014	32.21	NE	<0.01	0.0009		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001			
MW-06C	MW6C-ROX-072411	7/24/2011	84.95 - 89.95	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	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
	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				
	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	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
	MW6C-ROX-050212	5/2/2012		27.62	NE	<0.005	0.0015		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
	MW6C-ROX-080112	8/1/2012		28.15	NE	<0.003 UJ	0.00061		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
	MW6C-ROX-102412	10/24/2012		27.85	NE	<0.005 UJ	0.00035 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
	MW6C-ROX-011713	1/17/2013		30.88	NE	<0.005 UJ	<0.0005 UJ		<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.001 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		
	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	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
	MW6C-ROX-070913	7/9/2013		28.03	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
	MW6C-ROX-100713	10/7/2013		28.72	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
MW6C-ROX-011614	1/16/2014	31.48	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001				
MW6C-ROX-040814	4/8/2014	32.01	NE	<0.01	0.0021		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001				
MW-06D	MW6D-ROX-072311	7/23/2011	104.72 - 109.72	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	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
	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				
	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	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
	MW6D-ROX-050212	5/2/2012		27.45	NE	<0.005	0.0015		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
	MW6D-ROX-080212	8/2/2012		30.56	NE	<0.005 UJ	0.00068		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
	MW6D-ROX-102412	10/24/2012		29.71	NE	<0.005 UJ	0.00055		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
	MW6D-ROX-011713	1/17/2013		30.75	NE	<0.005 UJ	0.00053 J		<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.001 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		
	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	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
	MW6D-ROX-070913	7/9/2013		27.91	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		

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

						VOCs																				
Screening Values (mg/L)						Acetone ⁵	Benzene	Butane ⁶	p-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	
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	6.3 ¹	0.005 ¹		4.2 ¹	0.35 ³			0.7 ¹	0.005 ¹	0.1 ¹			0.07 ¹			1.4 ¹	0.005 ²	0.001 ²	0.0077 ¹	0.7 ¹	
						Analytical Results (mg/L)																				
MW-07	MW7-ROX-072411	7/24/2011	42.92 - 52.92	35.65	NE	<25 UJ	1840		<25	<25	<25	<25	<25	<5	<5	<10	<5	<10	<25	<25	<5	<10	<2.5	<130	<5	
	MW7-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	
	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	
	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	
	MW7-ROX-050412	5/4/2012		39.19	NE	<0.5	738		<0.5	<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	<0.1
	MW7-ROX-080712	8/7/2012		39.50	NE	0.199	591		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.05	<0.01	<0.02	<0.005	<0.25	0.0619
	MW7-ROX-103012	10/30/2012		41.23	NE	<10 UJ	833		<10	<10	<10	<10	<10	<10	<2	<2	<4	<2	<4 UJ	<10	<10	<2	<4	<1	<50	<2
	MW7-ROX-103012-DUP	10/30/2012		41.23	NE	<10 UJ	863		<10	<10	<10	<10	<10	<10	<2	<2	<4	<2	<4 UJ	<10	<10	<2	<4	<1	<50	<2
	MW7-ROX-011513	1/15/2013		42.21	NE	<20	1230		<20	<20	<20	<20	<20	<20	<4	<4	<8	<4	<8	<20	<20	<4	<8	<2	<100	<4
	MW7-ROX-011513-DUP	1/15/2013		42.21	NE	<20	1320		<20	<20	<20	<20	<20	<20	<4	<4	<8	<4	<8	<20	<20	<4	<8	<2	<100	<4
	MW7-ROX-041013	4/10/2013		42.70	NE	<20	475		<20	<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<1	<50	<2
	MW7-ROX-041013-DUP	4/10/2013		42.70	NE	<20	499		<20	<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<1	<50	<2
	MW7-ROX-071713	7/17/2013		39.60	NE	<0.01	1000 J		<0.005	<0.005	0.0023 J J	<0.005	<0.005	<0.005	<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
	MW7-ROX-101613	10/16/2013		40.64	NE	<20	553		<10	<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<1	<50	<2
MW7-ROX-013014	1/30/2014	42.94	NE	<25	1490		<13	<13	<13	<13	<13	<13	<2.5	<2.5	<5	<2.5	<5	<13	<13	<2.5	<5	<1.3	<63	<2.5		
MW7-ROX-041614	4/16/2014	43.79	NE	<50	1390		<25	<25	<25	<25	<25	<25	<5	<5	<10	<5	<10	<25	<25	<5	<10	<2.5	<130	<5		
MW-08	MW8-ROX-072411	7/24/2011	33.60 - 43.60	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	
	MW8-ROX-072411-DUP	7/24/2011		26.02	NE	<25 UJ	1860		<25	<25	<25	<25	<25	<5	<5	<10	<5	<10 UJ	<25	<25	<5	<10	<2.5	<130	<5	
	MW8-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	
	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	
	MW8-ROX-050412	5/4/2012		30.21	NE	<0.5	1070		<0.5	<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	0.393
	MW8-ROX-050412-DUP	5/4/2012		30.21	NE	<0.5	1040		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.05	<2.5	0.396
	MW8-ROX-080712	8/7/2012		30.97	NE	<0.378 U	397 J		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.1	<0.02	<0.04	<0.01	<0.5	0.249
	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	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.05	<0.01	<0.02	<0.005	<0.25	0.232
	MW8-ROX-103012	10/30/2012		32.32	NE	<5 UJ	523		<5	<5	<5	<5	<5	<5	<1	<1	<2	<1	<2 UJ	<5	<5	<1	<2	<0.5	<25	<1
	MW8-ROX-011513	1/15/2013		33.30	NE	<10	1120 J		<10	<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<1	<50	<2
	MW8-ROX-041013	4/10/2013		33.77	NE	<50	969		<50	<25	<25	<25	<25	<25	<5	<5	<10	<5	<10	<25	<25	<5	<10	<2.5	<130	<5
	MW8-ROX-071713	7/17/2013		30.43	NE	<0.008 U	532		<0.005	<0.005	0.0033 J	<0.005	<0.005	<0.005	<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
	MW8-ROX-071713-DUP	7/17/2013		30.43	NE	<0.01	494		<0.005	<0.005	0.0031 J	<0.005	<0.005	<0.005	<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
	MW8-ROX-101613	10/16/2013		31.59	NE	<20	360		<10	<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<1	<50	<2
MW8-ROX-101613-DUP	10/16/2013	31.59	NE	<20	351		<10	<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<1	<50	<2		
MW8-ROX-013014	1/30/2014	34.02	NE	<25	721		<13	<13	<13	<13	<13	<13	<2.5	<2.5	<5	<2.5	<5	<13	<13	<2.5	<5	<1.3	<63	<2.5		
MW8-ROX-013014-DUP	1/30/2014	34.02	NE	<25	748		<13	<13	<13	<13	<13	<13	<2.5	<2.5	<5	<2.5	<5	<13	<13	<2.5	<5	<1.3	<63	<2.5		
MW8-ROX-041614	4/16/2014	34.73	NE	<20	862		<10	<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<1	<50	<2		
MW8-ROX-041614-DUP	4/16/2014	34.73	NE	<20	1060		<10	<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<1	<50	<2		
MW-09	MW9-ROX-072311	7/23/2011	46.45 - 56.45	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	
	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	
	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	
	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	
	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	<0.025	<0.001	
	MW9-ROX-102912	10/29/2012		43.17	NE	<0.005 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001	
	MW9-ROX-011113	1/11/2013		43.90	NE	<0.123 U	<0.0005		<0.005	<0.005	<															

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

						VOCs																					
Screening Values (mg/L)						6.3 ¹	0.005 ¹		4.2 ¹	0.35 ³			0.7 ¹	0.005 ¹	0.1 ¹			0.07 ¹									
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																					
						Acetone ⁵	Benzene	Butane ⁶	p-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		
MW-10	MW10-ROX-072311	7/23/2011	44.43 - 54.43	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		
	MW10-ROX-110111	11/1/2011		37.72	NE	<0.005	0.0022		<0.005	<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	
	MW10-ROX-011612	1/16/2012		39.28	NE	<0.005	0.0026		<0.005	<0.005	<0.005	<0.005	<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	
	MW10-ROX-050112	5/1/2012		40.86	NE	<0.005	0.00079		<0.005	<0.005	<0.005	<0.005	<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	
	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	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.0005		<0.001	
	MW10-ROX-102612	10/26/2012		43.08	NE																						
	MW10-ROX-121712	12/17/2012		43.08	NE	<0.005 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<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	
	MW10-ROX-011013	1/10/2013		44.10	NE	<0.101 U	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001	
	MW10-ROX-012113	1/21/2013		44.10	NE	<0.025	0.003		<0.005 U	<0.005	<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	
	MW10-ROX-040913	4/9/2013		44.60	NE	<0.005	0.00067		<0.01	<0.005	<0.005	<0.005	<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	
	MW10-ROX-070813	7/8/2013		42.27	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<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	
	MW10-ROX-100313	10/3/2013		42.38	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<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	
MW10-ROX-011514	1/15/2014	44.42	NE	0.0174	<0.0005		<0.005	<0.005	<0.005	<0.005	<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			
MW10-ROX-040714	4/7/2014	44.43 - 54.43	45.00	NE	0.0684	0.0018		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	0.0032	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001			
MW-11	MW11-ROX-072411	7/24/2011	41.66 - 51.66	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		
	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		
	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		
	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		
	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		
	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		
	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		
	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		
	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		
	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		
	MW11-ROX-011514	1/15/2014		42.16	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
	MW11-ROX-040714	4/7/2014		41.66 - 51.66	42.70	NE	<0.01	0.0014		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001	
MW-12	MW12-ROX-072411	7/24/2011	41.92 - 51.92	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		
	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		
	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		
	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		
	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		
	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		
	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		
	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		
	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		
	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		
	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								

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

						VOCs																			
Screening Values (mg/L)						Acetone ⁵	Benzene	Butane ⁶	p-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
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	6.3 ¹	0.005 ¹		4.2 ¹	0.35 ³			0.7 ¹	0.005 ¹	0.1 ¹			0.07 ¹			1.4 ¹	0.005 ²	0.001 ²	0.0077 ¹	0.7 ¹
						Analytical Results (mg/L)																			
MW-13	MW13-ROX-080311	8/3/2011	25.57 - 35.57	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
MW13-ROX-012914	1/29/2014	29.63	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
MW13-ROX-041114	4/11/2014	30.15	NE	<0.01	0.00058		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
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
	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
	MW14-ROX-080312	8/3/2012		NM	NE	<0.005	0.0131		<0.005	0.0015 J	0.0027 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.00065 J
	MW14-ROX-103112	10/31/2012		32.02	NE	<0.005 UJ	0.00093		<0.005	<0.005	0.0028 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW14-ROX-011813	1/18/2013		33.05	NE	<0.005	0.0017		<0.005	0.0014 J	0.0032 J	0.0011 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW14-ROX-041113	4/11/2013		33.31	NE	<0.01	0.0125 J		<0.01	0.0021 J	0.0048 J	0.0016 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW14-ROX-071213	7/12/2013		30.36	NE	<0.01	0.00064		<0.005	0.00066 J	0.002 J	0.0013 J	<0.005	<0.001 UJ	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW14-ROX-101013	10/10/2013		30.80	NE	<0.01	<0.0005		<0.005	<0.005	0.0013 J	0.0012 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0011 J	<0.001	<0.002	<0.0005	<0.025	<0.001
MW14-ROX-012914	1/29/2014	33.67		NE	<0.01	<0.0005		<0.005	<0.005	0.0013 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001	
MW14-ROX-041114	4/11/2014	34.30	NE	<0.01	0.0017		<0.005	<0.005	<0.005	0.00046 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
MW-16	MW16-ROX-012313	1/23/2013	37.06 - 47.06	43.05	NE	<0.005	0.00057 J		0.0029 J	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025 UJ	<0.001
	MW16-ROX-040813	4/8/2013		43.39	NE	<0.005 UJ	<0.00058 U		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW16-ROX-070813	7/8/2013		40.62	NE	<0.01	<0.00062 U		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW16-ROX-100813	10/8/2013		41.62	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW16-ROX-011514	1/15/2014		43.76	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
MW16-ROX-040914	4/9/2014	44.63	NE	<0.01	0.00034 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
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
	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
	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
	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
	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
	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
	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
	MW22-ROX-012014	1/20/2014		42.49	NE	<0.01	1.47		0.0804	0.0357	0.0128	0.0147	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0094	0.0028	<0.002	<0.0005	<0.025	3.17
	MW22-ROX-012014-DUP	1/20/2014		42.49	NE	<0.01	1.58		0.0815	0.0355	0.0127	0.0146	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0094	<0.001	<0.002	<0.0005	<0.025	3.4

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

						VOCs																			
Screening Values (mg/L)						Acetone ⁵	Benzene	Butane ⁶	p-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
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	6.3 ¹	0.005 ¹		4.2 ¹	0.35 ³			0.7 ¹	0.005 ¹	0.1 ¹			0.07 ¹			1.4 ¹	0.005 ²	0.001 ²	0.0077 ¹	0.7 ¹
						Analytical Results (mg/L)																			
P-54	P54-ROX-072411	7/24/2011	38.00 - 63.00	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	P54-ROX-011514	1/15/2014	42.20	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001	
P54-ROX-040914	4/9/2014	42.80	NE	<0.01	0.00081		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001		
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
	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
	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
	P55-ROX-050912	5/9/2012	40.43 - 50.43	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
	P55-ROX-012113	1/21/2013		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	<0.025	0.316
	P55-ROX-012113	1/21/2013		43.60	NE	<0.005	0.538		<0.253 U	0.0203	0.0143	0.0013 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0055	<0.001	<0.002	<0.0005	<0.025	0.366
	P55-ROX-041513	4/15/2013		43.63	NE	<0.02 UJ	0.434		<0.01	0.0052 J	0.0196	<0.01	<0.01	<0.002	<0.002	<0.004	<0.002	<0.004	<0.01	<0.01	<0.002	<0.004	<0.001	<0.05	0.35
	P55-ROX-071613	7/16/2013		40.06	NE	<0.01	0.573	0.88	<0.005	0.0256	0.0155	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0065	<0.001	<0.002	<0.0005	<0.025	0.495
P55-ROX-101013	10/10/2013	41.67	NE	<0.01	0.757		<0.005	0.0239	0.0147	0.0013 J	<0.005	<0.001	<0.001	0.005	<0.001	0.0017 J	<0.005	0.0066	<0.001	<0.002	<0.0005	<0.025	0.602		
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
	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
	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
	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
	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
	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
	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
	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
	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
	P56-ROX-012214	1/22/2014		46.35	NE	<0.01	0.0895		<0.005	0.0033 J	0.0023 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0018 J	<0.001	<0.002	<0.0005	<0.025	0.305
P56-ROX-041414	4/14/2014	47.32	NE	<0.01	0.128		<0.005	0.0069	0.0046 J	0.0014 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0034 J	<0.001	<0.002	<0.0005	<0.025	0.608		
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
	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
	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
	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
	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					

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

						VOCs																							
Screening Values (mg/L)						Acetone ⁵	Benzene	Butane ⁶	p-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				
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	6.3 ¹	0.005 ¹		4.2 ¹	0.35 ³			0.7 ¹	0.005 ¹	0.1 ¹				0.07 ¹			1.4 ¹	0.005 ²	0.001 ²	0.0077 ¹	0.7 ¹			
						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	<0.025	<5			
	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	<0.025	0.97 J			
	P58-ROX-011912-D	1/19/2012		39.73	NE	<0.005	474		<0.005	0.0235 J	0.0168 J	0.0387 J	<0.005	<0.001	0.0014 J	<0.002	<0.001	<0.002	<0.005	0.0123 J	<0.001	<0.002	<0.0005	<0.025	<0.025	1.03			
	P58-ROX-050712	5/7/2012		40.90	NE	<0.5	477		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.05	<2.5	<2.5	1.03		
	P58-ROX-050712-DUP	5/7/2012		40.90	NE	<0.5	440		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.05	<2.5	<2.5	1		
	P58-ROX-080612	8/6/2012		41.63	NE	<0.1 UJ	313		<0.1 UJ	<0.1	<0.1	0.0317 J	<0.1	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.1	<0.02	<0.04	<0.01	<0.05	<0.05	<2.5	<2.5	0.889	
	P58-ROX-080612-DUP	8/6/2012		41.63	NE	<0.05	308		<0.05	<0.05	0.0176 J	0.0339 J	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.01	<0.02	<0.05	0.0118 J	<0.01	<0.02	<0.005	<0.25	<0.25	0.931	
	P58-ROX-110612	11/6/2012		43.09	NE	<0.5 UJ	415		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1 UJ	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.05	<2.5	<2.5	0.844		
	P58-ROX-121012	12/10/2012		43.09	NE																								
	P58-ROX-012213	1/22/2013		44.21	NE	<5	552		<5	<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<0.5	<25	<25	1.27		
	P58-ROX-041113	4/11/2013		44.40	NE	<20	532		<20	<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<1	<50	<50	1.28 J		
	P58-ROX-071613	7/16/2013		41.49	NE	<0.01	398		<0.005	0.0239	0.0215	0.0532	<0.005	<0.001	0.0017	<0.002	<0.001	<0.002	<0.005	0.0152	<0.001	<0.002	<0.0005	<0.025	<0.025	1.07			
	P58-ROX-101413	10/14/2013		42.19	NE	<0.01	647		<0.005	0.023	0.0235	0.0483	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0143	<0.001	<0.002	<0.0005	<0.025	<0.025	1.53			
	P58-ROX-020314	2/3/2014		44.66	NE	<10	496		<5	<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<0.5	<25	<25	0.767 J		
P58-ROX-041514	4/15/2014	40.21 - 65.21	45.66	NE	<0.01 UJ	782		0.0056 J	0.0216 J	0.0185 J	0.0396 J	<0.005	<0.001	0.0013 J	<0.002	<0.001	<0.002	<0.005	0.0116 J	<0.001	<0.002	<0.0005	<0.025	<0.025	0.891 J				
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	<1.3	1.49			
	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	<0.025	1.28			
	P59-ROX-011912-DUP	1/19/2012		42.88	NE	<0.005	7.04		<0.185 U	0.0264 J	0.0055	0.0372 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0038 J	<0.001	<0.002	<0.0005	<0.025	<0.025	1.4			
	P59-ROX-050912	5/9/2012		44.11	NE	<0.25	7.86		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.25	<0.05	<0.1	<0.025	<1.3	<1.3	1.93		
	P59-ROX-080212	8/2/2012		44.07	NE	<0.1 UJ	11		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.1	<0.02	<0.04	<0.01	<0.025	<0.025	1.74		
	P59-ROX-110212	11/2/2012		45.98	NE	<0.5 UJ	10.3		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.05	<2.5	<2.5	1.87		
	P59-ROX-110212-DUP	11/2/2012		45.98	NE	<0.5 UJ	10.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.05	<2.5	<2.5	1.94		
	P59-ROX-013013	1/30/2013		46.60	NE	<0.25	12.1		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.25	<0.05	<0.1	<0.025	<1.3	<1.3	1.9		
	P59-ROX-041213	4/12/2013		46.95	NE	<0.5 UJ	15		<0.25	<0.25	0.289	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.25	<0.05	<0.1	<0.025	<1.3	<1.3	2.85		
	P59-ROX-041213-DUP	4/12/2013		46.95	NE	<0.5 UJ	13.4		<0.25	<0.25	0.288	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.25	<0.05	<0.1	<0.025	<1.3	<1.3	2.57		
	P59-ROX-071613	7/16/2013		44.13	NE	<0.01	10.2		<0.005	0.0213 J	0.0068 J	0.0027 J J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0046 J J	<0.001	<0.002	<0.0005	<0.025	<0.025	2.4			
	P59-ROX-101013	10/10/2013		45.50	NE	<0.01	14.7		<0.005	0.0224	<0.005	0.0024 J	<0.005	<0.001	<0.001	0.0034	<0.001	<0.002	<0.005	0.0051	<0.001	<0.002	<0.0005	<0.025	<0.025	3.19			
	P59-ROX-020314	2/3/2014		47.35	NE	<0.2	15.9		<0.1	0.0165 J	<0.1	<0.1	<0.1	<0.1	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.1	<0.02	<0.04	<0.01	<0.5	<0.5	1.86		
	P59-ROX-041514	4/15/2014		47.91 - 72.91	48.60	NE	<0.01 UJ	14.8		0.0253	0.0181	0.0035 J	0.0014 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0029 J	0.0023	<0.002	<0.0005	<0.025	<0.025	1.69		
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	<0.025	0.0016			
	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	<0.025	0.0015			
	P66-ROX-080312	8/3/2012		30.51	NE	<0.005	0.0994		<0.005	0.0118	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.025	0.0013			
	P66-ROX-103112	10/31/2012		34.75	NE	<0.005	0.223		<0.005	0.0145	0.02	0.0054	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.025	0.0012			
	P66-ROX-011813	1/18/2013		35.70	NE	<0.005	0.0896		<0.005	0.0129	0.0227	0.0087	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.025	0.0014			
	P66-ROX-041113	4/11/2013		36.03	NE	<0.01	0.0444		<0.01	0.0199	0.0249	0.0104	<0.005	<0.001	<0.001	0.00065 J	<0.001	<0.002	<0.005	0.0093	<0.001	<0.002	<0.0005	<0.025	<0.025	0.0036			
	P66-ROX-071213	7/12/2013		33.20	NE	<0.01	0.187		<0.005	0.0146	0.0221	0.006	<0.005	<0.001 UJ	0.00059 J	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.025	0.0022			
	P66-ROX-101013	10/10/2013		33.66	NE	0.0095 J	0.0646		<0.005	0.0141	0.0186	0.0067	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.025	0.0045			
	P66-ROX-110713	11/7/2013																											

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

						VOCs																						
Screening Values (mg/L)						Acetone ⁵	Benzene	Butane ⁶	p-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			
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	6.3 ¹	0.005 ¹		4.2 ¹	0.35 ³			0.7 ¹	0.005 ¹	0.1 ¹				0.07 ¹			1.4 ¹	0.005 ²	0.001 ²	0.0077 ¹	0.7 ¹		
						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	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.229	
	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	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0095	
	P74-ROX-050712	5/7/2012		39.92	NE	<0.005	0.336		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0081	
	P74-ROX-080612	8/6/2012		40.71	NE	<0.05 UJ	2.46		<0.05 UJ	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.01	<0.02	<0.05	<0.05	<0.01	<0.02	<0.005		<0.025	0.0782
	P74-ROX-110112	11/1/2012		41.72	NE	<0.1	3.5		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.1	<0.02	<0.04	<0.01	<0.5	0.0493	
	P74-ROX-011713	1/17/2013		42.65	NE	<0.1	4.99		<0.1	0.0143 J	<0.1	<0.1	<0.1	<0.2	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.1	<0.02	<0.04	<0.01	<0.02	<0.005	<0.5	0.0997
	P74-ROX-041113	4/11/2013		42.83	NE	<0.01	0.144		<0.01	0.0026 J	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0086	
	P74-ROX-071513	7/15/2013		40.11	NE	<0.0046 U	0.117		<0.005	0.0088	0.002 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	0.0017 J	<0.001	<0.002	<0.0005	<0.025	0.0306	
	P74-ROX-101413	10/14/2013		41.72	NE	<0.01	1.55		<0.005	0.0158	0.003 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	0.0031 J	<0.001	<0.002	<0.0005	<0.025	0.0653	
	P74-ROX-012414	1/24/2014		43.35	NE	<0.01	4.45		<0.005	0.0252	0.0031 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	0.0031 J	<0.001	<0.002	<0.0005	<0.025	0.115	
P74-ROX-041514	4/15/2014	44.74	NE	0.0398 J	0.0349		<0.005	0.0013 J	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0043			
P-93A	P93A-ROX-081811	8/18/2011	48.17 - 63.17	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	<0.001	<0.002	<0.005	0.0049 J	<0.001	<0.002	<0.0005	<0.025	<10	
	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	<0.001	<0.002	<0.005	0.0081	<0.001	<0.002	<0.0005	<0.025	0.304	
	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	<0.001	<0.002	<0.005	0.0023 J	<0.001	<0.002	<0.0005	<0.025	0.185	
	P93A-ROX-050812	5/8/2012		42.75	NE	<0.0441 U	200		<0.005 UJ	0.005 J	0.0069 J	0.0179 J	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.001 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	
	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	<0.001	<0.002	<0.005	0.0022 J	<0.001	<0.002	<0.0005	<0.025	0.225	
	P93A-ROX-110712	11/7/2012		45.00	NE	<0.5 UJ	148		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.05	<2.5	0.265
	P93A-ROX-110712-DUP	11/7/2012		45.00	NE	<0.5 UJ	156		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.05	<2.5	0.262
	P93A-ROX-012313	1/23/2013		45.89	NE	<2.5	101		<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<0.25	<13 UJ	<0.5
	P93A-ROX-012313-DUP	1/23/2013		45.89	NE	<2.5	98.5		<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<0.25	<13 UJ	<0.5
	P93A-ROX-041113	4/11/2013		46.29	NE	<5	120		<5	<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<0.25	<13	0.255 J
	P93A-ROX-041113-DUP	4/11/2013		46.29	NE	<5	120		<5	<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<0.25	<13	<0.5
	P93A-ROX-071813	7/18/2013		43.25	NE	<0.0053 U	89.1		<0.005	<0.005	0.0056	0.0916	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	0.0024 J	<0.001	<0.002	<0.001	<0.002	<0.05	0.162
	P93A-ROX-101113	10/11/2013		44.18	NE	<0.01 UJ	197		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	0.0025 J	<0.001	<0.002	<0.0005	<0.025	0.264	
	P93A-ROX-012914	1/29/2014		46.53	NE	<5	136		<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<0.25	<13	<0.5
P93A-ROX-041714	4/17/2014	47.41	NE	<5	132		<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<0.25	<13	<0.5		
P-93B	P93B-ROX-081811	8/18/2011	74.60 - 76.60	39.44	NE	<5	304		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<0.5	<25	<25	<1		
	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	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0533	
	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	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	0.0831 J	0.0274 J	
	P93B-ROX-050812	5/8/2012		42.79	NE	<0.0747 U	304		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0379 J	
	P93B-ROX-080912	8/9/2012		43.69	NE	<0.0672 U	317		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0741	
	P93B-ROX-110712	11/7/2012		45.05	NE	<0.5 UJ	162 J		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.05	<2.5	<0.1
	P93B-ROX-110712-DUP	11/7/2012		45.05	NE	<0.5 UJ	413 J		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.05	<2.5	0.0695 J
	P93B-ROX-012313	1/23/2013		45.89	NE	<5	415		<5	<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<1	<2	<5	<5	<1	<2	<0.5	<25 UJ	<1
	P93B-ROX-041113	4/11/2013		46.32	NE	<5	618		<5	<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<0.25	<13	<0.5
	P93B-ROX-071813	7/18/2013		43.30	NE	<0.01	296		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.001	<0.05	0.0652	
	P93B-ROX-101613	10																										

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

						VOCs																				
Screening Values (mg/L)						Acetone ⁵	Benzene	Butane ⁶	p-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	
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	6.3 ¹	0.005 ¹		4.2 ¹	0.35 ³			0.7 ¹	0.005 ¹	0.1 ¹			0.07 ¹			1.4 ¹	0.005 ²	0.001 ²	0.0077 ¹	0.7 ¹	
						Analytical Results (mg/L)																				
P-93C	P93C-ROX-081811	8/18/2011	94.26 - 96.26	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	
	P93C-ROX-102611	10/26/2011		39.36	NE	<0.005 UJ	0.0014		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-012012	1/20/2012		41.57	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<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
	P93C-ROX-050812	5/8/2012		42.68	NE	<0.005	0.0057		<0.005	<0.005	<0.005	<0.005	<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
	P93C-ROX-080912	8/9/2012		43.57	NE	<0.0056 U	0.00084		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-110812	11/8/2012		45.12	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<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
	P93C-ROX-012313	1/23/2013		45.78	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<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
	P93C-ROX-041213	4/12/2013		46.21	NE	<0.0056 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-071813	7/18/2013		43.31	NE	<0.01	101		<0.005	<0.005	<0.005	<0.005	<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
	P93C-ROX-080813	8/8/2013		43.31	NE	<0.5	19.1		<0.25	<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
P93C-ROX-101613	10/16/2013	44.31	NE	<0.01	1.4		<0.005	<0.005	<0.005	<0.005	<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		
P93C-ROX-012414	1/24/2014	46.44	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<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		
P93C-ROX-041714	4/17/2014	47.34	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<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		
P-93D	P93D-ROX-081811	8/18/2011	125.75 - 127.75	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	
	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	
	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	
	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	
	P93D-ROX-080812	8/8/2012		43.71	NE	<0.005 UJ	0.0134		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	P93D-ROX-110812	11/8/2012		NM	NE	<0.005	0.049		<0.005	<0.005	<0.005	<0.005	<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
	P93D-ROX-012213	1/22/2013		44.21	NE	<0.005	0.106		<0.005	<0.005	<0.005	<0.005	<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
	P93D-ROX-041113	4/11/2013		46.37	NE	<0.01	<0.0005		<0.01	<0.005	<0.005	<0.005	<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
	P93D-ROX-071213	7/12/2013		43.51	NE	<0.01	<0.0005		<0.005	<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
	P93D-ROX-101113	10/11/2013		44.24	NE	<0.01	0.0014		<0.005	<0.005	<0.005	<0.005	<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
P93D-ROX-013114	1/31/2014	46.62	NE	<0.01	0.0012		<0.005	<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		
P93D-ROX-041414	4/14/2014	47.54	NE	<0.01	0.0022		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	0.00069 J	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	0.0164	<0.0005	<0.025	<0.001		
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	
	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	
	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	
	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	
	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	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	P114-ROX-012313	1/23/2013		30.22	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<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
	P114-ROX-041513	4/15/2013		31.80	NE	<0.0059 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	P114-ROX-071813	7/18/2013		27.22	NE	<0.251 U	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	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	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	P114-ROX-101713	10/17/2013		29.43	NE	0.0047 J	0.00074		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
P114-ROX-012814	1/28/2014	32.11	NE	0.142	0.0013		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.00							

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

						VOCs																						
Screening Values (mg/L)						Acetone ⁵	Benzene	Butane ⁶	p-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			
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	6.3 ¹	0.005 ¹		4.2 ¹	0.35 ³			0.7 ¹	0.005 ¹	0.1 ¹			0.07 ¹				1.4 ¹	0.005 ²	0.001 ²	0.0077 ¹	0.7 ¹		
						Analytical Results (mg/L)																						
ROST-4-PZ(C)	ROST4PZ-C-051412	5/14/2012	34.95 - 44.95	39.04	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001			
	ROST4PZ-C-ROX-072512	7/25/2012		39.10	NE	<0.005	0.0849		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.177			
	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			
	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			
	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			
	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			
	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			
	ROST4PZC-ROX-011714	1/17/2014	41.92	NE	<0.01	0.0015		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0039				
ROST4PZC-ROX-041014	4/10/2014	42.05	NE	<0.01	0.0019		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.00059 J					
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			
	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			
	T12-ROX-050912	5/9/2012		42.62	NE	<0.025	1.48		<0.025	<0.025	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	<0.005	<0.01	<0.025	<0.025	<0.005	<0.01	<0.0025	<0.13	1.88		
	T12-ROX-080212	8/2/2012		41.92	NE	<0.05 UJ	1.64		<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.05	<0.01	<0.02	<0.005		<0.005		0.573		
	T12-ROX-110512	11/5/2012		43.91	NE	<0.05	1.71		<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.05	<0.01	<0.02	<0.005	<0.25	1.73				
	T12-ROX-011813	1/18/2013		44.50	NE	<0.025	2.03		<0.0795 U	0.0056 J	0.0036 J	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	<0.025	<0.025	<0.005	<0.01	<0.0025	<0.13 UJ	0.426			
	T12-ROX-041513	4/15/2013		44.99	NE	<0.1 UJ	1.61		<0.05	<0.05	0.0595	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.05	<0.01	<0.02	<0.005	<0.25	1.03			
	T12-ROX-071613	7/16/2013		42.33	NE	<0.01	1.65		<0.005	0.0069 J	0.003 J J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0025 J J	<0.001	<0.002	<0.0005	<0.025	0.45			
	T12-ROX-101513	10/15/2013		43.73	NE	0.0803	2.02		0.0246 J	0.0098 J	0.0038 J	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	<0.025	<0.025	<0.005	<0.01	<0.0025	<0.13	1.82			
	T12-ROX-012414	1/24/2014		45.26	NE	<0.01	2.48		<0.005	0.0083	0.0029 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.518			
T12-ROX-041514	4/15/2014	46.72	NE	<0.01 UJ	2.07		0.017	0.0062	0.0024 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0018 J	<0.001	<0.002	<0.0005	<0.025	0.376					

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

Screening Values (mg/L)						VOCs																						
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Ethyl methacrylate	Hexachlorobutadiene	Hexane ⁶	n-Hexanone (Methyl N-Butyl Ketone)	Isopentane ⁶	Isopropylbenzene (Cumene)	n-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)		
						0.007 ³	0.42 ³	0.035 ³		0.7 ¹	0.56 ³	0.07 ¹	0.14 ¹	0.7 ³	1.0 ¹	0.0056 ³	0.07 ¹	0.005 ¹				0.07 ³	7.0 ²	10 ¹		10 ¹		
						Analytical Results (mg/L)																						
MW-01	MW1-ROX-072711	7/27/2011	43.41 - 58.41	35.77	NE	<0.005	<0.005	<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	<0.005	<0.001	<0.001	<0.001	<0.001	
	MW1-ROX-120511	12/5/2011		37.10	NE	<0.005	<0.005	<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	<0.005	<0.001	<0.001	<0.001	<0.001	
	MW1-ROX-011612	1/16/2012	48.80 - 58.80	37.75	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0032	0.000079 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	
	MW1-ROX-050112	5/1/2012		39.09	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0031	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	
	MW1-ROX-073012	7/30/2012		39.39	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0022	0.0001 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	
	MW1-ROX-102612	10/26/2012		41.22	NE																							
	MW1-ROX-121712	12/17/2012		41.22	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0022	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	
	MW1-ROX-011013	1/10/2013		41.89	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0015	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	
	MW1-ROX-040913	4/9/2013		42.55	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0012	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	
	MW1-ROX-070813	7/8/2013		39.56	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0049	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	
MW1-ROX-100313	10/3/2013	40.28		NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0013	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001		
MW1-ROX-011414	1/14/2014	42.77		NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0018	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001		
MW1-ROX-040714	4/7/2014	43.28	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001			
MW-02	MW2-ROX-072711	7/27/2011	47.19 - 62.19	37.04	NE	<0.05	<0.05	<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			
	MW2-ROX-072711-DUP	7/27/2011		37.04	NE	<0.05	<0.05	<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			
	MW2-ROX-112811	11/28/2011	49.87 - 59.87	38.03	NE	<0.005	<0.005	<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			
	MW2-ROX-011612	1/16/2012		38.89	NE	<0.025	<0.025	<0.025		0.0832	<0.025	<0.005	0.0859	0.0993	0.0375	<0.025	<0.025	<0.005		0.388	0.162	<0.025	0.857	0.056	0.913			
	MW2-ROX-050112	5/1/2012		40.25	NE	<0.025	<0.025	<0.025		0.0886	<0.025	<0.005	0.0497	0.119	0.0445	<0.025	<0.025	<0.005		0.413	0.154	<0.025	1.14	0.0797	1.22			
	MW2-ROX-073012	7/30/2012		40.60	NE	<0.005	<0.005	<0.005		0.0818	<0.005	<0.001	0.0554	0.116	0.0374	<0.005	<0.005	<0.001		0.338	0.135	<0.005	1.27	0.0906	1.34			
	MW2-ROX-102612	10/26/2012		42.35	NE	<0.025	<0.025	<0.025		0.0764	<0.025	0.0115	0.0821	0.104	0.0216	<0.025	<0.025	<0.005		0.299	0.129	<0.025	0.878	0.052	0.93			
	MW2-ROX-011113	1/11/2013		42.94	NE	<0.01	<0.01	<0.01		0.0879	<0.01	<0.002	0.0768	0.121	0.0093	<0.01	<0.01	<0.002		0.219	0.105	<0.01	0.685	0.0287	0.713			
	MW2-ROX-040913	4/9/2013		43.70	NE	<0.025	<0.025	<0.025		0.085	<0.025	<0.005	0.0578	0.11	0.0073	<0.025	<0.025	<0.005		0.338	0.155	<0.025	1.01	0.0454	1.05			
	MW2-ROX-071113	7/11/2013		40.82	NE	<0.005	<0.005	<0.005 UJ		0.0931	<0.005	0.0062	0.114	0.127	0.11	<0.005	<0.005	<0.001		0.522	0.175	<0.005 UJ	1.88	0.174	1.88			
MW2-ROX-100813	10/8/2013	41.73		NE	<0.005	<0.005	0.0079		0.0983	<0.005	0.0032	0.0939	0.132	0.0164	<0.005	<0.005	<0.001		0.368	0.174	0.0768	0.912	0.0519	0.912				
MW2-ROX-012014	1/20/2014	44.00		NE	<0.005	<0.005	<0.005		0.102	<0.005	<0.001	0.0663	0.133	0.0099	<0.005	<0.005	<0.001		0.264	0.156	<0.005	0.486	0.0304	0.516				
MW2-ROX-041014	4/10/2014	44.66	NE	<0.005	<0.005	<0.005		0.0816	<0.005	<0.001	0.0474	0.106	0.0072	<0.005	<0.005	<0.001		0.181	0.121	<0.005	0.444	0.0275	0.472					
MW-03	MW3-ROX-080311	8/3/2011	30.98 - 45.98	22.72	NE	<0.005	<0.005	<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			
	MW3-ROX-112911	11/29/2011		24.06	NE	<0.005	<0.005	<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			
	MW3-ROX-112911-DUP	11/29/2011	24.06	NE	<0.005	<0.005	<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				
	MW3-ROX-011612	1/16/2012	24.93	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001				
	MW3-ROX-043012	4/30/2012	26.19	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0039	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001				
	MW3-ROX-072712	7/27/2012	26.60	NE	<0.005	<0.005	<0.005 UJ		<0.005	<0.005	<0.001	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001				
	MW3-ROX-102512	10/25/2012	28.39	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0027	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001				
	MW3-ROX-010913	1/9/2013	29.35	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0008 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	0.007	<0.001	<0.001	<0.001				
	MW3-ROX-040813	4/8/2013	29.74	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001				
	MW3-ROX-071113	7/11/2013	26.32	NE	<0.005	<0.005	<0.005 UJ		0.0049 J	<0.005	0.0035	<0.005	0.0055	0.0013	<0.005	<0.005	<0.001		0.0013 J	<0.005	<0.005 UJ	0.0028	<0.001	0.0028				
MW3-ROX-100813	10/8/2013	27.38	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.00075 J	<0.005	0.0021 J	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	0.0197	0.0011	<0.001	0.0011					
MW3-ROX-011614	1/16/2014	29.91	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001												

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

Screening Values (mg/L)						VOCs																					
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Ethyl methacrylate	Hexachlorobutadiene	Hexane ⁶	n-Hexanone (Methyl N-Butyl Ketone)	Isopentane ⁶	Isopropylbenzene (Cumene)	n-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)	
						0.007 ³	0.42 ³	0.035 ³			0.7 ¹	0.56 ³	0.07 ¹	0.14 ¹	0.7 ³	1.0 ¹	0.0056 ³	0.07 ¹	0.005 ¹				0.07 ³	7.0 ²	10 ¹		10 ¹
Analytical Results (mg/L)																											
MW-04	MW4-ROX-072611	7/26/2011	42.63 - 57.63	34.15	NE	<0.005	<0.005		<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	
	MW4-ROX-072611-DUP	7/26/2011		34.15	NE	<0.005	<0.005		<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	
	MW4-ROX-121511	12/15/2011		33.99	NE	<0.005	<0.005		<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	
	MW4-ROX-011612	1/16/2012	46.06 - 56.06	36.00	NE	0.0017 J	<0.005	<0.005		<0.005	0.0061	<0.005	<0.001	<0.0001	0.0061	0.0283	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0148	0.0025	0.0173	
	MW4-ROX-050312	5/3/2012		37.45	NE	<0.005	<0.005	<0.005		0.0038 J	<0.005	0.0174	<0.0001	<0.005	0.0255	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.016	0.003	0.0189		
	MW4-ROX-050312-DUP	5/3/2012		37.45	NE	<0.005	<0.005	<0.005		0.0036 J	<0.005	0.0162	<0.0001	0.0043 J	0.0252	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0151	0.0031	0.0182		
	MW4-ROX-072512	7/25/2012		37.63	NE	<0.005	<0.005 UJ	<0.005		0.0061	<0.005	0.015	<0.0001	0.0071	0.0418	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0221	0.0042	0.0262		
	MW4-ROX-072512-Dup	7/25/2012		37.63	NE	<0.005	<0.005 UJ	<0.005		0.0063	<0.005	0.0154	<0.0001	0.0072	0.0427	<0.005	<0.005	<0.001		0.00068 J	0.0057	<0.005	0.0214	0.0043	0.0257		
	MW4-ROX-102912	10/29/2012		39.45	NE	<0.01	<0.01	<0.01		0.0029 J	<0.01	0.0324	<0.01	0.0033 J	0.0175	<0.01	<0.01	<0.002		<0.01	<0.01	<0.01	0.0114	<0.002	0.0114		
	MW4-ROX-011113	1/11/2013		40.20	NE	<0.005	<0.005	<0.005		0.0012 J	<0.005	0.0654	<0.005	0.0026 J	0.0075	<0.005	<0.005	<0.001		0.0019 J	0.0024 J	<0.005	0.0056	<0.001	0.0056		
	MW4-ROX-011113-DUP	1/11/2013		40.20	NE	<0.005	<0.005	<0.005		0.0014 J	<0.005	0.0681	<0.005	0.003 J	0.0083	<0.005	<0.005	<0.001		0.0019 J	0.0026 J	<0.005	0.006	<0.001	0.006		
	MW4-ROX-030413	3/4/2013		40.20	NE	<0.5	<0.5	<0.5		<0.5	<0.5	0.112	<0.5	<0.5	<0.1	<0.5	<0.1	<0.1		<0.5	<0.5	<0.5	<0.1	<0.1	<0.1		
	MW4-ROX-040913	4/9/2013		40.90	NE	<0.01	<0.01	<0.01		<0.01	<0.01	0.112	<0.01	<0.01	0.0057	<0.01	<0.01	<0.002		<0.01	<0.01	<0.01	0.0052	<0.001	0.0062		
	MW4-ROX-040913-DUP	4/9/2013		40.90	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.125	<0.005	0.004 J	0.0076	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0073	0.0011	0.0084		
	MW4-ROX-071713	7/17/2013		37.61	NE	<0.005	<0.005	0.0041 J		0.0067	<0.005	0.0559	<0.005	0.008	0.0381	<0.005	<0.005	0.00085 J		0.0012 J	<0.005	0.0392 J	0.0302	0.0052	0.0353		
MW4-ROX-101613	10/16/2013	38.80	NE	<0.05 UJ	<0.05	<0.05		<0.05	<0.05	0.0333 J	<0.05	<0.05	<0.01	<0.05	<0.05	<0.01		<0.05	<0.05	<0.05 UJ	<0.01	<0.01	0.0058 J				
MW4-ROX-013014	1/30/2014	41.09	NE	<0.005	<0.005	<0.005		0.0021 J	<0.005	<0.001	<0.005	<0.001	0.0026 J	0.0037	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0132	0.0049	0.0181			
MW4-ROX-041614	4/16/2014	41.91	NE	<0.005	<0.005	<0.005		0.00059 J	<0.005	<0.001	<0.005	<0.001	0.00081 J	0.00099 J	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0027	0.00039 J	0.0031			
MW-05	MW5-ROX-072611	7/26/2011	31.13 - 46.13	22.00	NE	<0.005	<0.005	<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		
	MW5-ROX-072611-DUP	7/26/2011		22.00	NE	<0.005	<0.005	<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		
	MW5-ROX-112111	11/21/2011		23.46	NE	<0.005	<0.005	<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		
	MW5-ROX-011712	1/17/2012	24.76	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0187	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.00081 U			
	MW5-ROX-050312	5/3/2012	25.89	NE	<0.005	<0.005	<0.005		0.001 J	<0.005	0.022	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001			
	MW5-ROX-072512	7/25/2012	26.18	NE	<0.005	<0.005 UJ	<0.005		0.0066	<0.005	0.013	0.00032	0.0018 J	0.0032	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.008	0.0017	0.0097			
	MW5-ROX-102912	10/29/2012	28.16	NE	<0.005	<0.005	<0.005		0.002 J	<0.005	0.0219	<0.005	<0.005	0.0018	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0018	<0.001	0.0018			
	MW5-ROX-011113	1/11/2013	28.75	NE	<0.005	<0.005	<0.005		0.00086 J	<0.005	0.0295	<0.005	<0.005	0.0008 J	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001			
	MW5-ROX-040913	4/9/2013	29.41	NE	<0.005	<0.005	<0.005		0.00085 J	<0.005	0.0427	<0.005	<0.005	0.002	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.001	<0.001	0.0014			
	MW5-ROX-070913	7/9/2013	26.04	NE	<0.005	<0.005	<0.005		0.0268	<0.005	0.0121	<0.005	0.0132	0.0029	<0.005	<0.005	0.0018		<0.005	<0.005	<0.005 UJ	0.0079	0.0018	0.0097			
	MW5-ROX-100813	10/8/2013	26.97	NE	<0.005	<0.005	<0.005		0.0045 J	<0.005	0.0221	<0.005	<0.005	0.002	<0.005	<0.005	<0.001		<0.005	<0.005	0.0129	0.0044	0.00097 J	0.0054			
MW5-ROX-011714	1/17/2014	29.59	NE	<0.005	<0.005	<0.005		0.00097 J	<0.005	0.0282	<0.005	<0.005	0.0014	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0081	0.0045	0.0127				
MW5-ROX-041014	4/10/2014	30.09	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0344	0.001 J	<0.005	0.0013	<0.005	<0.005	<0.001		0.00052 J	<0.005	<0.005	0.0013	0.00095 J	0.0023				
MW-06A	MW6A-ROX-072611	7/26/2011	31.98 - 46.98	23.76	NE	<0.005	<0.005	<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		
	MW6A-ROX-112111	11/21/2011		25.49	NE	<0.005	<0.005	<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		
	MW6A-ROX-112111-DUP	11/21/2011		25.49	NE	<0.005	<0.005	<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		
	MW6A-ROX-011712	1/17/2012	26.74	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0185	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001			
	MW6A-ROX-050212	5/2/2012	27.77	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001			
	MW6A-ROX-080112	8/1/2012	28.36	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0019	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001			
	MW6A-ROX-102412	10/24/2012	30.06	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001				

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

Screening Values (mg/L)						VOCs																				
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Ethyl methacrylate	Hexachlorobutadiene	Hexane ⁶	n-Hexanone (Methyl N-Butyl Ketone)	Isopentane ⁶	Isopropylbenzene (Cumene)	n-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)
						0.007 ³	0.42 ³	0.035 ³		0.7 ¹	0.56 ³	0.07 ¹	0.14 ¹	0.7 ³	1.0 ¹	0.0056 ³	0.07 ¹	0.005 ¹			0.07 ³	7.0 ²	10 ¹			10 ¹
						Analytical Results (mg/L)																				
MW-06B	MW6B-ROX-072311	7/23/2011	64.05 - 69.05	23.60	NE	<0.005	<0.005	<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	<0.001
	MW6B-ROX-110311	11/3/2011		24.67	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.036 J	<0.0001	<0.005	<0.01	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6B-ROX-011712	1/17/2012		26.77	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0049	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6B-ROX-050212	5/2/2012		27.82	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0115	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6B-ROX-080112	8/1/2012		28.39	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0122	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6B-ROX-102412	10/24/2012		30.11	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0091	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6B-ROX-011713	1/17/2013		31.11	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0166	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6B-ROX-040313	4/3/2013		31.68	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0132	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6B-ROX-070913	7/9/2013		28.25	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0069	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6B-ROX-100713	10/7/2013		28.93	NE	<0.005	<0.005	<0.005 UJ		<0.005	<0.005	0.0113	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
MW6B-ROX-011614	1/16/2014	31.67	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0069	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
MW6B-ROX-040814	4/8/2014	32.21	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0047	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
MW-06C	MW6C-ROX-072411	7/24/2011	84.95 - 89.95	23.43	NE	<0.005	<0.005	<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	<0.001
	MW6C-ROX-110311	11/3/2011		24.47	NE	<0.005	<0.005	<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 UJ	<0.001	<0.001	<0.001	<0.001
	MW6C-ROX-011712	1/17/2012		26.50	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6C-ROX-050212	5/2/2012		27.62	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6C-ROX-080112	8/1/2012		28.15	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6C-ROX-102412	10/24/2012		27.85	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6C-ROX-011713	1/17/2013		30.88	NE	<0.005 UJ	<0.005 UJ	<0.005 UJ		<0.005 UJ	<0.005 UJ	0.0012 J	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ		<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.001 UJ	<0.001 UJ
	MW6C-ROX-040313	4/3/2013		31.41	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0022	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6C-ROX-070913	7/9/2013		28.03	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6C-ROX-100713	10/7/2013		28.72	NE	<0.005	<0.005	<0.005 UJ		<0.005	<0.005	0.00075 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
MW6C-ROX-011614	1/16/2014	31.48	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.00068 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
MW6C-ROX-040814	4/8/2014	32.01	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
MW-06D	MW6D-ROX-072311	7/23/2011	104.72 - 109.72	23.29	NE	<0.005	<0.005	<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	<0.001
	MW6D-ROX-110311	11/3/2011		24.31	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6D-ROX-011712	1/17/2012		26.33	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.00016 U	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6D-ROX-050212	5/2/2012		27.45	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6D-ROX-080212	8/2/2012		30.56	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6D-ROX-102412	10/24/2012		29.71	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6D-ROX-011713	1/17/2013		30.75	NE	<0.005 UJ	<0.005 UJ	<0.005 UJ		<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ		<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.001 UJ	<0.001 UJ
	MW6D-ROX-040313	4/3/2013		31.27	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6D-ROX-070913	7/9/2013		27.91	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
	MW6D-ROX-100713	10/7/2013		28.58	NE	<0.005	<0.005	<0.005 UJ		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001
MW6D-ROX-011614	1/16/2014	31.33	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.00061 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
MW6D-ROX-040814	4/8/2014	31.85	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.00094 J	<0.005	<0.005														

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

Screening Values (mg/L)						VOCs																								
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Ethyl methacrylate	Hexachlorobutadiene	Hexane ⁶	n-Hexanone (Methyl N-Butyl Ketone)	Isopentane ⁶	Isopropylbenzene (Cumene)	n-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)				
						0.007 ³	0.42 ³	0.035 ³		0.7 ¹	0.56 ³	0.07 ¹	0.14 ¹	0.7 ³	1.0 ¹	0.0056 ³	0.07 ¹	0.005 ¹				0.07 ³	7.0 ²	10 ¹		10 ¹				
MW-07	MW7-ROX-072411	7/24/2011	42.92 - 52.92	35.65	NE	<25	<25	<25	<25	<25	<25	<5	0.0081	<25	<5	<25	<25	<5	<25	<25	<25	<25	<25	<25	<5	<5	<5			
	MW7-ROX-110211	11/2/2011		35.95	NE	<5	<5	<5	<5	<5	<5	<5	<1	0.0113	<5	<1	<5	<5	<1	<5	<5	<5	<5	<5	<5	<1	<1	<1		
	MW7-ROX-011812	1/18/2012		38.10	NE	<0.005	<0.005	<0.005	<0.005	0.0101	<0.005	0.0022	0.0134	0.0135	0.158	<0.005	<0.005	<0.001	0.148	0.0341	<0.005	0.137	0.0527	0.19						
	MW7-ROX-011812-DUP	1/18/2012		38.10	NE	<0.005	<0.005	<0.005	<0.005	0.01	<0.005	0.0024	0.0138	0.0138	0.156	<0.005	<0.005	<0.001	0.146	0.0332	<0.005	0.134	0.051	0.184						
	MW7-ROX-050412	5/4/2012		39.19	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	0.0158	<0.5	0.101	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1		
	MW7-ROX-080712	8/7/2012		39.50	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	0.0089	0.0102 J	0.0629	<0.05	<0.05	<0.01	0.1	0.021 J	<0.05	0.12	0.0486	0.169						
	MW7-ROX-103012	10/30/2012		41.23	NE	<10	<10	<10	<10	<10	<10	<2	<10	<10	<2	<10	<10	<2	<10	<10	<10	<10	<10	<10	<2	<2	<2	<2		
	MW7-ROX-103012-DUP	10/30/2012		41.23	NE	<10	<10	<10	<10	<10	<10	<2	<10	<10	<2	<10	<10	<2	<10	<10	<10	<10	<10	<10	<10	<2	<2	<2	<2	
	MW7-ROX-011513	1/15/2013		42.21	NE	<20	<20	<20	<20	<20	<20	<4	<20	<20	<4	<20	<20	<4	<20	<20	<4	<20	<20	<20	<20	<4	<4	<4	<4	
	MW7-ROX-011513-DUP	1/15/2013		42.21	NE	<20	<20	<20	<20	<20	<20	<4	<20	<20	<4	<20	<20	<4	<20	<20	<4	<20	<20	<20	<20	<4	<4	<4	<4	
	MW7-ROX-041013	4/10/2013		42.70	NE	<10	<10	<10	<10	<10	<10	<2	<10	<10	<2	<10	<10	<2	<10	<10	<2	<10	<10	<10	<10	<2	<2	<2	<2	
	MW7-ROX-041013-DUP	4/10/2013		42.70	NE	<10	<10	<10	<10	<10	<10	<2	<10	<10	<2	<10	<10	<2	<10	<10	<2	<10	<10	<10	<10	<2	<2	<2	<2	
	MW7-ROX-071713	7/17/2013		39.60	NE	<0.005	<0.005	<0.005	<0.005	0.0096 J	<0.005	0.0031 J	0.0185 J	0.0173 J	0.289 J	<0.005	<0.005	<0.001	0.117 J	0.0264 J	0.0094 J	0.455 J	0.183 J	0.639 J						
	MW7-ROX-101613	10/16/2013		40.64	NE	<10 UJ	<10	<10	<10	<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2	<10	<10	<2	<10	<10	<10	<10	<2	<2	<2	<2	
MW7-ROX-013014	1/30/2014	42.94	NE	<13	<13	<13	<13	<13	<13	<2.5	<13	<13	<2.5	<13	<13	<2.5	<13	<13	<2.5	<13	<13	<13	<13	<2.5	<2.5	<2.5	<2.5			
MW7-ROX-041614	4/16/2014	43.79	NE	<25	<25	<25	<25	<25	<25	<5	<25	<25	<5	<25	<25	<5	<25	<25	<5	<25	<25	<25	<25	<5	<5	<5	<5			
MW-08	MW8-ROX-072411	7/24/2011	33.60 - 43.60	26.02	NE	<25	<25	<25	<25	<25	<25	<5	0.0237	<25	<5	<25	<25	<5	<25	<25	<25	<25	<25	<25	<5	<5	<5			
	MW8-ROX-072411-DUP	7/24/2011		26.02	NE	<25	<25	<25	<25	<25	<25	<5	0.023	<25	<5	<25	<25	<5	<25	<25	<25	<25	<25	<25	<25	<5	<5	<5		
	MW8-ROX-110211	11/2/2011		27.02	NE	<5	<5	<5	<5	<5	<5	4.94 J	0.0282	<5	<1	<5	<5	<1	<5	<5	<5	<5	<5	<5	<1	<1	<1	<1		
	MW8-ROX-011812	1/18/2012		29.15	NE	<0.005	<0.005	<0.005	<0.005	0.0162	<0.005	1.41 J	0.0239	0.0377	<2	<0.005	<0.005	<0.001	0.163	0.061	<0.005	0.574	0.219	0.794						
	MW8-ROX-050412	5/4/2012		30.21	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.15	0.0186	<0.5	1.55	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	0.978	0.37	1.35						
	MW8-ROX-050412-DUP	5/4/2012		30.21	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.07	0.0188	<0.5	1.52	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	0.939	0.381	1.32						
	MW8-ROX-080712	8/7/2012		30.97	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.878	0.0164	0.0191 J	0.781	<0.1	<0.1	<0.02	0.104	0.0299 J	<0.1	0.623	0.246	0.868						
	MW8-ROX-080712-DUP	8/7/2012		30.97	NE	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.885	0.0164	0.0176 J	0.729	<0.05	<0.05	<0.01	0.0921	0.0265 J	<0.05	0.598	0.235	0.833						
	MW8-ROX-103012	10/30/2012		32.32	NE	<5	<5	<5	<5	<5	<5	<1	<5	<5	<1	<5	<5	<1	<5	<5	<1	<5	<5	<5	<1	<1	<1	<1		
	MW8-ROX-011513	1/15/2013		33.30	NE	<10	<10	<10	<10	<10	<10	<2	<10	<10	2.09	<10	<10	<2	<10	<10	<2	<10	<10	<10	<10	<2	<2	<2	<2	
	MW8-ROX-041013	4/10/2013		33.77	NE	<25	<25	<25	<25	<25	<25	<5	<25	<25	<5	<25	<25	<5	<25	<25	<5	<25	<25	<25	<25	<5	<5	<5	<5	
	MW8-ROX-071713	7/17/2013		30.43	NE	<0.005	<0.005	<0.005	<0.005	0.0173	<0.005	0.197	0.0335	0.0374	0.348	<0.005	<0.005	<0.001	0.199	0.0598	<0.005	1.01	0.361	1.3						
	MW8-ROX-071713-DUP	7/17/2013		30.43	NE	<0.005	<0.005	<0.005	<0.005	0.0174	<0.005	0.187	0.0347	0.0383	0.341	<0.005	<0.005	<0.001	0.203	0.0613	<0.005	0.818 J	0.364	1.05						
	MW8-ROX-101613	10/16/2013		31.59	NE	<10 UJ	<10	<10	<10	<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2	<10	<10	<2	<10	<10	<10	<10	<2	<2	<2	<2	
MW8-ROX-101613-DUP	10/16/2013	31.59	NE	<10 UJ	<10	<10	<10	<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2	<10	<10	<2	<10	<10	<10	<10	<2	<2	<2	<2			
MW8-ROX-013014	1/30/2014	34.02	NE	<13	<13	<13	<13	<13	<13	1.92 J	<13	<13	<2.5	<13	<13	<2.5	<13	<13	<2.5	<13	<13	<13	<13	<2.5	<2.5	<2.5	<2.5			
MW8-ROX-013014-DUP	1/30/2014	34.02	NE	<13	<13	<13	<13	<13	<13	1.99 J	<13	<13	<2.5	<13	<13	<2.5	<13	<13	<2.5	<13	<13	<13	<13	<2.5	<2.5	<2.5	<2.5			
MW8-ROX-041614	4/16/2014	34.73	NE	<10	<10	<10	<10	<10	<10	<2	<10	<10	<2	<10	<10	<2	<10	<10	<2	<10	<10	<10	<10	<2	<2	<2	<2			
MW8-ROX-041614-DUP	4/16/2014	34.73	NE	<10	<10	<10	<10	<10	<10	<2	<10	<10	<2	<10	<10	<2	<10	<10	<2	<10	<10	<10	<10	<2	<2	<2	<2			
MW-09	MW9-ROX-072311	7/23/2011	46.45 - 56.45	38.06	NE	<0.005	<0.005	<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	<0.001	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001			
	MW9-ROX-110111	11/1/2011		37.78	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001		
	MW9-ROX-011612	1/16/2012		39.50	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	0.000062 J	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005								

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

Screening Values (mg/L)						VOCs																							
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Ethyl methacrylate	Hexachlorobutadiene	Hexane ⁶	n-Hexanone (Methyl N-Butyl Ketone)	Isopentane ⁶	Isopropylbenzene (Cumene)	n-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)			
						0.007 ³	0.42 ³	0.035 ³		0.7 ¹	0.56 ³	0.07 ¹	0.14 ¹	0.7 ³	1.0 ¹	0.0056 ³	0.07 ¹	0.005 ¹				0.07 ³	7.0 ²	10 ¹		10 ¹			
						Analytical Results (mg/L)																							
MW-10	MW10-ROX-072311	7/23/2011	44.43 - 54.43	38.01	NE	<0.005	<0.005		<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	<0.001		
	MW10-ROX-110111	11/1/2011		37.72	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<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	<0.001	
	MW10-ROX-011612	1/16/2012		39.28	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.000047 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
	MW10-ROX-050112	5/1/2012		40.86	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.000052 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
	MW10-ROX-072712	7/27/2012		41.21	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
	MW10-ROX-102612	10/26/2012		43.08	NE																								
	MW10-ROX-121712	12/17/2012		43.08	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	0.00058 J	<0.001		
	MW10-ROX-011013	1/10/2013		44.10	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	0.016	<0.001	<0.001	<0.001	<0.001		
	MW10-ROX-012113	1/21/2013		44.10	NE	<0.005	<0.005	<0.02	<0.025		<0.005	<0.025	<0.002	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.001	<0.001	
	MW10-ROX-040913	4/9/2013		44.60	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
	MW10-ROX-070813	7/8/2013		42.27	NE	<0.005	<0.005		<0.005	1.9	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
MW10-ROX-100313	10/3/2013	42.38	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001				
MW10-ROX-011514	1/15/2014	44.42	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001				
MW10-ROX-040714	4/7/2014	44.43 - 54.43	45.00	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001			
MW-11	MW11-ROX-072411	7/24/2011	41.66 - 51.66	34.3	NE	<0.005	<0.005		<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	<0.001		
	MW-11-ROX-110211	11/2/2011		35.44	NE	<0.005	<0.005		<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 UJ	<0.001	<0.001	<0.001	<0.001		
	MW11-ROX-011712	1/17/2012		37.44	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001		<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
	MW11-ROX-043012	4/30/2012		38.66	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
	MW11-ROX-072712	7/27/2012		38.90	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.00012	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
	MW11-ROX-102512	10/25/2012		40.59	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
	MW11-ROX-011013	1/10/2013		41.43	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
	MW11-ROX-040813	4/8/2013		42.02	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
	MW11-ROX-070813	7/8/2013		39.24	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
	MW11-ROX-100713	10/7/2013		39.95	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
	MW11-ROX-011514	1/15/2014		42.16	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
MW11-ROX-040714	4/7/2014	41.66 - 51.66	42.70	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001			
MW-12	MW12-ROX-072411	7/24/2011	41.92 - 51.92	35.55	NE	<0.005	<0.005		<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 UJ	<0.001	<0.001	<0.001	<0.001		
	MW12-ROX-110211	11/2/2011		35.70	NE	<0.005	<0.005		<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 UJ	<0.001	<0.001	<0.001	<0.001		
	MW-12-ROX-110211-DUP	11/2/2011		35.70	NE	<0.005	<0.005		<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 UJ	<0.001	<0.001	<0.001	<0.001		
	MW12-ROX-011712	1/17/2012		37.70	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
	MW12-ROX-011712-DUP	1/17/2012		37.70	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
	MW12-ROX-043012	4/30/2012		38.98	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
	MW12-ROX-072712	7/27/2012		39.22	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
	MW12-ROX-102512	10/25/2012		40.95	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
	MW12-ROX-011013	1/10/2013		41.83	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	0.00089 J	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001		
	MW12-ROX-040813	4/8/2013		42.46	NE	<0.005	<0.005		<0.005		&																		

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

Screening Values (mg/L)						VOCs																							
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Ethyl methacrylate	Hexachlorobutadiene	Hexane ⁶	n-Hexanone (Methyl N-Butyl Ketone)	Isopentane ⁶	Isopropylbenzene (Cumene)	n-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)			
						0.007 ³	0.42 ³	0.035 ³		0.7 ¹	0.56 ³	0.07 ¹	0.14 ¹	0.7 ³	1.0 ¹	0.0056 ³	0.07 ¹	0.005 ¹			0.07 ³	7.0 ²	10 ¹			10 ¹			
						Analytical Results (mg/L)																							
MW-13	MW13-ROX-080311	8/3/2011	25.57 - 35.57	21.67	NE	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001		
	MW13-ROX-110311	11/3/2011		22.85	NE	<0.005	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	
	MW13-ROX-012012	1/20/2012		24.77	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0066 J	0.00021	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	
	MW13-ROX-050712	5/7/2012		25.79	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0083	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	
	MW13-ROX-080812	8/8/2012		26.67	NE	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 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	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.001 UJ	
	MW13-ROX-110812	11/8/2012		25.30	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0093	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW13-ROX-012313	1/23/2013		29.26	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0082	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	
	MW13-ROX-041213	4/12/2013		29.44	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0093	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	
	MW13-ROX-071213	7/12/2013		25.67	NE	<0.005	<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.005	0.0094	<0.005	0.00064 J	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	
MW13-ROX-100913	10/9/2013	26.94	NE	<0.005	<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.005	0.0072	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001			
MW13-ROX-012914	1/29/2014	29.63	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.008	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001			
MW13-ROX-041114	4/11/2014	30.15	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0062	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001			
MW-14	MW14-ROX-110911	11/9/2011	Unknown			<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001		
	MW14-ROX-051012	5/10/2012	33.42 - 43.42	NM	NE	<0.005	<0.005	<0.005		0.0104	<0.005	<0.001	0.00099	0.0078	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	0.0016	0.00041 J	0.002		
	MW14-ROX-080312	8/3/2012		NM	NE	<0.005	<0.005	<0.005		0.0173	<0.005	<0.001	0.0013	0.0137	0.00093 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	0.0033	0.00061 J	0.0039		
	MW14-ROX-103112	10/31/2012		32.02	NE	<0.005	<0.005	<0.005		0.0161	<0.005	<0.001	<0.005	0.0121	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	0.0024	<0.001	0.0024		
	MW14-ROX-011813	1/18/2013		33.05	NE	<0.005	<0.005	<0.005		0.021	<0.005	<0.001	<0.005	0.0162	0.00097 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	0.0026	<0.001	0.003		
	MW14-ROX-041113	4/11/2013		33.31	NE	<0.005	<0.005	<0.005		0.0346	<0.005	<0.001	<0.005	0.0206	0.0014	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	0.0038	<0.001	0.0043		
	MW14-ROX-071213	7/12/2013		30.36	NE	<0.005	<0.005 UJ	<0.005		0.0168	<0.005	<0.001	<0.005	0.0109	0.00059 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005 UJ	0.0026	<0.001	0.0029		
	MW14-ROX-101013	10/10/2013		30.80	NE	<0.005	<0.005	<0.005		0.0011 J	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	0.00088 J	0.0011 J	<0.005	<0.001	<0.001	<0.001		
MW14-ROX-012914	1/29/2014	33.67		NE	<0.005	<0.005	<0.005		0.0036 J	<0.005	<0.001	<0.005	0.002 J	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001			
MW14-ROX-041114	4/11/2014	34.30	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001				
MW-16	MW16-ROX-012313	1/23/2013	37.06 - 47.06	43.05	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001		
	MW16-ROX-040813	4/8/2013		43.39	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001		
	MW16-ROX-070813	7/8/2013		40.62	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001		
	MW16-ROX-100813	10/8/2013		41.62	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001		
	MW16-ROX-011514	1/15/2014		43.76	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001		
MW16-ROX-040914	4/9/2014	44.63	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001				
MW-22	MW22-ROX-012313	1/23/2013	37.88 - 47.88	41.80	NE	<0.25	<0.25	<0.25		0.126 J	<0.25	<0.05	0.396	0.22 J	10.5	<0.25	<0.25	<0.05		1.23	0.288	<0.25 UJ	7.56	3.73	11.3				
	MW22-ROX-012313-DUP	1/23/2013		41.80	NE	<0.25	<0.25	<0.25		0.124 J	<0.25	<0.05	0.377	0.234 J	9.06	<0.25	<0.25	<0.05		1.26	0.291	<0.25 UJ	6.96	3.52	10.5				
	MW22-ROX-040513	4/5/2013		42.23	NE	<0.005	<0.005	<0.005		0.159 J	0.0124 J	<0.001	0.286 J	0.29 J	6.14	<0.005	<0.005	<0.001		0.931	0.379 J	<0.005	5.15	2.64	7.79				
	MW22-ROX-071113	7/11/2013		39.35	NE	<0.005	<0.005	<0.005 UJ		0.131	0.0102	<0.001	0.345	0.242	3.92	<0.005	<0.005	<0.001		0.864	0.309	<0.005 UJ	4.13	2.26	6.39				
	MW22-ROX-071113-DUP	7/11/2013		39.35	NE	<0.005	<0.005	<0.005 UJ		0.133	0.0103	<0.001	0.362	0.245	3.57	<0.005	<0.005	<0.001		0.754	0.311	<0.005 UJ	3.83	2.05	5.88				
	MW22-ROX-100913	10/9/2013		40.39	NE	<0.005	<0.005 UJ	<0.005		0.137	0.0101	<0.001	0.47	0.244	6.02	<0.005</													

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

Screening Values (mg/L)						VOCs																						
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Ethyl methacrylate	Hexachlorobutadiene	Hexane ⁶	n-Hexanone (Methyl N-Butyl Ketone)	Isopentane ⁶	Isopropylbenzene (Cumene)	n-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)		
						0.007 ³	0.42 ³	0.035 ³			0.7 ¹	0.56 ³	0.07 ¹	0.14 ¹	0.7 ³	1.0 ¹	0.0056 ³	0.07 ¹	0.005 ¹				0.07 ³	7.0 ²	10 ¹		10 ¹	
						Analytical Results (mg/L)																						
P-54	P54-ROX-072411	7/24/2011	38.00 - 63.00	35.38	NE	<0.005	<0.005	<0.005	<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	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	
	P54-ROX-110311	11/3/2011		35.49	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001
	P54-ROX-011712	1/17/2012		37.17	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.000089 U	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001
	P54-ROX-050412	5/4/2012		38.77	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.0001	<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	<0.001
	P54-ROX-080212	8/2/2012		38.95	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001
	P54-ROX-103012	10/30/2012		40.70	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<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	<0.001
	P54-ROX-011113	1/11/2013		41.56	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001
	P54-ROX-041013	4/10/2013		41.80	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<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	<0.001
	P54-ROX-050313	5/3/2013		41.80	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001
	P54-ROX-071113	7/11/2013		39.07	NE	<0.005	<0.005	<0.005 UJ	<0.005	<0.005	<0.005	<0.001	<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	<0.001
	P54-ROX-100813	10/8/2013		39.94	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001
P54-ROX-011514	1/15/2014	42.20	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<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	<0.001		
P54-ROX-040914	4/9/2014	42.80	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001		
P-55	P55-ROX-103111	10/31/2011	39.82 - 64.82	39.15	NE	<0.005	<0.005	<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		
	P55-ROX-011912	1/19/2012		41.09	NE	<0.005	<0.005	<0.005		0.0105 J	<0.005	<0.001	0.0197	0.0173	0.0337	<0.005	<0.005	<0.001				0.017	0.009	<0.005	0.205	0.0663	0.271	
	P55-ROX-011912-D	1/19/2012		41.09	NE	<0.005	<0.005	<0.005		0.0105 J	<0.005	<0.001	0.0169	0.0176	0.0359	<0.005	<0.005	<0.001				0.0179	0.0097	<0.005	0.21	0.0649	0.275	
	P55-ROX-050912	5/9/2012		42.44	NE	<0.005	<0.005	<0.005		0.0392	<0.005	<0.001	0.0271	0.0699	0.227	<0.005	<0.005	<0.001				0.158	0.0368	<0.005	0.885	0.112	0.97	
	P55-ROX-012113	1/21/2013	43.60	NE	<0.005	<0.01	0.276	<0.25	0.0678	<0.25	<0.02	0.079 J	0.14	0.189	<0.05	<0.01	<0.05	0.183	0.039 J	0.026 J			<0.1	0.279	0.347			
	P55-ROX-012113	1/21/2013	43.60	NE	<0.005	<0.005	<0.005		0.0937	<0.005	0.002	0.12	0.206	0.262	<0.005	<0.005	<0.001				0.046	0.0312	<0.005	0.356	0.382	0.738		
	P55-ROX-041513	4/15/2013	40.43 - 50.43	43.63	NE	<0.01	<0.01	<0.01		0.068	<0.01	<0.002	0.0974 J	0.148	0.143	<0.01	<0.01	<0.002				0.0241	0.0229	<0.01	0.235	0.362	0.597	
	P55-ROX-071613	7/16/2013	40.06	NE	<0.005	<0.005 UJ	<0.005	0.72	0.0884	<0.005	<0.001	0.0841	0.175	0.343	<0.005	<0.005	<0.001				0.073	0.0559	<0.005 UJ	0.535	0.558	1.11		
P55-ROX-101013	10/10/2013	41.67	NE	<0.005	<0.005	<0.005		0.0851	<0.005	0.001	0.121	0.167	0.601	<0.005	<0.005	<0.001				0.151	0.062	<0.005	0.739	0.639	1.38			
P-56	P56-ROX-102711	10/27/2011	40.82 - 65.82	39.42	NE	<0.005	<0.005	<0.005	<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	
	P56-ROX-011912	1/19/2012		41.81	NE	<0.005	<0.005	<0.005		0.0787 J	<0.005	<0.001	0.0596	0.0697	0.023	<0.005	<0.005	<0.001				0.0229	0.0077	<0.005	0.202	0.0161	0.218	
	P56-ROX-050812	5/8/2012		43.09	NE	<0.005	<0.005	<0.005		0.0876	<0.005	<0.001	0.0667	0.111	0.197	<0.005	<0.005	<0.001				0.312	0.0708	<0.005	1.37	0.197	1.53	
	P56-ROX-080612	8/6/2012		43.60	NE	<0.025	<0.025	<0.025 UJ		0.0442	<0.025	<0.005	0.0197	0.0439	0.0109	<0.025 UJ	<0.025 UJ	<0.005				0.0131 J	0.005 J	<0.025 UJ	0.11	0.0083	0.118	
	P56-ROX-103112	10/31/2012		44.80	NE	<0.005	<0.005	<0.005		0.0752	<0.005	<0.001	0.167	0.105	0.187	<0.005	<0.005	<0.001				0.387	0.0901	<0.005	1.62	0.144	1.73	
	P56-ROX-011713	1/17/2013		45.65	NE	<0.025	<0.025	<0.025		0.0398	<0.025	<0.005	0.0322	0.0456	0.0119	<0.025	<0.025	<0.005				0.0172 J	0.0092 J	<0.025	0.0745	<0.005	0.0745	
	P56-ROX-041213	4/12/2013		46.12	NE	<0.01	<0.01	<0.01		0.0581	<0.01	<0.002	0.0964 J	0.0805	0.0799	<0.01	<0.01	<0.002				0.27	0.0486	<0.01	1	0.0243	1.03	
	P56-ROX-071513	7/15/2013		43.25	NE	<0.005	<0.005	<0.005		0.0968	<0.005	<0.001	0.316	0.145	0.311	<0.005	<0.005	<0.001				0.551	0.134	<0.005	2.67	0.21	2.85	
	P56-ROX-101013	10/10/2013		44.48	NE	<0.005	<0.005	<0.005		0.0822	<0.005	0.00058 J	0.156	0.105	0.157	<0.005	<0.005	<0.001				0.33	0.0714	<0.005	1.7	0.0617	1.76	
	P56-ROX-012214	1/22/2014		46.35	NE	<0.005	<0.005	<0.005		0.0399	<0.005	<0.001	0.0566	0.0426	0.0263	<0.005	<0.005	<0.001				0.074	0.0172	<0.005	0.224	0.0093	0.233	
P56-ROX-041414	4/14/2014	47.32	NE	<0.005	<0.005	<0.005		0.0781	<0.005	<0.001	0.0836	0.0951	0.0669	<0.005	<0.005	<0.001				0.205	0.0472	<0.005	0.742	0.0156	0.758			
P-57	P57-ROX-110811	11/8/2011	40.46 - 65.46	39.20	NE	<0.5	<0.5	<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		
	P57-ROX-021312	2/13/2012		42.13	NE	<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	0.271 J	<2.5	<0.5	<2.5	<2.5	<0.5					<2.5	<2.5	<2.5	0.502	<0.5	0.502	
	P57-ROX-050712	5/7/2012		42.92	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.453	0.0894	<0.5	<0.1	<												

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

Screening Values (mg/L)						VOCs																		
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	0.007 ³	0.42 ³	0.035 ³	0.7 ¹	0.56 ³	0.07 ¹	0.14 ¹	0.7 ³	1.0 ¹	0.0056 ³	0.07 ¹	0.005 ¹	0.07 ³	7.0 ²	10 ¹	10 ¹			
						Ethyl methacrylate	Hexachlorobutadiene	Hexane ⁶	n-Hexanone (Methyl N-Butyl Ketone)	Isopentane ⁶	Isopropylbenzene (Cumene)	n-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
						Analytical Results (mg/L)																		
P-58	P58-ROX-102811	10/28/2011	40.21 - 65.21	37.31	NE	<0.005	<0.005	<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	
	P58-ROX-011912	1/19/2012		39.73	NE	<0.005	<0.005	0.0097	0.108 J	<0.005	0.0082	0.212	0.129 J	0.155 J	<0.005	<0.005	<0.001		0.14 J	0.0408 J	0.679	0.108	0.787	
	P58-ROX-011912-D	1/19/2012		39.73	NE	<0.005	<0.005	<0.005	0.0832 J	<0.005	0.0101 J	0.191 J	0.0993 J	0.119 J	<0.005	<0.005	<0.001	<5	0.11	<0.005 UJ	<1	<1	<1	
	P58-ROX-050712	5/7/2012		40.90	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	0.112 J	0.106 J	0.137	<0.5	<0.5	<0.1	0.776	0.108 J	<0.5	0.666	0.0982 J	0.764	
	P58-ROX-050712-DUP	5/7/2012		40.90	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	0.0697 J	0.108 J	0.145	<0.5	<0.5	<0.1	0.757	0.109 J	<0.5	0.636	0.0968 J	0.733	
	P58-ROX-080612	8/6/2012		41.63	NE	<0.1	<0.1	<0.1 UJ	0.0649 J	<0.1	<0.02	0.142	0.0909 J	0.117	<0.1	<0.1	<0.02	0.705	0.0955 J	<0.1 UJ	0.652	0.0976	0.749	
	P58-ROX-080612-DUP	8/6/2012		41.63	NE	<0.05	<0.05	<0.05	0.0718	<0.05	<0.01	0.15	0.0996	0.128	<0.05	<0.05	<0.01	0.737	0.102	<0.05	0.656	0.104	0.759	
	P58-ROX-110612	11/6/2012		43.09	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	0.124	<0.5	<0.5	<0.1	0.658	0.108 J	<0.5	0.544	0.0807 J	0.624	
	P58-ROX-121012	12/10/2012		43.09	NE																			
	P58-ROX-012213	1/22/2013		44.21	NE	<5	<5	<5	<5	<5	<1	<5	<5	<1	<5	<5	<1	<5	<5	<5	<1	<1	0.728 J	
	P58-ROX-041113	4/11/2013		44.40	NE	<10	<10	<10	<10	<10	<2	<10	<10	<2	<10	<10	<2	0.926 J	<10	<10	<2	<2	<2	
	P58-ROX-071613	7/16/2013		41.49	NE	<0.005	<0.005 UJ	<0.005	0.101	<0.005	<0.001	0.234	0.131	0.147	<0.005	<0.005	<0.001	0.634 J	0.13	<0.005 UJ	0.723	0.12	0.843	
	P58-ROX-101413	10/14/2013		42.19	NE	<0.005	<0.005	<0.005	0.0999	0.0055	0.0015	0.234	0.135	0.2	<0.005	<0.005	<0.001	1.17 J	0.131	<0.005	0.74	0.112	0.852	
	P58-ROX-020314	2/3/2014		44.66	NE	<5	<5	<5	<5	<5	<1	<5	<5	<1	<5	<5	<1	<5	<5	<5	<1	<1	<1	
P58-ROX-041514	4/15/2014	45.66	NE	<0.005	<0.005	<0.005	0.0777 J	<0.005	<0.001	0.277 J	0.104 J	0.127 J	<0.005	<0.005	<0.001	0.53 E J	0.0992 J	<0.005	0.552 J	0.0908 J	0.643 J			
P-59	P59-ROX-102711	10/27/2011	47.91 - 72.91	41.06	NE	<0.25	<0.25	<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	
	P59-ROX-011912	1/19/2012		42.88	NE	<0.005	<0.005	<0.005	0.0713	<0.005	<0.001	0.18	0.128	0.896	<0.005	<0.005	<0.001	0.483 J	0.198	<0.005	3.03	0.587	3.62	
	P59-ROX-011912-DUP	1/19/2012		42.88	NE	<0.005	<0.005	<0.005	0.0733	<0.005	<0.001	0.183	0.133	0.931	<0.005	<0.005	<0.001	0.536	0.203	<0.005	3.21	0.587	3.8	
	P59-ROX-050912	5/9/2012		44.11	NE	<0.25	<0.25	<0.25	0.0585 J	<0.25	<0.05	0.0925	0.123 J	2.35	<0.25	<0.25	<0.05	0.67	0.171 J	<0.25	4.56	1.08	5.64	
	P59-ROX-080212	8/2/2012		44.07	NE	<0.1	<0.1	<0.1	0.0452 J	<0.1	<0.02	0.0886	0.0974 J	0.506	<0.1	<0.1	<0.02	0.563	0.158	<0.1	4.35	0.376	4.73	
	P59-ROX-110212	11/2/2012		45.98	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	0.105 J	1.09	<0.5	<0.5	<0.1	0.558	0.154 J	<0.5	4.49	0.686	5.17	
	P59-ROX-110212-DUP	11/2/2012		45.98	NE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	0.111 J	1.1	<0.5	<0.5	<0.1	0.592	0.167 J	<0.5	4.68	0.721	5.4	
	P59-ROX-013013	1/30/2013		46.60	NE	<0.25	<0.25	<0.25	0.0455 J	<0.25 UJ	<0.05 UJ	0.376	0.085 J	0.296	<0.25	<0.25	<0.05	0.563	0.0491 J	<0.25	4.19	0.264	4.45	
	P59-ROX-041213	4/12/2013		46.95	NE	<0.25	<0.25	<0.25	0.062 J	<0.25	<0.05	0.664	0.136 J	0.523	<0.25	<0.25	<0.05	0.946	<0.25	<0.25	6.52	0.646	7.16	
	P59-ROX-041213-DUP	4/12/2013		46.95	NE	<0.25	<0.25	<0.25	0.0543 J	<0.25	<0.05	0.547	0.117 J	0.463	<0.25	<0.25	<0.05	0.843	<0.25	<0.25	5.89	0.591	6.48	
	P59-ROX-071613	7/16/2013		44.13	NE	<0.005	<0.005 UJ	<0.005	0.074 J	<0.005	<0.001	0.215 J	0.149 J	1.03	<0.005	<0.005	<0.001	0.784	0.219	<0.005 UJ	5.76	0.431	6.19	
	P59-ROX-101013	10/10/2013		45.50	NE	<0.005	<0.005	<0.005	0.086	<0.005	0.0012	0.285	0.176	2.89	<0.005	<0.005	<0.001	1.14	0.273	<0.005	7.47	1.28	8.75	
	P59-ROX-020314	2/3/2014		47.35	NE	<0.1	<0.1	<0.1	0.0409 J	<0.1	<0.02	0.0321 J	0.0824 J	0.66	<0.1	<0.1	<0.02	0.621	0.193	<0.1	3.79	0.438	4.23	
	P59-ROX-041514	4/15/2014		48.60	NE	<0.005	<0.005	0.054	0.0495	<0.005	<0.001	0.196	0.0798	0.746	0.0027 J	<0.005	<0.001	0.385	0.214	<0.005	4.83	0.902	5.73	
P-66	P66-ROX-110111	11/1/2011	34.72 - 59.72	28.92	NE	<0.005	<0.005	<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	
	P66-ROX-051012	5/10/2012		32.48	NE	<0.005	<0.005	<0.005	0.123	<0.005	0.0771	<0.001	0.152	0.0021	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	0.0012	0.0012	0.0024	
	P66-ROX-080312	8/3/2012		30.51	NE	<0.005	<0.005	<0.005	0.0874	<0.005	0.103	0.0013	0.112	0.0013	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	0.0011	0.0011	0.0022	
	P66-ROX-103112	10/31/2012		34.75	NE	<0.005	<0.005	<0.005	0.122	<0.005	0.0733	<0.005	0.156	0.0014	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	
	P66-ROX-011813	1/18/2013		35.70	NE	<0.005	<0.005	<0.005	0.146	<0.005	0.104	<0.005	0.193	0.0015	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	0.00093 J	0.00093 J	
	P66-ROX-041113	4/11/2013		36.03	NE	<0.005	<0.005	<0.005	0.287	<0.005	0.086	<0.005	0.384	0.0012	<0.005	<0.005	<0.001	0.0041 J	<0.005	<0.005	<0.001	<0.001	<0.001	
	P66-ROX-071213	7/12/2013		33.20	NE	<0.005	<0.005 UJ	<0.005	0.191	<0.005	<0.001	<0.005	0.229	0.0018	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005 UJ	<0.001	0.001	0.0015	
	P66-ROX-101013	10/10/2013		33.66	NE	<0.005	<0.005	<0.005	0.151	<0.005	0.085	0.0104	0.204	0.0013	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	0.00096 J	0.00096 J	
	P66-ROX-110713	11/7/2013		33.66	NE	<0.005	<0.005	<0.005	0.0958	<0.005	0.0528	0.0057	0.0658	0.00086 J	<0.005	<0.005	0.0015	<0.005	<0.005	<0.005	<0.001	0.00057 J	0.00057 J	
	P66-ROX-012914	1/29/2014		36.39	NE	<0.005	<0.005	<0.005	0.131	<0.005	<0.001	<0.005	0.157	0.0017	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	0.0045	0.0045	
	P66-ROX-041114	4/11/2014		37.10	NE	<0.005	<0.005	<0.005	0.115	<0.005	<0.001	0.0014 J	0.136	0.0017	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	0.00072 J	0.0013	

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

Screening Values (mg/L)						VOCs																					
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Ethyl methacrylate	Hexachlorobutadiene	Hexane ⁶	n-Hexanone (Methyl N-Butyl Ketone)	Isopentane ⁶	Isopropylbenzene (Cumene)	n-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)	
						0.007 ³	0.42 ³	0.035 ³		0.7 ¹	0.56 ³	0.07 ¹	0.14 ¹	0.7 ³	1.0 ¹	0.0056 ³	0.07 ¹	0.005 ¹				0.07 ³	7.0 ²	10 ¹		10 ¹	
P-93C	P93C-ROX-081811	8/18/2011	94.26 - 96.26	39.32	NE	<0.005	<0.005	<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	<0.001	<0.001
	P93C-ROX-102611	10/26/2011		39.36	NE	<0.005	<0.005	<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 UJ	<0.001	<0.001	<0.001	<0.001	<0.001
	P93C-ROX-012012	1/20/2012		41.57	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.006	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
	P93C-ROX-050812	5/8/2012		42.68	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.004	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
	P93C-ROX-080912	8/9/2012		43.57	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0053	0.000065 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
	P93C-ROX-110812	11/8/2012		45.12	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0056	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
	P93C-ROX-012313	1/23/2013		45.78	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0044	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001	<0.001
	P93C-ROX-041213	4/12/2013		46.21	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0045	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
	P93C-ROX-071813	7/18/2013		43.31	NE	<0.005	<0.005	<0.005		<0.005	0.002 J	<0.005	0.0049	<0.005	0.002 J	0.007	<0.005	<0.005	<0.001		0.0016 J	<0.005	<0.005 UJ	0.0076	0.0015	0.0091	
	P93C-ROX-080813	8/8/2013		43.31	NE	<0.25	<0.25	<0.25		<0.25	<0.25	<0.05	<0.25	<0.25	<0.05	<0.25	<0.05	<0.25	<0.25	<0.05		<0.25	<0.25	<0.25	<0.05	<0.05	<0.05
	P93C-ROX-101613	10/16/2013	44.31	NE	<0.005 UJ	<0.005	<0.005		<0.005	<0.005	0.0035 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001	<0.001	
P93C-ROX-012414	1/24/2014	46.44	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0047	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001	<0.001		
P93C-ROX-041714	4/17/2014	47.34	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0043	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001		
P-93D	P93D-ROX-081811	8/18/2011	125.75 - 127.75	39.46	NE	<0.005	<0.005	<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	<0.001	
	P93D-ROX-102711	10/27/2011		39.59	NE	<0.005	<0.005	<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	<0.001	
	P93D-ROX-012012	1/20/2012		41.77	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	0.00016	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	
	P93D-ROX-050812	5/8/2012		42.96	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.00077 J	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	
	P93D-ROX-080812	8/8/2012		43.71	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.0092 U	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	
	P93D-ROX-110812	11/8/2012		NM	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0023	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	
	P93D-ROX-012213	1/22/2013		44.21	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		0.0015 J	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	
	P93D-ROX-041113	4/11/2013		46.37	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	
	P93D-ROX-071213	7/12/2013		43.51	NE	<0.005	<0.005 UJ	<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001	
	P93D-ROX-101113	10/11/2013		44.24	NE	<0.005 UJ	<0.005	<0.005		<0.005	<0.005	0.00066 J J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.001	
	P93D-ROX-013114	1/31/2014	46.62	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0011	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001		
P93D-ROX-041414	4/14/2014	47.54	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	0.0017 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001			
P-114	P114-ROX-102811	10/28/2011	32.67 - 52.67	24.73	NE	<0.005	<0.005	<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	<0.001	
	P114-ROX-012012	1/20/2012		27.17	NE	<0.005	<0.005	<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	
	P114-ROX-050912	5/9/2012		28.09	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0035 J	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	
	P114-ROX-080912	8/9/2012		29.13	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.00083 J	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		0.00039 J	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	
	P114-ROX-110912	11/9/2012		30.90	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0076 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	0.0013 J	<0.001	0.0013 J		
	P114-ROX-012313	1/23/2013		30.22	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.003 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001		
	P114-ROX-041513	4/15/2013		31.80	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0051	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001		
	P114-ROX-071813	7/18/2013		27.22	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0023 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001		
	P114-ROX-071813-DUP	7/18/2013		27.22	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0022 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001		
	P114-ROX-101713	10/17/2013		29.43	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0036	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001		
	P114-ROX-012814	1/28/2014	32.11	NE	<0.005	<0.005	<0.005		<0.005	<0.005	0.0153	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005								

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

Screening Values (mg/L)						VOCs																					
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Ethyl methacrylate	Hexachlorobutadiene	Hexane ⁶	n-Hexanone (Methyl N-Butyl Ketone)	Isopentane ⁶	Isopropylbenzene (Cumene)	n-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)	
						0.007 ³		0.42 ³	0.035 ³		0.7 ¹	0.56 ³	0.07 ¹	0.14 ¹	0.7 ³	1.0 ¹	0.0056 ³	0.07 ¹	0.005 ¹				0.07 ³	7.0 ²	10 ¹		10 ¹
						Analytical Results (mg/L)																					
ROST-4-PZ(C)	ROST4PZ-C-051412	5/14/2012	34.95 - 44.95	39.04	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.0018	<0.005	<0.001	<0.005	<0.005	<0.001			<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	ROST4PZ-C-ROX-072512	7/25/2012		39.10	NE	<0.005	<0.005 UJ		<0.005		0.0036 J	<0.005	<0.001	0.0331	0.0059	0.0596	<0.005	<0.005	<0.001			0.0374	0.0076	<0.005	0.373	0.207	0.581
	ROST4PZC-ROX-102912	10/29/2012		40.75	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001			<0.005	<0.005	<0.005	0.0021	<0.001	0.0021
	ROST4PZ(C)-ROX-011113	1/11/2013		41.42	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001			0.002 J	0.0014 J	<0.005	0.0018	<0.001	0.0018
	ROST4PZC-ROX-041013	4/10/2013		42.27	NE	<0.005	<0.005		<0.005 UJ		0.00061 J J	<0.005 UJ	<0.001	<0.005	0.0011 J	0.0006 J J	<0.005 UJ	<0.005 UJ	<0.001 UJ			0.0016 J	<0.005	<0.005	<0.001 UJ	<0.001 UJ	<0.001 UJ
	ROST4PZC-ROX-071113	7/11/2013		40.18	NE	<0.005	<0.005		<0.005 UJ		0.0025 J	<0.005	<0.001	0.0189	0.0041 J	0.041	<0.005	<0.005	<0.001			0.0194	0.0044 J	<0.005 UJ	0.126	0.0649	0.191
	ROST4PZC-ROX-100913	10/9/2013		39.91	NE	<0.005	<0.005 UJ		<0.005		0.00066 J	<0.005	<0.001	0.0054	0.0012 J	0.0013	<0.005	<0.005	<0.001			<0.005	<0.005	<0.005	0.0101	0.0054	0.0155
ROST4PZC-ROX-011714	1/17/2014	41.92	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	0.00073 J	0.0014	<0.005	<0.005	<0.001			0.0017 J	<0.005	<0.005	0.0124	0.0057	0.018		
ROST4PZC-ROX-041014	4/10/2014	42.05	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	0.00057 J	<0.005	<0.005	<0.001			<0.005	<0.005	<0.005	0.0015	0.0015	0.003		
T-12	T12-ROX-102711	10/27/2011	46.46 - 72.46	38.54	NE	<0.05	<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	
	T12-ROX-011912	1/19/2012		41.0	NE	<0.005	<0.005		<0.005		0.022	<0.005	0.0016	0.132	0.03	0.175	<0.005	<0.005	<0.001			0.34	0.0715	0.0952	0.684	0.0399	0.724
	T12-ROX-050912	5/9/2012		42.62	NE	<0.025	<0.025		<0.025		0.0572	<0.025	<0.005	0.0924	0.101	0.388	<0.025	<0.025	<0.005			0.476	0.0765	<0.025	2.87	0.251	3.12
	T12-ROX-080212	8/2/2012		41.92	NE	<0.05	<0.05		<0.05		0.0297 J	<0.05	<0.01	0.0625	0.0486 J	0.197	<0.05	<0.05	<0.01			0.403	0.0474 J	<0.05	1.32	0.0709	1.39
	T12-ROX-110512	11/5/2012		43.91	NE	<0.05	<0.05		<0.05		0.0468 J	<0.05	<0.01	0.125	0.0831	0.322	<0.05	<0.05	<0.01			0.385	0.0543	<0.05	2.55	0.176	2.73
	T12-ROX-011813	1/18/2013		44.50	NE	<0.025	<0.025		<0.025		0.031	<0.025	<0.005	0.129	0.0466	0.184	<0.025	<0.025	<0.005			0.42	0.0407	<0.025	1.11	0.0252	1.13
	T12-ROX-041513	4/15/2013		44.99	NE	<0.05	<0.05		<0.05		0.0405 J	<0.05	<0.01	0.266 J	0.076	0.592	<0.05	<0.05	<0.01			0.309	<0.05	<0.05	1.2	0.104	1.3
	T12-ROX-071613	7/16/2013		42.33	NE	<0.005	<0.005 UJ		<0.005		0.0363 J	<0.005	<0.001	0.122 J	0.0627 J	0.186 J	<0.005	<0.005	<0.001			0.361 J	0.0238 J	<0.005 UJ	0.794 J	0.0145 J	0.808 J
	T12-ROX-101513	10/15/2013		43.73	NE	<0.025	<0.025		<0.025		0.0618	<0.025	<0.005	0.215 J	0.114	0.697	<0.025	<0.025	<0.005			0.575	0.0607	<0.025	2.43	0.139	2.57
T12-ROX-012414	1/24/2014	45.26	NE	<0.005	<0.005		<0.005		0.0362	<0.005	<0.001	0.171	0.0676	0.421	<0.005	<0.005	<0.001			0.526	0.0507	<0.005	1.12	0.0469	1.23		
T12-ROX-041514	4/15/2014	46.72	NE	<0.005	<0.005		<0.005		0.0306	<0.005	<0.001	0.12	0.0534	0.406	<0.005	<0.005	<0.001			0.22 J	0.0339	<0.005	0.841	0.0401	0.864		

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

Screening Values (mg/L)						SVOCs																								
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	Bis(2-Chloroethyl)ether	Bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (P-Chloro-m-cresol)	p-Chlorophenol	Chrysene (1,2-Benzophenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol			
						0.42 ¹	0.21 ³	0.023 ³	2.1 ¹	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		0.035 ²	0.012 ¹	0.0003 ¹	0.007 ³	0.021 ²	5.6 ¹	0.14 ²			
Analytical Results (mg/L)																														
MW-01	MW1-ROX-072711	7/27/2011	43.41 - 58.41	35.77	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005		
	MW1-ROX-120511	12/5/2011		37.10	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000056 U	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.01	
	MW1-ROX-011612	1/16/2012	48.80 - 58.80	37.75	NE	0.000077 J	0.000035 J	<0.01	0.000062 J	0.00011	0.0001	0.00011	<0.00011 U	0.00012	<0.01 UJ	<0.01	<0.0051	<0.002	<0.00039 U	<0.01	<0.0051	0.00011	<0.00011 U	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.01	
	MW1-ROX-050112	5/1/2012		39.09	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.01	
	MW1-ROX-073012	7/30/2012		39.39	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	0.00032 J	<0.011	
	MW1-ROX-102612	10/26/2012		41.22	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0057	0.00099 J	<0.0057	<0.011	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011	
	MW1-ROX-121712	12/17/2012		41.22	NE																									
	MW1-ROX-011013	1/10/2013		41.89	NE	<0.000024 U	<0.0001	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	<0.01	
	MW1-ROX-040913	4/9/2013		42.55	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0011 U	<0.011	
	MW1-ROX-070813	7/8/2013		39.56	NE	<0.000026 U	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	0.000027 J	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.0024 U	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051	<0.01	
	MW1-ROX-100313	10/3/2013		40.28	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00065 J	<0.0054	<0.011	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	
MW1-ROX-011414	1/14/2014	42.77	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011 UJ	<0.0053 UJ	<0.011 UJ	<0.0053 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.0053	<0.011 UJ			
MW1-ROX-040714	4/7/2014	48.80 - 58.80	43.28	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	0.003 J J	<0.011	<0.0054	<0.0022	<0.0054	<0.011 UJ	<0.0057 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.0054	<0.011 UJ	<0.0054	<0.011 UJ		
MW-02	MW2-ROX-072711	7/27/2011	47.19 - 62.19	37.04	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.01	
	MW2-ROX-072711-DUP	7/27/2011		37.04	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.01	
	MW2-ROX-112811	11/28/2011	49.87 - 59.87	38.03	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.01	
	MW2-ROX-011612	1/16/2012		38.89	NE	0.000057 J	<0.00011	<0.011	<0.00011	<0.000053	0.000033 J	0.00004 J	<0.000047 U	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.00083 U	<0.00047 U	<0.011	<0.0053	<0.00011	<0.000047 U	<0.0053	<0.011	<0.0053	<0.011	<0.0053	0.0035 J	
	MW2-ROX-050112	5/1/2012		40.25	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	0.0055 J	
	MW2-ROX-073012	7/30/2012		40.60	NE	0.000051 J	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.00059 J	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	0.00036 J	0.0045 J			
	MW2-ROX-102612	10/26/2012		42.35	NE	0.000093 J	<0.00011	<0.011	<0.00011	0.00016	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.0034 J			
	MW2-ROX-011113	1/11/2013		42.94	NE	0.00016	0.000019 J	<0.011 UJ	<0.00011	<0.000056	0.000027 J	0.000039 J	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056	<0.011	
	MW2-ROX-040913	4/9/2013		43.70	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.005 J			
	MW2-ROX-071113	7/11/2013		40.82	NE	0.000035 J	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0055	0.00063 J	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055	0.005 J	
	MW2-ROX-100813	10/8/2013		41.73	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054	<0.011	
MW2-ROX-012014	1/20/2014	44.00	NE	<0.00011	0.00018	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	<0.011			
MW2-ROX-041014	4/10/2014	49.87 - 59.87	44.66	NE	<0.00012	<0.00012	<0.012	<0.00012	<0.00006	<0.00012	<0.00006	<0.00012	<0.00012	<0.012 UJ	<0.012	<0.006	<0.0024	<0.006	<0.012	<0.006	<0.00012	<0.00012	<0.0024	<0.012	<0.006	<0.012	<0.006	<0.012		
MW-03	MW3-ROX-080311	8/3/2011	30.98 - 45.98	22.72	NE	<0.000095	<0.000095	<0.0095	<0.000095	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.0095 UJ	<0.0095	<0.0048	0.0084	<0.0048	<0.0095	<0.0048	<0.000095	<0.000095	<0.0048	<0.0095	<0.0048	<0.0095	<0.0048		
	MW3-ROX-112911	11/29/2011		24.06	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.01	
	MW3-ROX-112911-DUP	11/29/2011	24.06	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.01		
	MW3-ROX-011612	1/16/2012	24.93	NE	<0.0001	<0.0001	<0.01																							

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

Screening Values (mg/L)						SVOCs																							
Location	Sample ID	Sample Date	Screened Interval (ft b/c)	Depth to Water (ft b/c)	Product Thickness (ft)	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	Bis(2-Chloroethyl)ether	Bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	p-Chlorophenol	Chrysene (1,2-Benzophenanthracene)	Dibenz(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol		
						0.42 ¹	0.21 ³	0.023 ³	2.1 ¹	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		0.035 ²	0.012 ¹	0.0003 ¹	0.007 ³	0.021 ²	5.6 ¹	0.14 ²		
						Analytical Results (mg/L)																							
MW-04	MW4-ROX-072611	7/26/2011	42.63 - 57.63	34.15	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	0.0102	<0.01	<0.005	<0.0057 U	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01		
	MW4-ROX-072611-DUP	7/26/2011		34.15	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	0.0103	<0.01	<0.005	<0.002 U	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	
	MW4-ROX-121511	12/15/2011		33.99	NE	<0.0001	0.00011	<0.01 UJ	<0.0001	<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	<0.0052	<0.0001	<0.00035 U	<0.0052	<0.01	<0.0052	<0.01		
	MW4-ROX-011612	1/16/2012	46.06 - 56.06	36.00	NE	<0.0001	<0.0001	<0.01	0.00003 J	0.00012	0.00012	0.00013	<0.0002 U	0.00015	<0.01 UJ	<0.01	<0.0052	<0.0005 U	<0.00073 U	<0.01	<0.0052	0.00014	<0.00019 U	<0.0052	<0.01	<0.0052	<0.01		
	MW4-ROX-050312	5/3/2012		37.45	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	
	MW4-ROX-050312-DUP	5/3/2012		37.45	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	
	MW4-ROX-072512	7/25/2012		37.63	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.0001	0.0056 J	<0.01	<0.0051	<0.00079 U	0.00039 J	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	0.0012 J	<0.01	
	MW4-ROX-072512-Dup	7/25/2012		37.63	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.00069 U	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	0.0012 J	<0.01	
	MW4-ROX-102912	10/29/2012		39.45	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	
	MW4-ROX-011113	1/11/2013		40.20	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	
	MW4-ROX-011113-DUP	1/11/2013		40.20	NE	<0.00012	<0.00012	<0.012 UJ	<0.00012	<0.00006	<0.00012	<0.00006	<0.00012	<0.00012	<0.00012	<0.012	<0.012	<0.006	<0.0024	<0.006	<0.012	<0.006	<0.00012	<0.00012	<0.0024	<0.012	<0.006	<0.012	
	MW4-ROX-030413	3/4/2013		40.20	NE																								
	MW4-ROX-040913	4/9/2013		40.90	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	
	MW4-ROX-040913-DUP	4/9/2013		40.90	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053 UJ	<0.011	
	MW4-ROX-071713	7/17/2013		37.61	NE	<0.000036 U	<0.00011	<0.011	<0.00011	<0.000055	0.00004 J	0.000034 J	0.000061 J	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011		
MW4-ROX-101613	10/16/2013	38.80	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011 UJ	<0.0055 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.0054	<0.011 UJ			
MW4-ROX-013014	1/30/2014	41.09	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011 UJ	<0.0054 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.0054	<0.011 UJ			
MW4-ROX-041614	4/16/2014	41.91	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011 UJ	<0.0056 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.0056	<0.011 UJ			
MW-05	MW5-ROX-072611	7/26/2011	31.13 - 46.13	22.00	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01		
	MW5-ROX-072611-DUP	7/26/2011		22.00	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01		
	MW5-ROX-112111	11/21/2011		23.46	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	0.00079 J	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0053	<0.011	<0.0053	<0.011		
	MW5-ROX-011712	1/17/2012	24.76	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0015 U	<0.00049 U	<0.011	<0.0053	<0.00011	<0.00011	<0.0053	<0.011	<0.0053	<0.011			
	MW5-ROX-050312	5/3/2012	25.89	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01			
	MW5-ROX-072512	7/25/2012	26.18	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.00064 U	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	0.0011 J	<0.01			
	MW5-ROX-102912	10/29/2012	28.16	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01			
	MW5-ROX-011113	1/11/2013	28.75	NE	0.000071 J	0.000066 J	<0.011 UJ	0.000028 J	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011			
	MW5-ROX-040913	4/9/2013	29.41	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011			
	MW5-ROX-070913	7/9/2013	26.04	NE	<0.0001	<0.0001	<0.01	<0.0001	0.0001 J	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01			
	MW5-ROX-100813	10/8/2013	26.97	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011			
	MW5-ROX-011714	1/17/2014	29.59	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011			
MW5-ROX-041014	4/10/2014	33.97 - 43.97	30.09	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.002						

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

						SVOCs																						
Screening Values (mg/L)						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	Bis(2-Chloroethyl)ether	Bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (P-Chloro-m-cresol)	p-Chlorophenol	Chrysene (1,2-Benzophenanthracene)	Dibenz(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	
Location	Sample ID	Sample Date	Screened Interval (ft b(toc))	Depth to Water (ft b(toc))	Product Thickness (ft)	0.42 ¹	0.21 ³	0.023 ³	2.1 ¹	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	0.035 ²	0.012 ¹	0.0003 ¹	0.007 ³	0.021 ²	5.6 ¹	0.14 ²		
						Analytical Results (mg/L)																						
MW-06B	MW6B-ROX-072311	7/23/2011	64.05 - 69.05	23.60	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<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	<0.0053	<0.0008 U	<0.000031 U	<0.0053	<0.011	<0.0053	<0.011	
	MW6B-ROX-110311	11/3/2011		24.67	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01 UJ
	MW6B-ROX-011712	1/17/2012		26.77	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00015 U	<0.00011 U	<0.00028 U	0.0001 J	<0.011 UJ	<0.011	<0.0055	<0.0011 U	<0.0055	<0.011	<0.0055	<0.00011	<0.00027 U	<0.0055	<0.011	<0.0055	<0.011	<0.0055
	MW6B-ROX-050212	5/2/2012		27.82	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01
	MW6B-ROX-080112	8/1/2012		28.39	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.00049 J	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	MW6B-ROX-102412	10/24/2012		30.11	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	0.00057 J	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	MW6B-ROX-011713	1/17/2013		31.11	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	MW6B-ROX-040313	4/3/2013		31.68	NE	<0.00011	<0.00011 UJ	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW6B-ROX-070913	7/9/2013		28.25	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW6B-ROX-100713	10/7/2013		28.93	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.00057 U	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
MW6B-ROX-011614	1/16/2014	31.67	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	0.000051 J	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	0.000042 J	<0.0022	<0.011	<0.0054	<0.011		
MW6B-ROX-040814	4/8/2014	32.21	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011		
MW-06C	MW6C-ROX-072411	7/24/2011	84.95 - 89.95	23.43	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	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	<0.0053	0.00015 B	<0.00011	<0.0053	<0.011	<0.0053	<0.011	
	MW6C-ROX-110311	11/3/2011		24.47	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01 UJ	
	MW6C-ROX-011712	1/17/2012		26.50	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.00046 U	<0.011	<0.0054	<0.00011	<0.00011	<0.0054	<0.011	<0.0054	<0.011	
	MW6C-ROX-050212	5/2/2012		27.62	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	
	MW6C-ROX-080112	8/1/2012		28.15	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	
	MW6C-ROX-102412	10/24/2012		27.85	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	
	MW6C-ROX-011713	1/17/2013		30.88	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	
	MW6C-ROX-040313	4/3/2013		31.41	NE	<0.0001	<0.0001 UJ	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01 UJ	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	
	MW6C-ROX-070913	7/9/2013		28.03	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	
	MW6C-ROX-100713	10/7/2013		28.72	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.00056 U	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	
MW6C-ROX-011614	1/16/2014	31.48	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	0.000041 J	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011		
MW6C-ROX-040814	4/8/2014	32.01	NE	<0.00012	<0.00012	<0.012	<0.00012	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.012	<0.012	<0.0059	<0.0024	<0.0059	<0.012	<0.0059	<0.00012	<0.00012	<0.0024	<0.012	<0.0059	<0.012			
MW-06D	MW6D-ROX-072311	7/23/2011	104.72 - 109.72	23.29	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<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	<0.0053	<0.00039 U	<0.00011	<0.0053	<0.011	<0.0053	<0.011	
	MW6D-ROX-110311	11/3/2011		24.31	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01 UJ	
	MW6D-ROX-011712	1/17/2012		26.33	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0055	<0.011	<0.0055	<0.011	
	MW6D-ROX-050212	5/2/2012		27.45	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.0044 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	
	MW6D-ROX-080212	8/2/2012		30.56	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	0.00022 J	<0.01	
	MW6D-ROX-102412	10/24/2012		29.71	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	
	MW6D-ROX-011713	1/17/2013		30.75	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001														

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

Screening Values (mg/L)						SVOCs																						
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	Bis(2-Chloroethyl)ether	Bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	p-Chlorophenol	Chrysene (1,2-Benzophenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	
						0.42 ¹	0.21 ³	0.023 ³	2.1 ¹	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		0.035 ²	0.012 ¹	0.0003 ¹	0.007 ³	0.021 ²	5.6 ¹	0.14 ²	
						Analytical Results (mg/L)																						
MW-07	MW7-ROX-072411	7/24/2011	42.92 - 52.92	35.65	NE	0.0001 J	<0.00011	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	0.000018 J	<0.00011	<0.0054	<0.011	<0.0054	<0.011	
	MW7-ROX-110211	11/2/2011		35.95	NE	<0.00026 U	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01 UJ
	MW7-ROX-011812	1/18/2012		38.10	NE	0.00025	<0.0001	<0.01	<0.0001	<0.00005	<0.000024 U	<0.00005	<0.0001	<0.0001	<0.0001		<0.01 UJ	<0.005	<0.002	0.00049 J	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01
	MW7-ROX-011812-DUP	1/18/2012		38.10	NE	0.00027	<0.00011	<0.011	<0.00011	<0.000056	<0.00003 U	<0.000056	<0.00011	<0.00011	<0.00011		<0.011 UJ	<0.0056	0.00044 J	0.00048 J	<0.011	<0.0056	<0.00011	<0.00011	<0.0056	<0.011	<0.0056	<0.011
	MW7-ROX-050412	5/4/2012		39.19	NE	0.00028	<0.0001	<0.01	<0.0001	0.00011	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.00071 J	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01
	MW7-ROX-080712	8/7/2012		39.50	NE	0.00024	0.000037 J	<0.01 UJ	0.000022 J	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.0006 J	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.00058 U	<0.01
	MW7-ROX-103012	10/30/2012		41.23	NE	0.00031	<0.00012	<0.012 UJ	<0.00012	<0.000058	<0.00012	<0.000058	<0.00012	<0.00012	<0.00012	<0.012	<0.012	<0.0058	0.0015 J	<0.0058	<0.012	<0.0058	<0.00012	<0.00012	<0.0023	<0.012	<0.0058	<0.012
	MW7-ROX-103012-DUP	10/30/2012		41.23	NE	0.00034	<0.00011	<0.011 UJ	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0056	0.0007 J	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW7-ROX-011513	1/15/2013		42.21	NE	0.00073	0.00011	<0.011 UJ	0.000059 J	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	0.00061 J	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW7-ROX-011513-DUP	1/15/2013		42.21	NE	0.00066	0.000093 J	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	0.00055 J	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	MW7-ROX-041013	4/10/2013		42.70	NE	0.0012	0.00015	<0.011	0.000089 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.00083 J	<0.011	<0.0054	<0.011
	MW7-ROX-041013-DUP	4/10/2013		42.70	NE	0.0012	0.00016	<0.011	0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.00088 J	<0.011	<0.0053	<0.011
	MW7-ROX-071713	7/17/2013		39.60	NE	0.00019	0.000031 J	<0.011	0.000028 J	0.00004 J	0.000044 J	0.000045 J	0.00008 J	0.00008 J	0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	0.000077 J	<0.0022	<0.011	<0.0054	<0.011
	MW7-ROX-101613	10/16/2013		40.64	NE	0.00035	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011
MW7-ROX-013014	1/30/2014	42.94	NE	0.00028	<0.0001	<0.01	0.00029	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01		
MW7-ROX-041614	4/16/2014	42.92 - 52.92	43.79	NE	0.00034	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01		
MW-08	MW8-ROX-072411	7/24/2011	33.60 - 43.60	26.02	NE	0.00029	<0.00011	<0.011 UJ	0.000067 J	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	<0.0054	0.000099 JB	<0.00011	<0.0054	<0.011	<0.0054	0.0228	
	MW8-ROX-072411-DUP	7/24/2011		26.02	NE	0.00027	<0.00011	<0.011 UJ	0.000062 J	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	<0.0055	0.000099 JB	<0.00011	<0.0055	<0.011	<0.0055	0.0213	
	MW8-ROX-110211	11/2/2011		27.02	NE	<0.00023 U	<0.000095	<0.0095 UJ	<0.000095	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.0095	<0.0095	<0.0048	<0.0019	<0.0048	<0.0095	<0.0048	<0.000095	<0.000095	<0.0048	<0.0095	<0.0048	0.0383 J	
	MW8-ROX-011812	1/18/2012		29.15	NE	0.00038 J	<0.00053	<0.011	<0.00053	<0.00026	<0.00053	<0.00026	<0.00053	<0.00053		<0.011 UJ	<0.0053	0.00052 J	0.00042 J	<0.011	<0.0053	<0.00053	<0.00053	0.0006 J	<0.011	<0.0053	0.015	
	MW8-ROX-050412	5/4/2012		30.21	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	0.0204	<0.011	<0.0053	0.00053 J	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.00044 J	<0.011	<0.0053	0.0595	
	MW8-ROX-050412-DUP	5/4/2012		30.21	NE	<0.0001	<0.0001	<0.01	<0.0001	0.00012	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.00047 J	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	0.0557
	MW8-ROX-080712	8/7/2012		30.97	NE	0.00023	0.00013	<0.011 UJ	0.000055 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00051 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.00035 J	<0.011	<0.0016 U	0.015
	MW8-ROX-080712-DUP	8/7/2012		30.97	NE	0.0002	0.00029	<0.011 UJ	0.000071 J	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0056	0.00043 J	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	0.0004 J	<0.011	<0.0018 U	0.0158
	MW8-ROX-103012	10/30/2012		32.32	NE	0.00026	0.00011	<0.011 UJ	0.00044	<0.00087 U	0.00053 B	0.00057 B	0.00058 B	0.00064 B	<0.011	<0.011	<0.0053	0.0012 J	0.00086 J	<0.011	<0.0053	0.00066 B	0.00059 B	<0.0021	<0.011	<0.0053	0.0085 J	
	MW8-ROX-011513	1/15/2013		33.30	NE	0.00017	0.000085 J	<0.011 UJ	0.000029 J	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	0.00089 J	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	0.019	
	MW8-ROX-041013	4/10/2013		33.77	NE	0.00018	0.000059 J	<0.011	0.000072 J	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.0023	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	0.0358	
	MW8-ROX-071713	7/17/2013		30.43	NE	0.0002	<0.0001	<0.01	0.000049 J	<0.000052	0.000021 J	<0.000052	0.00004 J	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	0.009 J
	MW8-ROX-071713-DUP	7/17/2013		30.43	NE	0.00019	0.000056 J	<0.011	0.000061 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.0004 J	<0.011	<0.0054	0.0089 J	
	MW8-ROX-101613	10/16/2013		31.59	NE	0.00021	0.000089 J	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.0005 J	<0.011	<0.0054	0.0066 J	
MW8-ROX-101613-DUP	10/16/2013	31.59	NE	0.0002	0.000058 J	<0.012	<																					

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

						SVOCs																							
Screening Values (mg/L)						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	Bis(2-Chloroethyl)ether	Bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	p-Chlorophenol	Chrysene (1,2-Benzophenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol		
Location	Sample ID	Sample Date	Screened Interval (ft b(toc))	Depth to Water (ft b(toc))	Product Thickness (ft)	0.42 ¹	0.21 ³	0.023 ³	2.1 ¹	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	0.035 ²	0.012 ¹	0.0003 ¹	0.007 ³	0.021 ²	5.6 ¹	0.14 ²			
						Analytical Results (mg/L)																							
MW-10	MW10-ROX-072311	7/23/2011	44.43 - 54.43	38.01	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<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	<0.005	<0.00027 U	<0.0001	<0.005	<0.01	<0.005	<0.01		
	MW10-ROX-110111	11/1/2011		37.72	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.000043 J	<0.000042 U	<0.00011	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	
	MW10-ROX-011612	1/16/2012		39.28	NE	<0.00011	<0.00011	<0.011	0.000027 J	0.000037 J	0.000031 J	0.000043 J	<0.000042 U	<0.00011	<0.011 UJ	<0.011	<0.0053	0.0255	<0.0013 U	<0.011	<0.0053	<0.00011	<0.00011	<0.0053	<0.011	<0.0053	<0.011	<0.0053	
	MW10-ROX-050112	5/1/2012		40.86	NE	<0.0001	<0.0001	<0.01 UJ	0.000018 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	
	MW10-ROX-072712	7/27/2012		41.21	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001 UJ	<0.0001	<0.01	<0.01	<0.005	<0.00067 U	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	
	MW10-ROX-102612	10/26/2012		43.08	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056	
	MW10-ROX-121712	12/17/2012		43.08	NE																								
	MW10-ROX-011013	1/10/2013		44.10	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	MW10-ROX-012113	1/21/2013		44.10	NE	<0.0001	<0.0001	<0.02	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.05	<0.02	<0.01	<0.006	<0.01	<0.02	<0.01	<0.0001	<0.0001	<0.01	<0.01	<0.01	<0.01
	MW10-ROX-040913	4/9/2013		44.60	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0018 U	<0.011
	MW10-ROX-070813	7/8/2013		42.27	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0027 U	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	
	MW10-ROX-100313	10/3/2013		42.38	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	
MW10-ROX-011514	1/15/2014	44.42	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	0.000096 J	<0.00011	<0.011 UJ	<0.011	<0.0053	0.00054 J	<0.0053	<0.011 UJ	<0.0054 UJ	<0.00011	0.000074 J	<0.0021	<0.011 UJ	<0.0053	<0.011 UJ	<0.0053	<0.011 UJ		
MW10-ROX-040714	4/7/2014	44.43 - 54.43	45.00	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0053	0.00068 JB U	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053		
MW-11	MW11-ROX-072411	7/24/2011	41.66 - 51.66	34.3	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	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	<0.0056	0.00013 B	<0.00011	<0.0056	<0.011	<0.0056	<0.011		
	MW11-ROX-110211	11/2/2011		35.44	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0054	<0.011	<0.0054	<0.011 UJ	
	MW11-ROX-011712	1/17/2012		37.44	NE			0.000022 J J					0.000065 J J																
	MW11-ROX-043012	4/30/2012		38.66	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051	
	MW11-ROX-072712	7/27/2012		38.90	NE	<0.00012	<0.00012	<0.012 UJ	<0.00012	<0.000058	<0.00012	<0.000058	<0.00012 UJ	<0.00012	<0.012	<0.012	<0.0058	<0.00056 U	<0.0058	<0.012	<0.0058	<0.00012	<0.00012	<0.0023	<0.012	<0.0058	<0.012		
	MW11-ROX-102512	10/25/2012		40.59	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.00042 U	<0.011		
	MW11-ROX-011013	1/10/2013		41.43	NE	<0.0001 UJ	<0.0001 UJ	<0.01 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01 UJ	<0.01 UJ	<0.005 UJ	<0.002 UJ	<0.005 UJ	<0.01 UJ	<0.005 UJ	<0.0001 UJ	<0.0001 UJ	<0.002 UJ	<0.01 UJ	<0.005 UJ	<0.01 UJ	<0.005 UJ	
	MW11-ROX-040813	4/8/2013		42.02	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011		
	MW11-ROX-070813	7/8/2013		39.24	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.00052 U	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011		
	MW11-ROX-100713	10/7/2013		39.95	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0011 U	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0011 U	<0.011		
	MW11-ROX-011514	1/15/2014		42.16	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011		
	MW11-ROX-040714	4/7/2014		41.66 - 51.66	42.70	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0056	0.0056 B U	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	
MW-12	MW12-ROX-072411	7/24/2011	41.92 - 51.92	35.55	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	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	<0.005 UJ	0.000072 JB	0.000031 JB	<0.005	<0.01 UJ	<0.005	<0.01 UJ		
	MW12-ROX-110211	11/2/2011		35.70	NE	<0.000095	<0.000095	<0.0095 UJ	<0.000095	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.000095	<0.0095	<0.0095	<0.0048	<0.0019	<0.0048	<0.0095	<0.0048	<0.000095	<0.000095	<0.0048	<0.0095	<0.0048	<0.0095 UJ	
	MW12-ROX-011712	1/17/2012		37.70	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00016 U	<0.00013 U	<0.00021 U	0.00013	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.00029 U	<0.011	<0.0054	<0.00011	<0.00021 U	<0.0054	<0.011	<0.0054	<0.011		
	MW12-ROX-011712-DUP	1/17/2012		37.70	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.000039 U	<0.00004 U	<0.000067 U	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.00033 U	<0.011	<0.0056	<0.00011	<0.000051 U	<0.0056	<0.011	<0.0056	<0.011		
	MW12-ROX-043012	4/30/2012		38.98	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051												

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

Screening Values (mg/L)						SVOCs																						
Location	Sample ID	Sample Date	Screened Interval (ft b/c)	Depth to Water (ft b/c)	Product Thickness (ft)	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	Bis(2-Chloroethyl)ether	Bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (P-Chloro-m-cresol)	p-Chlorophenol	Chrysene (1,2-Benzophenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	
						0.42 ¹	0.21 ³	0.023 ³	2.1 ¹	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		0.035 ²	0.012 ¹	0.0003 ¹	0.007 ³	0.021 ²	5.6 ¹	0.14 ²	
						Analytical Results (mg/L)																						
MW-13	MW13-ROX-080311	8/3/2011	25.57 - 35.57	21.67	NE	<0.0001	<0.0001	<0.01	0.00011	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	<0.005	0.000036 J	<0.0001	<0.005	<0.01	<0.005	<0.01	
	MW13-ROX-110311	11/3/2011		22.85	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0056	<0.011	<0.0056	<0.011 UJ
	MW13-ROX-012012	1/20/2012		24.77	NE	<0.00011	0.00014	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.00011	0.0087 J J	<0.011	<0.0053	<0.0007 U	<0.0007 U	<0.011	<0.0053	<0.00011	<0.00011	<0.0053	<0.011	<0.0053	<0.011
	MW13-ROX-050712	5/7/2012		25.79	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01
	MW13-ROX-080812	8/8/2012		26.67	NE	0.0001 J	0.00019	<0.011 UJ	0.000063 J	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW13-ROX-110812	11/8/2012		25.30	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	MW13-ROX-012313	1/23/2013		29.26	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055 UJ	<0.011
	MW13-ROX-041213	4/12/2013		29.44	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	MW13-ROX-071213	7/12/2013		25.67	NE	<0.00011	<0.000063 U	<0.011	<0.000058 U	<0.00014 U	<0.00011	<0.000054	<0.00011	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	0.00079 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW13-ROX-100913	10/9/2013		26.94	NE	0.000098 J	0.000071 J	<0.01	<0.0001	0.000022 J	<0.0001	<0.000052	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.00068 J	<0.0052	<0.01	<0.0052	0.000034 J	<0.0001	<0.0021	<0.01	<0.0052	<0.01
MW13-ROX-012914	1/29/2014	29.63	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011		
MW13-ROX-041114	4/11/2014	30.15	NE	0.00013	0.000066 J	<0.012	<0.00012	<0.00006	<0.00012	<0.00006	<0.00012	<0.00012	<0.00012	<0.012	<0.012	<0.0055	0.00069 JB U	<0.006	<0.012	<0.0055	<0.00012	<0.00012	<0.0024	<0.012	<0.0055	<0.012		
MW-14	MW14-ROX-110911	11/9/2011	Unknown			<0.00011	<0.00011 UJ	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0053	<0.011	<0.0053	<0.011	
	MW14-ROX-051012	5/10/2012		NM	NE	0.00046	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.00042 U	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	0.00084 J	<0.0052	<0.01	
	MW14-ROX-080312	8/3/2012		NM	NE	0.00095	0.00015	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.00049 J	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.00076 J	0.00096 J	<0.0053	<0.011	
	MW14-ROX-103112	10/31/2012		32.02	NE	0.00074	0.00008 J	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	0.0003 J	<0.01	<0.005	<0.01 UJ	
	MW14-ROX-011813	1/18/2013	33.42 - 43.42	33.05	NE	0.00092	0.00013	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	
	MW14-ROX-041113	4/11/2013		33.31	NE	0.00068	0.000098 J	<0.011	<0.00011	0.00013	<0.00011	0.000054	0.000053 J	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	
	MW14-ROX-071213	7/12/2013		30.36	NE	0.00046 B	<0.000062 U	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	0.00066 J	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	
	MW14-ROX-101013	10/10/2013		30.80	NE	0.00065	0.00011	<0.011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	0.00019 J	<0.011	<0.0057	<0.011	
MW14-ROX-012914	1/29/2014		33.67	NE	0.00062	0.00012	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00056 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011		
MW14-ROX-041114	4/11/2014	33.42 - 43.42	34.30	NE	0.00037	0.000089 J	<0.012	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.012	<0.012	<0.006	0.00069 JB U	<0.006	<0.012	<0.006	<0.00011	<0.00011	<0.0024	<0.012	<0.006	<0.012		
MW-16	MW16-ROX-012313	1/23/2013	37.06 - 47.06	43.05	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053 UJ	<0.011	
	MW16-ROX-040813	4/8/2013		43.39	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	
	MW16-ROX-070813	7/8/2013		40.62	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	
	MW16-ROX-100813	10/8/2013		41.62	NE	<0.0001 UJ	<0.0001 UJ	<0.01 UJ	<0.0001 UJ	<0.000052 UJ	<0.0001 UJ	<0.000052 UJ	<0.0001 UJ	<0.0001 UJ	<0.01 UJ	<0.01 UJ	<0.0052 UJ	<0.0021 UJ	<0.0052 UJ	<0.01 UJ	<0.0052 UJ	<0.0001 UJ	<0.0001 UJ	<0.0021 UJ	<0.01 UJ	<0.0052 UJ	<0.01 UJ	
	MW16-ROX-011514	1/15/2014		43.76	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.00061 J	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	
MW16-ROX-040914	4/9/2014	44.63	NE	<0.00012	<0.00012	<0.012	<0.00012	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.012	<0.012	<0.0059	<0.0024	<0.0059	<0.012	<0.0059	<0.00012	<0.00012	<0.0024	<0.012	<0.0059	<0.012			
MW-22	MW22-ROX-012313	1/23/2013	37.88 - 47.88	41.80	NE	0.00018	<0.0001	<0.01 UJ	0.00002 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	0.0031 J	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052 UJ	0.0146	
	MW22-ROX-012313-DUP	1/23/2013		41.80	NE	0.00018	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	0.0033 J	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053 UJ	0.0149	
	MW																											

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

						SVOCs																								
Screening Values (mg/L)						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	Bis(2-Chloroethyl)ether	Bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (P-Chloro-m-cresol)	p-Chlorophenol	Chrysene (1,2-Benzophenanthracene)	Dibenz(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol			
Location	Sample ID	Sample Date	Screened Interval (ft b(toc))	Depth to Water (ft b(toc))	Product Thickness (ft)	0.42 ¹	0.21 ³	0.023 ³	2.1 ¹	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		0.035 ²	0.012 ¹	0.0003 ¹	0.007 ³	0.021 ²	5.6 ¹	0.14 ²			
						Analytical Results (mg/L)																								
P-54	P54-ROX-072411	7/24/2011	38.00 - 63.00	35.38	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	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	<0.005	0.000081 JB	0.00002 JB	<0.005	<0.01	<0.005	<0.01	<0.01		
	P54-ROX-110311	11/3/2011		35.49	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.01	
	P54-ROX-011712	1/17/2012		37.17	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.000024 U	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.01	
	P54-ROX-050412	5/4/2012		38.77	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	0.0045 J	<0.01	<0.0051	0.0133	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.01	
	P54-ROX-080212	8/2/2012		38.95	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	<0.011	
	P54-ROX-103012	10/30/2012		40.70	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051	<0.01	
	P54-ROX-011113	1/11/2013		41.56	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	<0.011	
	P54-ROX-041013	4/10/2013		41.80	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011	<0.0057	<0.011	
	P54-ROX-050313	5/3/2013		41.80	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056	<0.011	
	P54-ROX-071113	7/11/2013		39.07	NE	0.000032 J	0.000016 J	<0.01	0.000018 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	0.00052 J	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	<0.01	
	P54-ROX-100813	10/8/2013		39.94	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011	<0.0057	<0.011	
	P54-ROX-011514	1/15/2014		42.20	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00058 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054	<0.011	
P54-ROX-040914	4/9/2014	42.80	NE	<0.00012	<0.00012	<0.012	<0.00012	<0.00006	<0.00012	<0.00006	<0.00012	<0.00012	<0.012	<0.012	<0.006	<0.0024	<0.006	<0.012	<0.006	<0.00012	<0.00012	<0.0024	<0.012	<0.006	<0.012	<0.006	<0.012			
P-55	P55-ROX-103111	10/31/2011	39.82 - 64.82	39.15	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.0022	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.01	
	P55-ROX-011912	1/19/2012		41.09	NE	0.00017	<0.0001	<0.01	<0.0001	<0.000052	0.000022 J	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.0052	<0.0021	<0.00048 U	<0.01	<0.0052	<0.0001	<0.0001	0.00035 J	<0.01	<0.0052	<0.01	<0.0052	<0.01		
	P55-ROX-011912-D	1/19/2012		41.09	NE	0.00015	<0.00011	<0.011	<0.00011	<0.000054	0.000067 J	0.000061	0.00011	0.000071 J	<0.011 UJ	<0.0054	<0.0022	<0.00035 U	<0.011	<0.0054	<0.00011	0.000086 J	0.00033 J	<0.011	<0.0054	<0.011	<0.0054	<0.011		
	P55-ROX-050912	5/9/2012		42.44	NE	0.00036	0.000095 J	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.01	
	P55-ROX-012113	1/21/2013		43.60	NE	0.00069	0.00019	<0.02	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.05	<0.02	<0.01	<0.006	<0.01	<0.02	<0.01	<0.0001	<0.0001	<0.0001	0.001 J	<0.01	<0.0051	<0.01	<0.0051	0.004 J
	P55-ROX-012113	1/21/2013		43.60	NE	0.00054	0.00014	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	0.001 J	<0.01	0.00073 J	<0.01	0.00073 J	0.0024 J	
	P55-ROX-041513	4/15/2013		43.63	NE	0.00073	0.00021	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	0.0017 J	<0.01	<0.0052	<0.01	<0.0052	<0.01	
	P55-ROX-071613	7/16/2013		40.06	NE	0.00066	0.0002	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056 UJ	<0.00066 U	<0.0056	<0.011	<0.0056 UJ	<0.00011	<0.00011	0.0016 J	<0.011	<0.0056	0.0024 J			
	P55-ROX-101013	10/10/2013		41.67	NE	0.00071	0.00019	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0055	0.0006 J	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	0.0016 J	<0.011	<0.0055	0.0014 J			
	P56-ROX-102711	10/27/2011		39.42	NE	0.0007	0.00013	<0.01 UJ	0.00013	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0026	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.01	
P56-ROX-011912	1/19/2012	41.81	NE	0.00064	<0.0001	<0.01	0.00011	<0.000051	0.000021 J	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.0051	<0.00066 U	<0.00053 U	<0.01	<0.0051	<0.0001	<0.0001	0.00064 J	<0.01	<0.0051	<0.01	<0.0051	<0.01				
P56-ROX-050812	5/8/2012	43.09	NE	0.00057	0.0001	<0.01	<0.0001	<0.00011 U	<0.00012 U	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.01			
P56-ROX-080612	8/6/2012	43.60	NE	0.00058	0.000087 J		0.00013	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	0.00051 J	<0.01	<0.0051	<0.01	<0.0051	<0.01			
P56-ROX-103112	10/31/2012	44.80	NE	0.0011	<0.0001	<0.01 UJ	0.00012	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	0.00066 J	<0.01	<0.0051	<0.01	<0.0051	<0.01			
P56-ROX-011713	1/17/2013	45.65	NE	0.00039	0.000083 J	<0.01 UJ	0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.0044	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	<0.01			
P56-ROX-041213	4/12/2013	46.12	NE	0.00053	0.000088 J	<0.011	0.0001 J	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055	<0.011			
P56-ROX-071513	7/15/2013	43.25	NE	0.00065	0.00013	<0.011	0.00014	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011																

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

Screening Values (mg/L)						SVOCs																							
Location	Sample ID	Sample Date	Screened Interval (ft b(toc))	Depth to Water (ft b(toc))	Product Thickness (ft)	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	Bis(2-Chloroethyl)ether	Bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (P-Chloro-m-cresol)	p-Chlorophenol	Chrysene (1,2-Benzophenanthracene)	Dibenz(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol		
						0.42 ¹	0.21 ³	0.023 ³	2.1 ¹	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		0.035 ²	0.012 ¹	0.0003 ¹	0.007 ³	0.021 ²	5.6 ¹	0.14 ²		
						Analytical Results (mg/L)																							
P-74	P74-ROX-103111	10/31/2011	44.43 - 69.43	36.26	NE	0.00033	0.00012	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	
	P74-ROX-011912	1/19/2012		38.77	NE	<0.000095	<0.000095	<0.0095	<0.000095	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.000095	<0.0095 UJ	<0.0048	<0.0019	<0.00043 U	<0.0095	<0.0048	<0.000095	<0.000095	<0.0048	<0.0095	<0.0048	<0.0095	<0.0048	<0.0095
	P74-ROX-050712	5/7/2012		39.92	NE	<0.0001	<0.0001	<0.01	<0.0001	0.00012	<0.0001	<0.000052	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052
	P74-ROX-080612	8/6/2012		40.71	NE	0.00016	0.000056 J		0.000041 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.0012 U	0.0039 J	
	P74-ROX-110112	11/1/2012		41.72	NE	0.00023	<0.0001	<0.01 UJ	0.000044 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	0.00044 J	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	0.00031 J	0.001 J	<0.0052	0.008 J J	
	P74-ROX-011713	1/17/2013		42.65	NE	0.00019	0.0001	<0.01 UJ	0.000063 J	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.0001	<0.01	0.0028 J	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	0.0021 J	
	P74-ROX-041113	4/11/2013		42.83	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	
	P74-ROX-071513	7/15/2013		40.11	NE	<0.000063 U	<0.00011	<0.011	0.000032 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	0.0013 J	<0.0054	<0.011	
	P74-ROX-101413	10/14/2013		41.72	NE	0.0002	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00097 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.00033 J	0.0012 J	<0.0054	0.0019 J	
	P74-ROX-012414	1/24/2014		43.35	NE	0.00023	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.00063 J	0.00097 J	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	
P74-ROX-041514	4/15/2014	44.74	NE	<0.00012	<0.00012	<0.012	<0.00012	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.00012	<0.012	<0.012	<0.0059	<0.0024	<0.0059	<0.012	<0.0059	<0.00012	<0.00012	<0.0024	<0.012	<0.0059	<0.012 UJ			
P-93A	P93A-ROX-081811	8/18/2011	48.17 - 63.17	39.40	NE	0.00036	<0.0001	<0.01	0.000058 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.003	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.0029 U	<0.01		
	P93A-ROX-102611	10/26/2011		39.43	NE	0.00024	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.0075	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	
	P93A-ROX-012012	1/20/2012		41.66	NE	0.00014	<0.000095	<0.0095 UJ	0.000032 J	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.0095 UJ	<0.0095	<0.0048	<0.006 U	<0.00053 U	<0.0095	<0.0048	<0.000095	<0.000095	<0.0048	<0.0095	<0.0048	<0.0095		
	P93A-ROX-050812	5/8/2012		42.75	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.0001 U	<0.00012 U	<0.000051	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.0029	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	
	P93A-ROX-080912	8/9/2012		43.66	NE	0.00015	<0.00011	<0.011	0.000048 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.00011	0.0032 J	<0.011	<0.0054	0.0153	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	
	P93A-ROX-110712	11/7/2012		45.00	NE	<0.00022 U	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0026	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	0.00027 J	<0.01	<0.0052	<0.01	
	P93A-ROX-110712-DUP	11/7/2012		45.00	NE	0.00029 B	<0.0001	<0.01	0.000061 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0023	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	
	P93A-ROX-012313	1/23/2013		45.89	NE	0.00016	<0.0001	<0.01 UJ	0.000028 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0099	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052 UJ	<0.01	
	P93A-ROX-012313-DUP	1/23/2013		45.89	NE	0.00014	<0.0001	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.011	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052 UJ	<0.01	
	P93A-ROX-041113	4/11/2013		46.29	NE	0.00023	<0.0001	<0.01	0.000074 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	
	P93A-ROX-041113-DUP	4/11/2013		46.29	NE	0.00021	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	
	P93A-ROX-071813	7/18/2013		43.25	NE	<0.00011	0.000032 J	<0.011	0.00003 J	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	0.00024 J	<0.011	<0.0056	<0.011	
	P93A-ROX-101113	10/11/2013		44.18	NE	0.00017	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	
	P93A-ROX-012914	1/29/2014		46.53	NE	0.00022	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	
P93A-ROX-041714	4/17/2014	47.41	NE	0.00013	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011			
P-93B	P93B-ROX-081811	8/18/2011	74.60 - 76.60	39.44	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.001 J	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0021 U	<0.01		
	P93B-ROX-102611	10/26/2011		39.48	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0103	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01		
	P93B-ROX-012012	1/20/2012		41.72	NE	<0.000095	0.000028 J	<0.0095 UJ	<0.000095	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.0095 UJ	<0.0095	<0.0048	<0.0033 U	<0.00033 U	<0.0095	<0.0048	<0.000095	<0.000095	<0.0048	<0.0095	<0.0048	<0.0095		
	P93B-ROX-050812	5/8/2012		42.79	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.00012 U	<0.000051	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	
	P93B-ROX-080912	8/9/2012		43.69																									

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

Screening Values (mg/L)						SVOCs																						
Location	Sample ID	Sample Date	Screened Interval (ft b/c)	Depth to Water (ft b/c)	Product Thickness (ft)	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	Bis(2-Chloroethyl)ether	Bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	p-Chlorophenol	Chrysene (1,2-Benzophenanthracene)	Dibenz(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	
						0.42 ¹	0.21 ³	0.023 ³	2.1 ¹	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		0.035 ²	0.012 ¹	0.0003 ¹	0.007 ³	0.021 ²	5.6 ¹	0.14 ²	
						Analytical Results (mg/L)																						
P-93C	P93C-ROX-081811	8/18/2011	94.26 - 96.26	39.32	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.0092	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.0015 U	<0.01	
	P93C-ROX-102611	10/26/2011		39.36	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01
	P93C-ROX-012012	1/20/2012		41.57	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	0.000019 J	0.000027 J	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.0096 U	<0.00037 U	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	
	P93C-ROX-050812	5/8/2012		42.68	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.00012 U	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.008	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0053	<0.011	<0.0053	<0.011	
	P93C-ROX-080912	8/9/2012		43.57	NE	0.000089 J	0.000022 J	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0043	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.00046 U	<0.01	
	P93C-ROX-110812	11/8/2012		45.12	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.00081 J	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	
	P93C-ROX-012313	1/23/2013		45.78	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	0.0049	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055 UJ	<0.011	
	P93C-ROX-041213	4/12/2013		46.21	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	
	P93C-ROX-071813	7/18/2013		43.31	NE	<0.000045 U	<0.00011	<0.011	0.000021 J	<0.000056	0.00015	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	
	P93C-ROX-080813	8/8/2013		43.31	NE																							
P93C-ROX-101613	10/16/2013	44.31	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01			
P93C-ROX-012414	1/24/2014	46.44	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01			
P93C-ROX-041714	4/17/2014	47.34	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01			
P-93D	P93D-ROX-081811	8/18/2011	125.75 - 127.75	39.46	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.000015 U	<0.0001	<0.005	<0.01	<0.0018 U	<0.01	
	P93D-ROX-102711	10/27/2011		39.59	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	
	P93D-ROX-012012	1/20/2012		41.77	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0054	<0.011	<0.0054	<0.011	
	P93D-ROX-050812	5/8/2012		42.96	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.0001 U	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	
	P93D-ROX-080812	8/8/2012		43.71	NE	0.00017	0.000051 J	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.0021 U	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	
	P93D-ROX-110812	11/8/2012		NM	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	
	P93D-ROX-012213	1/22/2013		44.21	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	
	P93D-ROX-041113	4/11/2013		46.37	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	
	P93D-ROX-071213	7/12/2013		43.51	NE	<0.000026 U	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	0.00057 J	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	
	P93D-ROX-101113	10/11/2013		44.24	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005 UJ	<0.0001	<0.0001	<0.002	<0.01 UJ	<0.0001	<0.002	<0.01 UJ	<0.005	<0.01 UJ
P93D-ROX-013114	1/31/2014	46.62	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.0045	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011			
P93D-ROX-041414	4/14/2014	47.54	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.0005 UB U	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011			
P-114	P114-ROX-102811	10/28/2011	32.67 - 52.67	24.73	NE	<0.000095	<0.000095	<0.0095 UJ	<0.000095	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.0095	<0.0095	<0.0048	0.0053	<0.0048	<0.0095	<0.0048	<0.000095	<0.000095	<0.0048	<0.0095	<0.0048	<0.0095	
	P114-ROX-012012	1/20/2012		27.17	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	0.000055 J	0.00005 J	0.000058 J	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.0013 U	<0.00044 U	<0.01	<0.0051	<0.0001	0.000053 J	<0.0051	<0.01	<0.0051	<0.01	
	P114-ROX-050912	5/9/2012		28.09	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0015 J	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	
	P114-ROX-080912	8/9/2012		29.13	NE	<0.0001	0.000029 J	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.0039	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	
	P114-ROX-110912	11/9/2012		30.90	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	
	P114-ROX-012313	1/23/2013		30.22	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.0059	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053 UJ	<0.011	
	P114-ROX-041513	4/15/2013		31.80	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052																

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

						SVOCs																					
Screening Values (mg/L)						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	Bis(2-Chloroethyl)ether	Bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	p-Chlorophenol	Chrysene (1,2-Benzophenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	0.42 ¹	0.21 ³	0.023 ³	2.1 ¹	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	0.035 ²	0.012 ¹	0.0003 ¹	0.007 ³	0.021 ²	5.6 ¹	0.14 ²	
						Analytical Results (mg/L)																					
ROST-4-PZ(C)	ROST4PZ-C-051412	5/14/2012	34.95 - 44.95	39.04	NE	0.00027	0.000072 J	<0.01	0.00011	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	0.00027 J	<0.01	<0.005	<0.01
	ROST4PZ-C-ROX-072512	7/25/2012		39.10	NE	0.00039 B	<0.00011	<0.011	<0.00018 U	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	0.00042 J	<0.0053	<0.00051 U	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.00036 J	<0.011	0.0012 J	0.003 J
	ROST4PZC-ROX-102912	10/29/2012		40.75	NE	0.000054 J	<0.0001	<0.01 UJ	0.00005 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0045	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	ROST4PZ(C)-ROX-011113	1/11/2013		41.42	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	ROST4PZC-ROX-041013	4/10/2013		42.27	NE	0.000066 J	0.000018 J	<0.011	0.000033 J	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011
	ROST4PZC-ROX-071113	7/11/2013		40.18	NE	0.00019	0.000073 J	<0.011	0.00012	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	0.0032	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	ROST4PZC-ROX-100913	10/9/2013		39.91	NE	0.00012	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	ROST4PZC-ROX-011714	1/17/2014		41.92	NE	<0.00012	<0.00012	<0.012	<0.00012	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.01 UJ	<0.012	<0.0059	<0.0024	<0.0059	<0.01 UJ	<0.005 UJ	<0.00012	<0.00012	<0.0024	<0.01 UJ	<0.0059	<0.01 UJ
ROST4PZC-ROX-041014	4/10/2014	42.05	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011		
T-12	T12-ROX-102711	10/27/2011	46.46 - 72.46	38.54	NE	0.00079	0.00012	<0.01 UJ	0.00017	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.0025	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	0.0109
	T12-ROX-011912	1/19/2012		41.0	NE	0.00047	<0.00011	<0.011	0.00014	<0.000056	0.000032 J	0.000035 J	0.000069 J	<0.00011		<0.011 UJ	<0.0056	<0.0017 U	<0.00062 U	<0.011	<0.0056	<0.00011	0.00005 J	0.00029 J	<0.011	<0.0056	0.0095 J
	T12-ROX-050912	5/9/2012		42.62	NE	0.00032	<0.0001	<0.01	0.000081 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01
	T12-ROX-080212	8/2/2012		41.92	NE	0.00044	0.000082 J	<0.011 UJ	0.0001 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.0003 J	<0.011	<0.0054	0.0153
	T12-ROX-110512	11/5/2012		43.91	NE	0.00044	<0.0001	<0.01	0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	0.00054 J	<0.005	<0.01	<0.005	<0.0001	<0.0001	0.00029 J	<0.01	<0.005	0.0028 J J
	T12-ROX-011813	1/18/2013		44.50	NE	0.0005	0.000093 J	<0.011 UJ	<0.00013 U	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	0.0065 J
	T12-ROX-041513	4/15/2013		44.99	NE	0.00063	0.00009 J	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	0.00048 J	<0.01	<0.0051	<0.01
	T12-ROX-071613	7/16/2013		42.33	NE	0.00055	0.0001 J	<0.011	0.00015	0.00013	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	0.001 J	<0.0054 UJ	<0.0044 U	<0.0054	<0.011	<0.0054 UJ	<0.00011	<0.00011	0.00042 J	<0.011	<0.0054	0.0096 J
	T12-ROX-101513	10/15/2013		43.73	NE	0.00036	<0.00011	<0.011	0.00012	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	0.000028 J	<0.00011	0.00029 J	<0.011	<0.0054	0.0047 J
	T12-ROX-012414	1/24/2014		45.26	NE	0.0005	<0.0001	<0.01	0.00014	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	0.0073 J
T12-ROX-041514	4/15/2014	46.72	NE	0.00037	<0.00011	<0.011	0.00012	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	0.00031 J	<0.011	<0.0056	<0.011 UJ		

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

Screening Values (mg/L)						SVOCs																						
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Dimethyl phthalate	D-n-butyl phthalate	D-n-octyl phthalate	2,6-Dinitrotoluene	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)	2,4-Methylphenol (m & p-Cresol)	o-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	
						0.7 ¹	0.14 ²	0.00031 ²	0.28 ¹	0.28 ¹	0.00006 ²		0.00043 ¹	1.4 ²	0.49 ³	0.028 ¹	0.35 ¹	0.35 ³		0.014 ¹	0.0006 ³	0.0032 ²	0.001 ¹	0.21 ³	0.1 ¹	0.21 ¹		
						Analytical Results (mg/L)																						
MW-01	MW1-ROX-072711	7/27/2011	43.41 - 58.41	35.77	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001	
	MW1-ROX-120511	12/5/2011		37.10	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001	
	MW1-ROX-011612	1/16/2012	48.80 - 58.80	37.75	NE	<0.0051	<0.0051	<0.0051	<0.01	0.00011	0.000059 J	<0.0051		<0.00012 U	<0.0051	<0.0002	0.000098 J	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.000098	<0.0051	0.00009 J	
	MW1-ROX-050112	5/1/2012		39.09	NE	<0.0051	<0.00054 U	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051 UJ	<0.0051	<0.01	<0.000051	<0.0051 UJ	<0.0001	
	MW1-ROX-073012	7/30/2012		39.39	NE	<0.0053	<0.00043 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.000025 J	<0.0053	<0.00011	
	MW1-ROX-102612	10/26/2012		41.22	NE	<0.0057	<0.0057	<0.0057	<0.011	<0.00011	<0.00011	<0.0057		<0.00011	<0.0057	<0.00023	<0.00023	<0.011	<0.011	<0.011	<0.0057	<0.0057	<0.0057	<0.011	<0.000057	<0.0057	<0.00011	
	MW1-ROX-121712	12/17/2012		41.22	NE																							
	MW1-ROX-011013	1/10/2013		41.89	NE	<0.0052 UJ	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000021 U	<0.0052	<0.0001	
	MW1-ROX-040913	4/9/2013		42.55	NE	<0.0053 UJ	<0.0012 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011	
	MW1-ROX-070813	7/8/2013		39.56	NE	<0.0051	<0.0051	<0.0051	<0.01	0.000033 J	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000043 U	<0.0051	<0.0001	
	MW1-ROX-100313	10/3/2013		40.28	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011	
	MW1-ROX-011414	1/14/2014		42.77	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011 UJ	<0.011 UJ	<0.011	<0.0053	<0.0053	<0.0053	<0.011 UJ	0.000031 J	<0.0053 UJ	<0.00011	
MW1-ROX-040714	4/7/2014	43.28	NE	<0.0054	0.00029 JB U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011 UJ	<0.011 UJ	<0.011	<0.0054	<0.0054	<0.0054	<0.011 UJ	0.000023 JB U	<0.0057 UJ	<0.00011			
MW-02	MW2-ROX-072711	7/27/2011	47.19 - 62.19	37.04	NE	<0.005	<0.005	<0.005	<0.01	<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	<0.005	<0.005	<0.005	<0.01	<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	<0.005	<0.005	<0.005	<0.01	<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	<0.0053	0.00056 J	<0.0053	<0.011	<0.00011	0.000052 J	<0.0053		<0.000054 U	<0.0053	0.0107	0.0229	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.000066	<0.0053	<0.00011	
	MW2-ROX-050112	5/1/2012		40.25	NE	<0.0052	<0.0005 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	0.0105	0.021	<0.01	<0.01	<0.01	<0.0052	<0.0052 UJ	<0.0052	<0.01	<0.000052	<0.0052 UJ	<0.0001	
	MW2-ROX-073012	7/30/2012		40.60	NE	<0.0053	<0.00047 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.0097	0.0229	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00004 J	<0.0053	0.000039 J	
	MW2-ROX-102612	10/26/2012		42.35	NE	<0.0054	<0.0054	<0.0054	<0.011	0.000061 J	0.00011	<0.0054		<0.00011	<0.0054	0.0091	0.0182	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00011	<0.0054	0.000046 J	
	MW2-ROX-011113	1/11/2013		42.94	NE	<0.0056 UJ	<0.0056	<0.0056	<0.011	0.00004 J	<0.00011	<0.0056		<0.00011	<0.0056	0.008	0.0162	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.000044 J	<0.0056	0.000039 J	
	MW2-ROX-040913	4/9/2013		43.70	NE	<0.0054 UJ	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.012	0.0256	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011	
	MW2-ROX-071113	7/11/2013		40.82	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	0.0123 J	0.0249	<0.011	<0.011	<0.011 UJ	<0.0055	<0.0055	<0.0055	<0.011	<0.000051 U	<0.0055 UJ	<0.00011	
	MW2-ROX-100813	10/8/2013		41.73	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.009	0.0201	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011	
	MW2-ROX-012014	1/20/2014		44.00	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.0094	0.0208	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000043 U	<0.0053	<0.00011	
MW2-ROX-041014	4/10/2014	44.66	NE	<0.006	0.00046 JB U	<0.006	<0.012	<0.00012	<0.00012	<0.006		<0.00012	<0.006	0.0083	0.0193	<0.012	<0.012	<0.012	<0.006	<0.006	<0.006	<0.012	<0.00006	<0.006	<0.00012			
MW-03	MW3-ROX-080311	8/3/2011	30.98 - 45.98	22.72	NE	<0.0048	<0.00061 U	<0.0048	<0.0095	<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		24.06	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052 UJ	<0.0052	<0.01	<0.000052	<0.0052 UJ	<0.0001	
	MW3-ROX-112911-DUP	11/29/2011	24.06	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051 UJ	<0.0051	<0.01	<0.000051	<0.0051 UJ	<0.0001		
	MW3-ROX-011612	1/16/2012	24.93	NE	<0.0052	<0.0052	<0.0052	<0.01	0.000098 J	<0.0001	<0.0052		<0.00015 U	<0.0052	<0.00021	0.00015 J	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.000095	<0.0052	0.000078 J		
	MW3-ROX-043012	4/30/2012	26.19	NE	<0.0052	<0.00047 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001		
	MW3-ROX-072712	7/27/2012	26.60	NE	<0.0053	<0.00066 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011 UJ	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.000025 J J	<0.0053	<0.00011		
	MW3-ROX-102512	10/25/2012	28.39	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.00															

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

Screening Values (mg/L)						SVOCs																						
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Dimethyl phthalate	D-n-butyl phthalate	D-n-octyl phthalate	2,6-Dinitrotoluene	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)	2,4-Methylphenol (m & p-Cresol)	o-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	
						0.7 ¹	0.14 ²	0.00031 ²	0.28 ¹	0.28 ¹	0.00006 ²		0.00043 ¹	1.4 ²	0.49 ³	0.028 ¹	0.35 ¹	0.35 ³		0.014 ¹	0.0006 ³	0.0032 ²	0.001 ¹	0.21 ³	0.1 ¹	0.21 ¹		
Analytical Results (mg/L)																												
MW-04	MW4-ROX-072611	7/26/2011	42.63 - 57.63	34.15	NE	<0.005	<0.005	<0.005	<0.01	<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	<0.005	<0.005	<0.005	<0.01	<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	<0.0052	<0.0052	<0.0052	<0.01	<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	<0.0052	0.00077 J	<0.0052	<0.01	0.000047 J	<0.0001	<0.0052		<0.00018 U	<0.0052	0.0006	0.00059	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.000057	<0.0052	0.000065 J	
	MW4-ROX-050312	5/3/2012		37.45	NE	<0.005	<0.00062 U	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	0.00032	0.00025	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001	
	MW4-ROX-050312-DUP	5/3/2012		37.45	NE	<0.0051	<0.00061 U	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001	
	MW4-ROX-072512	7/25/2012		37.63	NE	<0.0051	0.00075 J	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	0.00054	0.00045 B	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	0.0018 J	<0.0001	
	MW4-ROX-072512-Dup	7/25/2012		37.63	NE	<0.0051	0.00057 J	<0.0051	<0.01	<0.0001	<0.00047 U	<0.0001	<0.0051		<0.0001	<0.0051	0.00049	0.0004 B	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000031 U	0.0023 J	<0.0001
	MW4-ROX-102912	10/29/2012		39.45	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	0.00025	0.00016 J	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001	
	MW4-ROX-011113	1/11/2013		40.20	NE	<0.0056 UJ	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	0.00014 J	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	0.0608	<0.00011	
	MW4-ROX-011113-DUP	1/11/2013		40.20	NE	<0.006 UJ	<0.006	<0.006	<0.012	<0.00012	<0.00012	<0.006		<0.00012	<0.006	<0.00024	0.000099 J	<0.012	<0.012	<0.012	<0.006	<0.006	<0.006	<0.012	<0.00006	0.0665	<0.00012	
	MW4-ROX-030413	3/4/2013		40.20	NE																							
	MW4-ROX-040913	4/9/2013		40.90	NE	<0.0053 UJ	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00022	0.000082 J	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000054	0.11	<0.00011	
	MW4-ROX-040913-DUP	4/9/2013		40.90	NE	<0.0053 UJ	<0.00062 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	0.000076 J	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	0.103	<0.00011	
	MW4-ROX-071713	7/17/2013		37.61	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		0.000052 J	<0.0055	0.00037	0.00023	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.00003 U	0.0661	<0.00011	
MW4-ROX-101613	10/16/2013	38.80	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.00016 J	0.00015 J	<0.011 UJ	<0.011 UJ	<0.011	<0.0054	<0.0054	<0.0054	<0.011 UJ	<0.000054	0.0168 J	<0.00011			
MW4-ROX-013014	1/30/2014	41.09	NE	<0.0054	<0.0013 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.00027	0.00022	<0.011 UJ	<0.011 UJ	<0.011	<0.0054	<0.0054	<0.0054	<0.011 UJ	<0.000022 U	0.0164 J	<0.00011			
MW4-ROX-041614	4/16/2014	41.91	NE	<0.0056	0.00076 JB U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	0.000072 J	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011			
MW-05	MW5-ROX-072611	7/26/2011	31.13 - 46.13	22.00	NE	<0.005	<0.005	<0.005	<0.01	<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	<0.005	<0.005	<0.005	<0.01	<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		23.46	NE	<0.0053	0.00052 J	<0.0053	<0.011	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	33.97 - 43.97	24.76	NE	<0.0053	<0.0053	<0.0053	<0.011	<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	<0.0053	<0.011	<0.000053	<0.0053	<0.00011	
	MW5-ROX-050312	5/3/2012		25.89	NE	<0.0051	<0.0005 U	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	0.00072 J	0.0117	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001	
	MW5-ROX-072512	7/25/2012		26.18	NE	<0.0052	0.00057 J	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	0.003	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000025 U	0.0015 J	<0.0001	
	MW5-ROX-102912	10/29/2012		28.16	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	0.0091	0.000084 J	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001	
	MW5-ROX-011113	1/11/2013		28.75	NE	<0.0055 UJ	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	0.0043	0.000084 J	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.000048 J	<0.0055	<0.00011	
	MW5-ROX-040913	4/9/2013		29.41	NE	<0.0054 UJ	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.004	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011	
	MW5-ROX-070913	7/9/2013		26.04	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.00099 U	<0.005		<0.0001	<0.005	0.0015	<0.0002 UJ	<0.01	<0.01	<0.01 UJ	<0.005	<0.005	<0.005	<0.01	<0.000074 U	<0.005	<0.0001	
	MW5-ROX-100813	10/8/2013		26.97	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	0.0038	0.00009 J	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011	
	MW5-ROX-011714	1/17/2014		29.59	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.0035	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011	
MW5-ROX-041014	4/10/2014	30.09	NE	<0.0056	0.00087 JB U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	0.0038	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011			
MW-06A	MW6A-ROX-072611	7/26/2011	31.98 - 46.98	23.76	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001	
	MW6A-ROX-112111	11/21/2011		25.49	NE	<0.0052	0.00053 J	0.00093 J	<0.01	<0.0001	<0.0001	<0.0052		0.0015 J	<0.0052	<0.00021 UJ	<0.00021											

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

Screening Values (mg/L)						SVOCs																					
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Dimethyl phthalate	D-n-butyl phthalate	D-n-octyl phthalate	2,6-Dinitrotoluene	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)	2,4-Methylphenol (m & p-Cresol)	o-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
						0.7 ¹	0.14 ²	0.00031 ²	0.28 ¹	0.28 ¹	0.00006 ²		0.00043 ¹	1.4 ²	0.49 ³	0.028 ¹	0.35 ¹	0.35 ³		0.014 ¹	0.0006 ³	0.0032 ²	0.001 ¹	0.21 ³	0.1 ¹	0.21 ¹	
Analytical Results (mg/L)																											
MW-06B	MW6B-ROX-072311	7/23/2011	64.05 - 69.05	23.60	NE	<0.0053 UJ	<0.00047 U	<0.0053	<0.011	<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	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW6B-ROX-011712	1/17/2012		26.77	NE	<0.0055	0.00055 J	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00028 U	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW6B-ROX-050212	5/2/2012		27.82	NE	<0.005	0.00039 J	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW6B-ROX-080112	8/1/2012		28.39	NE	<0.0051	0.0007 J	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	MW6B-ROX-102412	10/24/2012		30.11	NE	<0.0051	0.00079 J	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	MW6B-ROX-011713	1/17/2013		31.11	NE	<0.005	0.0026 J	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW6B-ROX-040313	4/3/2013		31.68	NE	<0.0054	0.0012 J	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	0.0002 J	<0.011	<0.011	<0.011	<0.0054	<0.0054 UJ	<0.0054	<0.011	<0.000054	<0.0054 UJ	<0.00011
	MW6B-ROX-070913	7/9/2013		28.25	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011 UJ	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	MW6B-ROX-100713	10/7/2013		28.93	NE	<0.0054 UJ	<0.0054	<0.0054	0.0224	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
MW6B-ROX-011614	1/16/2014	31.67	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054 UJ	<0.0054	<0.011	<0.000054	<0.0054 UJ	<0.00011		
MW6B-ROX-040814	4/8/2014	32.21	NE	<0.0053	0.00043 JB U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	<0.000053	<0.0053 UJ	<0.00011		
MW-06C	MW6C-ROX-072411	7/24/2011	84.95 - 89.95	23.43	NE	<0.0053 UJ	<0.0004 U	<0.0053	<0.011	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	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00011 U	<0.005	<0.0001
	MW6C-ROX-011712	1/17/2012		26.50	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW6C-ROX-050212	5/2/2012		27.62	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW6C-ROX-080112	8/1/2012		28.15	NE	<0.005	0.001 J	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW6C-ROX-102412	10/24/2012		27.85	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	MW6C-ROX-011713	1/17/2013		30.88	NE	<0.005	0.0022 J	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW6C-ROX-040313	4/3/2013		31.41	NE	<0.0052	0.00077 J	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	0.00016 J	<0.01	<0.01	<0.01	<0.0052	<0.0052 UJ	<0.0052	<0.01	<0.000052	<0.0052 UJ	<0.0001
	MW6C-ROX-070913	7/9/2013		28.03	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011 UJ	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	MW6C-ROX-100713	10/7/2013		28.72	NE	<0.0055 UJ	0.00043 J	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
MW6C-ROX-011614	1/16/2014	31.48	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	<0.000053	<0.0053 UJ	<0.00011		
MW6C-ROX-040814	4/8/2014	32.01	NE	<0.0059	0.0004 JB U	<0.0059	<0.012	<0.00012	<0.00012	<0.0059		<0.00012	<0.0059	<0.00024	<0.00024	<0.012	<0.012	<0.012	<0.0059	<0.0059	<0.0059	<0.012	<0.000059	<0.0059	<0.00012		
MW-06D	MW6D-ROX-072311	7/23/2011	104.72 - 109.72	23.29	NE	<0.0053 UJ	<0.00046 U	<0.0053	<0.011	<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	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	MW6D-ROX-011712	1/17/2012		26.33	NE	<0.0055	0.00047 J	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.000085 U	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW6D-ROX-050212	5/2/2012		27.45	NE	<0.005	0.00047 J	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.0005 U	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW6D-ROX-080212	8/2/2012		30.56	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	MW6D-ROX-102412	10/24/2012		29.71	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	MW6D-ROX-011713	1/17/2013		30.75	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW6D-ROX-040313	4/3/2013		31.27	NE	<0.0053	0.00069 J	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	<0.000053	<0.0053 UJ	

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

Screening Values (mg/L)						SVOCs																					
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Dimethyl phthalate	D-n-butyl phthalate	D-n-octyl phthalate	2,6-Dinitrotoluene	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)	2,4-Methylphenol (m & p-Cresol)	o-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosophenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
						0.7 ¹	0.14 ²	0.00031 ²	0.28 ¹	0.28 ¹	0.00006 ²		0.00043 ¹	1.4 ²	0.49 ³	0.028 ¹	0.35 ¹	0.35 ³		0.014 ¹	0.0006 ³	0.0032 ²	0.001 ¹	0.21 ³	0.1 ¹	0.21 ¹	
Analytical Results (mg/L)																											
MW-07	MW7-ROX-072411	7/24/2011	42.92 - 52.92	35.65	NE	<0.0054 UJ	<0.00044 U	<0.0054	<0.011	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
	MW7-ROX-110211	11/2/2011		35.95	NE	<0.005	<0.00044 U	<0.005	<0.01	<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	<0.011	<0.00033 U	0.0702	<0.0001
	MW7-ROX-011812	1/18/2012		38.10	NE	<0.005	0.00045 J	<0.005	<0.01	<0.0001	0.00018	<0.005		<0.0001	<0.005	0.0055	0.0069	<0.01	<0.01	<0.01 UJ	<0.005	<0.005	<0.005	<0.011	0.00029	0.15	<0.000042 U
	MW7-ROX-011812-DUP	1/18/2012		38.10	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	0.0002	<0.0056		<0.00011	<0.0056	0.0057	0.0071	<0.011	<0.011	<0.011 UJ	<0.0056	<0.0056	<0.0056	<0.011	0.00028	0.165	<0.000043 U
	MW7-ROX-050412	5/4/2012		39.19	NE	<0.005	<0.00095 U	<0.005	<0.01	0.000039 J	0.00019	<0.005		<0.0001	<0.005	0.0075	0.0087	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.011	0.00028	0.0944	<0.0001
	MW7-ROX-080712	8/7/2012		39.50	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	0.00016	<0.0051		<0.0001	<0.0051	0.0055	0.0065	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.011	0.00019	0.0576	<0.0001
	MW7-ROX-103012	10/30/2012		41.23	NE	<0.0058	<0.0058	<0.0058	<0.012	<0.00012	0.00023	<0.0058		<0.00012	<0.0058	0.0061 J	0.0077	<0.012	<0.012	<0.012	<0.0058	<0.0058 UJ	<0.0058	<0.012	0.00036	0.0615 J	<0.00005 U
	MW7-ROX-103012-DUP	10/30/2012		41.23	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	0.00026	<0.0056		<0.00011	<0.0056	0.006 J	0.0098	<0.011	<0.011	<0.011	<0.0056	<0.0056 UJ	<0.0056	<0.011	0.00037	0.0812 J	<0.00005 U
	MW7-ROX-011513	1/15/2013		42.21	NE	<0.0053 UJ	<0.0053	<0.0053	<0.011	0.00004 J	0.00061	<0.0053		<0.00011	<0.0053	0.0187	0.0224	<0.011	<0.011	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	0.00086	0.0865 J	0.000089 J
	MW7-ROX-011513-DUP	1/15/2013		42.21	NE	<0.0052 UJ	<0.0052	<0.0052	<0.01	<0.0001	0.00057	<0.0052		<0.0001	<0.0052	0.0173	0.0207	<0.01	<0.01	<0.01	<0.0052	<0.0052 UJ	<0.0052	<0.011	0.00078	0.0735 J	0.000078 J
	MW7-ROX-041013	4/10/2013		42.70	NE	<0.0054	<0.0054	<0.0054	<0.011	0.000039 J	0.00081	<0.0054		<0.00011	<0.0054	0.0271	0.0351	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.0014	0.147	0.00015
	MW7-ROX-041013-DUP	4/10/2013		42.70	NE	<0.0053	<0.0053	<0.0053	<0.011	0.000068 J	0.00087	<0.0053		<0.00011	<0.0053	0.0274	0.0357	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.0015	0.148	0.00016
	MW7-ROX-071713	7/17/2013		39.60	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00019	<0.0054		0.000078 J	<0.0054	0.0043	0.006	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00024	0.118	0.000039 J
	MW7-ROX-101613	10/16/2013		40.64	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	0.00022	<0.0055		<0.00011	<0.0055	0.0082	0.011	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.00019	0.0849	<0.00011
MW7-ROX-013014	1/30/2014	42.94	NE	<0.005	<0.0007 U	<0.005	<0.01	<0.0001	0.00021	<0.005		<0.0001	<0.005	0.0059	0.0083	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.011	0.00029	0.0314	<0.0001		
MW7-ROX-041614	4/16/2014	43.79	NE	<0.0052	0.00071 JB U	<0.0052	<0.01	<0.0001	0.00026	<0.0052		<0.0001	<0.0052	0.0074	0.0103	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.011	0.00033 B	0.0988	<0.0001		
MW-08	MW8-ROX-072411	7/24/2011	33.60 - 43.60	26.02	NE	<0.0054 UJ	<0.0054	0.00077 J	<0.011	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	<0.011	0.00014 B	0.0972 J	0.000031 JB	
	MW8-ROX-072411-DUP	7/24/2011		26.02	NE	<0.0055 UJ	<0.00038 U	0.00054 J	<0.011	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
	MW8-ROX-110211	11/2/2011		27.02	NE	<0.0048	<0.0048	<0.0048	<0.0095	<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	<0.0053	<0.0053	<0.0053	<0.011	<0.00053	0.00074	<0.0053		<0.00053	<0.0053	0.0165	0.0204	0.0044 J	0.0121	<0.011 UJ	<0.0053	<0.0053	<0.0053	<0.011	0.00041	0.375	<0.00053
	MW8-ROX-050412	5/4/2012		30.21	NE	<0.0053	<0.00063 U	<0.0053	<0.011	<0.00011	0.00024	<0.0053		<0.00011	<0.0053	0.0085	0.0099	0.0302	0.0657	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00014	0.258 J	<0.00011
	MW8-ROX-050412-DUP	5/4/2012		30.21	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	0.00031	<0.005		<0.0001	<0.005	0.0086	0.0102	0.0275	0.0569	<0.01	<0.005	<0.005	<0.005	<0.011	0.00014	0.12 J	<0.0001
	MW8-ROX-080712	8/7/2012		30.97	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00027	<0.0054		<0.00011	<0.0054	0.0091	0.0109	0.0075 J	0.0231	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00015	0.136	<0.00011
	MW8-ROX-080712-DUP	8/7/2012		30.97	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	0.00026	<0.0056		<0.00011	<0.0056	0.0092	0.0111	0.0081 J	0.024	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.00014	0.134	<0.00011
	MW8-ROX-103012	10/30/2012		32.32	NE	<0.0053	0.00082 J	0.00063 J	<0.011	0.00059 B	0.00053	<0.0053		0.00059 B	<0.0053	0.0097	0.0112	0.0058 J	0.0158	<0.011	<0.0053	<0.0053 UJ	0.00052 J	0.003 J	0.00057	0.165 J	0.00054 B
	MW8-ROX-011513	1/15/2013		33.30	NE	<0.0056 UJ	<0.0056	<0.0056	<0.011	<0.00011	0.00041	<0.0056		<0.00011	<0.0056	0.011	0.0129	0.0332	0.102	<0.011	<0.0056	<0.0056 UJ	<0.0056	<0.011	0.00016	0.0997 J	<0.00011
	MW8-ROX-041013	4/10/2013		33.77	NE	<0.0053	0.0013 J	<0.0053	<0.011	0.000056 J	0.00032	<0.0053		<0.00011	<0.0053	0.0091	0.0113	0.0388	0.084	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00019	0.253 J	0.000042 J
	MW8-ROX-071713	7/17/2013		30.43	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	0.00033	<0.0052		<0.0001	<0.0052	0.0097 J	0.0113	0.0046 J	0.0106	<0.01	<0.0052	<0.0052	<0.0052	<0.011	0.00015	0.328	0.000062 J
	MW8-ROX-071713-DUP	7/17/2013		30.43	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00036	<0.0054		<0.00011	<0.0054	0.0087 J	0.0098	0.0037 J	0.0091 J	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00016	0.303	<0.00011
	MW8-ROX-101613	10/16/2013		31.59	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00041	<0.0054		<0.00011	<0.0054	0.0117	0.0136	0.0022 J	0.0052 J	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00011	0.0996	<0.00011
MW8-ROX-101613-DUP	10/16/2013	31.59	NE	<0.0059	<0.0059	<0.0059	<0.012	<0.00012	0.00037	<0.0059		<0.00012	<0.0059	0.0108	0.0128	0.0019 J	0.0046 J	<0.012	<0.0059	<0.0059	<0.0059	<0.012	0.000097	0.108	<0.00012		
MW8-ROX-013014	1/30/2014	34.02	NE	<0.0051	<0.0011 U	<0.0051	<0.01	<0.0001	0.00054	<0.0051		<0.0001	<0.0051	0.0137	0.0123	0.0128	0.0198	<0.01	<0.0051	<0.0051	<0.0051	<0.011	0.00018	0.105	<0.0001		
MW8-ROX-013014-DUP	1/30/2014	34.02	NE	<0.0054	<0.00092 U	<0.0054	<0.011	<0.00011	0.00052	<0.0054		<0.00011	<0.0054	0.0136	0.0123	0.0129	0.019	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00019</				

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

Screening Values (mg/L)						SVOCs																						
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Dimethyl phthalate	D-n-butyl phthalate	D-n-octyl phthalate	2,6-Dinitrotoluene	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)	2 & 4-Methylphenol (m & p-Cresol)	o-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	
						0.7 ¹	0.14 ²	0.00031 ²	0.28 ¹	0.28 ¹	0.00006 ²		0.00043 ¹	1.4 ²	0.49 ³	0.028 ¹	0.35 ¹	0.35 ³		0.014 ¹	0.0006 ³	0.0032 ²	0.001 ¹	0.21 ³	0.1 ¹	0.21 ¹		
						Analytical Results (mg/L)																						
MW-10	MW10-ROX-072311	7/23/2011	44.43 - 54.43	38.01	NE	<0.005 UJ	<0.005	<0.005	<0.01	<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	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001	
	MW10-ROX-011612	1/16/2012		39.28	NE	<0.0053	0.00081 J	<0.0053	<0.011	0.000052 J	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	0.000055 J	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.000072	<0.0053	0.00005 J	
	MW10-ROX-050112	5/1/2012		40.86	NE	<0.0052	<0.00041 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052 UJ	<0.0052	<0.01	0.000033 J	<0.0052 UJ	<0.0001	
	MW10-ROX-072712	7/27/2012		41.21	NE	<0.005	<0.00043 U	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01 UJ	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001	
	MW10-ROX-102612	10/26/2012		43.08	NE	<0.0056	<0.0056	<0.0056	<0.011	0.000052 J	0.000086 J	<0.0056		<0.00011	<0.0056	<0.00022	0.00009 J	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.000076	<0.0056	0.00004 J	
	MW10-ROX-121712	12/17/2012		43.08	NE																							
	MW10-ROX-011013	1/10/2013		44.10	NE	<0.005 UJ	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.000021 U	<0.005	<0.0001	
	MW10-ROX-012113	1/21/2013		44.10	NE	<0.01	<0.01	<0.01	<0.001	<0.0001	<0.0001	<0.002		<0.0001	<0.01		<0.01	<0.01	<0.01	<0.002	<0.004	<0.02	<0.003	<0.004	<0.0001	<0.005	<0.0001	
	MW10-ROX-040913	4/9/2013		44.60	NE	<0.0054 UJ	<0.0019 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011	
	MW10-ROX-070813	7/8/2013		42.27	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000021 U	<0.0056	<0.00011	
	MW10-ROX-100313	10/3/2013		42.38	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.000056	<0.0056	<0.00011	
	MW10-ROX-011514	1/15/2014		44.42	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		0.000072 J	<0.0053	<0.00021	<0.00021	<0.011 UJ	<0.011 UJ	<0.011	<0.0053	<0.0053	<0.0053	<0.011 UJ	0.000037 JB	<0.0054 UJ	<0.00011	
MW10-ROX-040714	4/7/2014	44.43 - 54.43	45.00	NE	<0.0053	0.00085 JB U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.000042 JB U	<0.0053	<0.00011		
MW-11	MW11-ROX-072411	7/24/2011	41.66 - 51.66	34.3	NE	<0.0056 UJ	<0.0056	<0.0056	<0.011	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	
	MW11-ROX-110211	11/2/2011		35.44	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011	
	MW11-ROX-011712	1/17/2012		37.44	NE																							
	MW11-ROX-043012	4/30/2012		38.66	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001	
	MW11-ROX-072712	7/27/2012		38.90	NE	<0.0058	<0.00057 U	<0.0058	<0.012	<0.00012	<0.00012	<0.0058		<0.00012	<0.0058	<0.00023	<0.00023	<0.012	<0.012 UJ	<0.012	<0.0058	<0.0058	<0.0058	<0.012	<0.000058	<0.0058	<0.00012	
	MW11-ROX-102512	10/25/2012		40.59	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054 UJ	<0.00011	
	MW11-ROX-011013	1/10/2013		41.43	NE	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.01 UJ	<0.0001 UJ	<0.0001 UJ	<0.005 UJ		<0.0001 UJ	<0.005 UJ	<0.0002 UJ	<0.0002 UJ	<0.01 UJ	<0.01 UJ	<0.01 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.01 UJ	<0.000015 UJ	<0.005 UJ	<0.0001 UJ	
	MW11-ROX-040813	4/8/2013		42.02	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011	
	MW11-ROX-070813	7/8/2013		39.24	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011	
	MW11-ROX-100713	10/7/2013		39.95	NE	<0.0055 UJ	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011	
MW11-ROX-011514	1/15/2014	42.16	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000026 U	<0.0055	<0.00011			
MW11-ROX-040714	4/7/2014	41.66 - 51.66	42.70	NE	<0.0056	0.0007 JB U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.000023 JB U	<0.0056	<0.00011		
MW-12	MW12-ROX-072411	7/24/2011	41.92 - 51.92	35.55	NE	<0.005 UJ	<0.00039 U	<0.005	<0.01	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	
	MW12-ROX-110211	11/2/2011		35.70	NE	<0.0048	<0.0048	<0.0048	<0.0095	<0.000095	<0.000095	<0.0048		<0.000095	<0.0048	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0.0048	<0.0048	<0.0048	<0.0095	<0.000048	<0.0048	<0.000095	
	MW12-ROX-110211-DUP	11/2/2011		35.70	NE	<0.0048	<0.0048	<0.0048	<0.0095	<0.000095	<0.000095	<0.0048		<0.000095	<0.0048	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0.0048	<0.0048	<0.0048	<0.0095	<0.000048	<0.0048	<0.000095	
	MW12-ROX-011712	1/17/2012		37.70	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011	
	MW12-ROX-011712-DUP	1/17/2012		37.70	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011	
	MW12-ROX-043012	4/30/2012		38.98	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001	
	MW12-ROX-072712	7/27/2012		39.22	NE	<0.0053	<0.00063 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	&											

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

Screening Values (mg/L)						SVOCs																						
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Dimethyl phthalate	D-n-butyl phthalate	D-n-octyl phthalate	2,6-Dinitrotoluene	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)	2 & 4-Methylphenol (m & p-Cresol)	o-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	
						0.7 ¹	0.14 ²	0.00031 ²	0.28 ¹	0.28 ¹	0.00006 ²		0.00043 ¹	1.4 ²	0.49 ³	0.028 ¹	0.35 ¹	0.35 ³		0.014 ¹	0.0006 ³	0.0032 ²	0.001 ¹	0.21 ³	0.1 ¹	0.21 ¹		
Analytical Results (mg/L)																												
MW-13	MW13-ROX-080311	8/3/2011	25.57 - 35.57	21.67	NE	<0.005	<0.00074 U	<0.005	<0.01	<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	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00033 U	<0.0056		<0.00011	<0.0056	<0.00081 U	<0.0003 U	<0.011	<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	<0.0053	<0.00058 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.00022	<0.00027 U	<0.011	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	0.0015 J	0.000065 J
	MW13-ROX-050712	5/7/2012		25.79	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	MW13-ROX-080812	8/8/2012		26.67	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.00021	<0.00014 UJ	<0.011	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	MW13-ROX-110812	11/8/2012		25.30	NE	<0.005	0.00054 J	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW13-ROX-012313	1/23/2013		29.26	NE	<0.0055 UJ	0.0027 J	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	0.00011 J	<0.011	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW13-ROX-041213	4/12/2013		29.44	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	0.00011 J	<0.01	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	MW13-ROX-071213	7/12/2013		25.67	NE	<0.0054 UJ	<0.0054	<0.0054	<0.011	<0.000042	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.000067 U	<0.011	<0.011	<0.011	<0.011	<0.0054	<0.0054 UJ	<0.0054	<0.011	<0.000076	<0.0054 UJ	<0.00004
	MW13-ROX-100913	10/9/2013		26.94	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
MW13-ROX-012914	1/29/2014	29.63	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.000096 U	<0.00022	<0.011	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011		
MW13-ROX-041114	4/11/2014	30.15	NE	<0.006	0.00079 JB U	<0.006	<0.012	<0.00012	<0.00012	<0.006		<0.00012	<0.006	<0.00024	<0.00024	<0.012	<0.012	<0.012	<0.012	<0.006	<0.006	<0.006	<0.012	0.000033 J	<0.006	<0.00012		
MW-14	MW14-ROX-110911	11/9/2011	Unknown			<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011	
	MW14-ROX-051012	5/10/2012	33.42 - 43.42	NM	NE	<0.0052	0.00043 J	<0.0052	<0.01	<0.0001	0.00022	<0.0052		<0.0001	<0.0052	0.0101	0.0015	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001	
	MW14-ROX-080312	8/3/2012		NM	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	0.00071	<0.0053		<0.00011	<0.0053	0.019	0.0038	<0.011	<0.011	<0.011	0.00032 J	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011	
	MW14-ROX-103112	10/31/2012		32.02	NE	<0.005	0.00044 J	<0.005	<0.01	<0.0001	0.00029	<0.005		<0.0001	<0.005	0.0192	0.004	<0.01	<0.01	<0.01	<0.005	<0.005 UJ	<0.005	<0.01	<0.000051	<0.005 UJ	<0.0001	
	MW14-ROX-011813	1/18/2013		33.05	NE	<0.005 UJ	<0.005	<0.005	<0.01	<0.0001	0.00064	<0.005		<0.0001	<0.005	0.0215	0.0084	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001	
	MW14-ROX-041113	4/11/2013		33.31	NE	<0.0054	<0.0054	<0.0054	<0.011	0.000068 J	0.00016	<0.0054		<0.00011	<0.0054	0.0124	0.0018	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.0001	<0.0054	0.000053 J	
	MW14-ROX-071213	7/12/2013		30.36	NE	<0.0053 UJ	0.00043 J	<0.0053	<0.011	<0.00011	<0.000093 U	<0.0053		<0.00011	<0.0053	0.0127	0.0027	<0.011	<0.011	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	<0.000032 U	<0.0053 UJ	<0.000067 U	
	MW14-ROX-101013	10/10/2013		30.80	NE	<0.0057	<0.0057	<0.0057	<0.011	<0.00011	0.00034	<0.0057		<0.00011	<0.0057	0.0184	<0.00023	<0.011	<0.011	<0.011	<0.0057	<0.0057	<0.0057	<0.011	<0.000057	<0.0057	<0.00011	
MW14-ROX-012914	1/29/2014	33.67		NE	<0.0054	0.00045 J	<0.0054	<0.011	<0.00011	0.00041	<0.0054		<0.00011	<0.0054	0.0075	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011		
MW14-ROX-041114	4/11/2014	34.30	NE	<0.006	0.00082 JB U	<0.006	<0.012	<0.00011	0.0003	<0.006		<0.00011	<0.006	0.0018	<0.00023	<0.012	<0.012	<0.012	<0.006	<0.006	<0.006	<0.012	<0.000057	<0.006	<0.00011			
MW-16	MW16-ROX-012313	1/23/2013	37.06 - 47.06	43.05	NE	<0.0053 UJ	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	0.000085 J	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.000025 J J	<0.0053	<0.00011	
	MW16-ROX-040813	4/8/2013		43.39	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	0.000058 J	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001	
	MW16-ROX-070813	7/8/2013		40.62	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000018 U	<0.0056	<0.00011	
	MW16-ROX-100813	10/8/2013		41.62	NE	<0.0052 UJ	<0.0052 UJ	<0.0052 UJ	<0.01 UJ	<0.0001 UJ	<0.0001 UJ	<0.0052 UJ		<0.0001 UJ	<0.0052 UJ	<0.00021 UJ	<0.00021 UJ	<0.01 UJ	<0.01 UJ	<0.01 UJ	<0.0052 UJ	<0.0052 UJ	<0.0052 UJ	<0.01 UJ	<0.000052 UJ	<0.0052 UJ	<0.0001 UJ	
	MW16-ROX-011514	1/15/2014		43.76	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000031 U	<0.0052	<0.0001	
	MW16-ROX-040914	4/9/2014		44.63	NE	<0.0059	0.00067 JB U	<0.0059	<0.012	<0.00012	<0.00012	<0.0059		<0.00012	<0.0059	<0.00024	<0.00024	<0.012	<0.012	<0.012	<0.0059	<0.0059	<0.0059	<0.012	<0.000059	<0.0059	<0.00012	
MW-22	MW22-ROX-012313	1/23/2013	37.88 - 47.88	41.80	NE	<0.0052 UJ	0.0024 J	<0.0052	<0.01	<0.0001	0.00018	<0.0052		<0.0001	<0.0052	0.0276	0.05	0.018	0.0322	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00019	0.0111	<0.0001	
	MW22-ROX-012313-DUP	1/23/2013		41.80	NE	<0.0053 UJ	0.0024 J	<0.0053	<0.011	<0.00011	0.00018	<0.0053		<0.00011	<0.0053	0.028	0.0501	0.0187	0.0349	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.0002	0.0122	<0.00011	
	MW22-ROX-040513	4/5/2013		42.23	NE	<0.0053	0.00057 J	<0.0053	<0.011	<0.00011	0.00018	<0.0053		<0.00011	<0.0053	0.0241	0.0413	0.0236	0.0403	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	0.00019	0.0123 J	<0.00011	
	MW22-ROX-071113	7/11/2013		39.35	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00027	<0.0054		<														

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

Screening Values (mg/L)						SVOCs																					
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Dimethyl phthalate	D-n-butyl phthalate	D-n-octyl phthalate	2,6-Dinitrotoluene	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)	2,4-Methylphenol (m & p-Cresol)	o-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
						0.7 ¹	0.14 ²	0.00031 ²	0.28 ¹	0.28 ¹	0.00006 ²		0.00043 ¹	1.4 ²	0.49 ³	0.028 ¹	0.35 ¹	0.35 ³		0.014 ¹	0.0006 ³	0.0032 ²	0.001 ¹	0.21 ³	0.1 ¹	0.21 ¹	
Analytical Results (mg/L)																											
P-54	P54-ROX-072411	7/24/2011	38.00 - 63.00	35.38	NE	<0.005 UJ	<0.00049 U	<0.005	<0.01	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	<0.005	<0.00049 U	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	P54-ROX-011712	1/17/2012		37.17	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.000081 U	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	P54-ROX-050412	5/4/2012		38.77	NE	<0.0051	<0.00085 U	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	0.0026 J	<0.0001
	P54-ROX-080212	8/2/2012		38.95	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	P54-ROX-103012	10/30/2012		40.70	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051 UJ	<0.0051	<0.01	<0.000051	<0.0051 UJ	<0.0001
	P54-ROX-011113	1/11/2013		41.56	NE	<0.0053 UJ	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.000032 J	<0.0053	<0.00011
	P54-ROX-041013	4/10/2013		41.80	NE	<0.0057 UJ	<0.0057	<0.0057	<0.011	<0.00011	<0.00011	<0.0057		<0.00011	<0.0057	<0.00023	<0.00023	<0.011	<0.011	<0.011	<0.0057	<0.0057	<0.0057	<0.011	<0.000057	<0.0057	<0.00011
	P54-ROX-050313	5/3/2013		41.80	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	P54-ROX-071113	7/11/2013		39.07	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021 UJ	0.000083 J	<0.01	<0.01	<0.01 UJ	<0.0052	<0.0052	<0.0052	<0.01	<0.000049 U	<0.0052 UJ	<0.0001
P54-ROX-100813	10/8/2013	39.94	NE	<0.0057	<0.0057	<0.0057	<0.011	<0.00011	<0.00011	<0.0057		<0.00011	<0.0057	<0.00023	<0.00023	<0.011	<0.011	<0.011	<0.0057	<0.0057	<0.0057	<0.011	<0.000057	<0.0057	<0.00011		
P54-ROX-011514	1/15/2014	42.20	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011		
P54-ROX-040914	4/9/2014	42.80	NE	<0.006	0.00062 JB U	<0.006	<0.012	<0.00012	<0.00012	<0.006		<0.00012	<0.006	<0.00024	<0.00024	<0.012	<0.012	<0.012	<0.006	<0.006	<0.006	<0.012	<0.00006	<0.006	<0.00012		
P-55	P55-ROX-103111	10/31/2011	39.82 - 64.82	39.15	NE	<0.005	<0.005	<0.005	<0.01	<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	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	0.00038	<0.0052		<0.0001	<0.0052	0.0048	0.0076	<0.01	<0.01	<0.01 UJ	<0.0052	<0.0052	<0.0052	<0.01	0.00039	<0.0052	<0.0001
	P55-ROX-011912-D	1/19/2012		41.09	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00032	<0.0054		0.00011	<0.0054	0.0046	0.0076	<0.011	<0.011	<0.011 UJ	<0.0054	<0.0054	<0.0054	<0.011	0.00036	0.0029 J	<0.00011
	P55-ROX-050912	5/9/2012		42.44	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	0.00069	<0.0051		<0.0001	<0.0051	0.0118	0.0179	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.00066	<0.0051	<0.0001
	P55-ROX-012113	1/21/2013	43.60	NE	<0.01	<0.01	<0.01	<0.001	<0.0001	0.00133	<0.002		<0.0001	<0.01		0.042	<0.01	<0.01	<0.002	<0.004	<0.02	<0.003	<0.004	0.00211	0.004 J	<0.0001	
	P55-ROX-012113	1/21/2013	43.60	NE	<0.0051	0.00069 J	<0.0051	<0.01	<0.0001	0.00093	<0.0051		<0.0001	<0.0051	0.0176	0.0254	<0.01	0.0018 J	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.0017	0.0034 J	<0.0001	
	P55-ROX-041513	4/15/2013	40.43 - 50.43	43.63	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	0.0013	<0.0052		<0.0001	<0.0052	0.0268	0.0389	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.0021	<0.0052	<0.0001
	P55-ROX-071613	7/16/2013	40.06	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	0.0015	<0.0056		<0.00011	<0.0056	0.0244	0.0353	<0.011 UJ	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.0019	0.0048 J J	<0.00011	
P55-ROX-101013	10/10/2013	41.67	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	0.0014	<0.0055		<0.00011	<0.0055	0.0279	0.0415	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.0017	0.002 J	<0.00011		
P-56	P56-ROX-102711	10/27/2011	40.82 - 65.82	39.42	NE	<0.0052	<0.0052	<0.0052	<0.01	<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	<0.0051	<0.00044 U	<0.0051	<0.01	<0.0001	0.00046	<0.0051		<0.0001	<0.0051	0.0186	0.024	<0.01	<0.01	<0.01 UJ	<0.0051	<0.0051	<0.0051	<0.01	0.0012	<0.0051	0.000036 J
	P56-ROX-050812	5/8/2012		43.09	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	0.00033	<0.0052		<0.0001	<0.0052	0.0186	0.0236	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.0011	<0.0052	<0.0001
	P56-ROX-080612	8/6/2012		43.60	NE	<0.0051	<0.00075 U	<0.0051	<0.01	<0.0001	0.0003	<0.0051		<0.0001	<0.0051	0.0143	0.0178	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.0013	<0.0051	<0.0001
	P56-ROX-103112	10/31/2012		44.80	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	0.00046	<0.0051		<0.0001	<0.0051	0.024	0.0307	<0.01	0.0011 J	<0.01	<0.0051	<0.0051 UJ	<0.0051	<0.01	0.0013	<0.0051 UJ	<0.0001
	P56-ROX-011713	1/17/2013		45.65	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	0.00032	<0.005		<0.0001	<0.005	0.0147	0.0131	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.0012	0.0014 J	<0.0001
	P56-ROX-041213	4/12/2013		46.12	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	0.00032	<0.0055		<0.00011	<0.0055	0.0208	0.0239	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.0012	<0.0055	<0.00011
	P56-ROX-071513	7/15/2013		43.25	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	0.00059	<0.0055		<0.00011	<0.0055	0.0315	0.0431	<0.011 UJ	0.0064 J	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.0015	<0.0055 UJ	<0.00011
	P56-ROX-101013	10/10/2013		44.48	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	0.00044	<0.0055		<0.00011	<0.0055	0.0251	0.03	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.0013	<0.0055	<0.00011
	P56-ROX-012214	1/22/2014		46.35	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	0.00035	<0.0052		<0.0001	<0.0052	0.0193	0.0228	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.0012	<0.0052	<0.0001
P56-ROX-041414	4/14/2014	47.32	NE	<0.0059	0.00051 J	<0.0059	<0.012	<0.00012	0.00038	<0.0059		<0.00012	<0.0059	0.0223	0.0269												

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

Screening Values (mg/L)						SVOCs																						
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Dimethyl phthalate	D-n-butyl phthalate	D-n-octyl phthalate	2,6-Dinitrotoluene	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)	2,4-Methylphenol (m & p-Cresol)	o-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	
						0.7 ¹	0.14 ²	0.00031 ²	0.28 ¹	0.28 ¹	0.00006 ²		0.00043 ¹	1.4 ²	0.49 ³	0.028 ¹	0.35 ¹	0.35 ³		0.014 ¹	0.0006 ³	0.0032 ²	0.001 ¹	0.21 ³	0.1 ¹	0.21 ¹		
Analytical Results (mg/L)																												
P-58	P58-ROX-102811	10/28/2011	40.21 - 65.21	37.31	NE	<0.0049	<0.0049	<0.0049	<0.0097	<0.000097	0.0016	<0.0049		<0.000097	<0.0049	0.049	0.0717	<0.0097	0.0347	<0.0097	<0.0049	<0.0049	<0.0097	0.00085	0.137	0.00012		
	P58-ROX-011912	1/19/2012		39.73	NE	<0.0053	<0.00057 U	<0.0053	<0.011	0.000047 J	0.0017	<0.0053		<0.00011	<0.0053	0.0639	0.0904	<0.011	0.0171	<0.011 UJ	<0.0053	<0.0053	<0.0053	<0.011	0.00084	0.259	0.00012	
	P58-ROX-011912-D	1/19/2012		39.73	NE	<0.0053	<0.00059 U	<0.0053	<0.011	0.000052 J	0.0018	<0.0053		<0.00011	<0.0053	0.0588	0.0821	<0.011	0.0156	<0.011 UJ	<0.0053	<0.0053	<0.0053	<0.011	0.0008	0.225	0.00012	
	P58-ROX-050712	5/7/2012		40.90	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	0.0009 J	<0.0051		<0.0001	<0.0051	0.0351 J	0.0435 J	<0.01	0.0181	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.00056 J	0.161	0.0001	
	P58-ROX-050712-DUP	5/7/2012		40.90	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	0.00067 J	<0.0052		<0.0001	<0.0052	0.0267 J	0.0338 J	<0.01	0.0122	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00041 J	0.147	0.000076 J	
	P58-ROX-080612	8/6/2012		41.63	NE	<0.005	<0.00053 U	<0.005	<0.01	0.000068 J	0.0014	<0.005		<0.0001	<0.005	0.0524	0.0691	<0.01	0.0146	<0.01	<0.005	<0.005	<0.005	<0.01	0.001	0.15	<0.0001 UJ	
	P58-ROX-080612-DUP	8/6/2012		41.63	NE	<0.005	<0.00063 U	<0.005	<0.01	0.000066 J	0.0015	<0.005		<0.0001	<0.005	0.0596	0.079	<0.01	0.0195	<0.01	<0.005	<0.005	<0.005	<0.01	0.0011	0.19	0.00021 J	
	P58-ROX-110612	11/6/2012		43.09	NE																							
	P58-ROX-121012	12/10/2012		43.09	NE	<0.0054 UJ	<0.0054	<0.0054	<0.011	<0.00011	0.0014	<0.0054		<0.00011	<0.0054	0.0616	0.0807	<0.011	0.0124	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00085	0.178	0.00012	
	P58-ROX-012213	1/22/2013		44.21	NE	<0.0054	<0.0054	<0.0054	<0.011	0.00024	0.003	<0.0054		0.000072 J	<0.0054	0.068	0.0846	<0.011	0.0198	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.0023	0.208	0.00077	
	P58-ROX-041113	4/11/2013		44.40	NE	<0.0054	<0.0054	<0.0054	<0.011	0.00019	0.0022	<0.0054		<0.00011	<0.0054	0.0692	0.0961	<0.011	0.014	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.0021	0.0985	0.00055	
	P58-ROX-071613	7/16/2013		41.49	NE	<0.0055	<0.0055	<0.0055	<0.011	0.000071 J	0.0013	<0.0055		<0.00011	<0.0055	0.0544	0.0708	<0.011 UJ	0.0359	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.00099	0.247	<0.0002 U	
	P58-ROX-101413	10/14/2013		42.19	NE	<0.0054	0.00058 J	<0.0054	<0.011	0.000066 J	0.0014	<0.0054		<0.00011	<0.0054	0.0488	0.0628	<0.011	0.0481	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00095	0.213	0.00021	
	P58-ROX-020314	2/3/2014		44.66	NE	<0.0052	<0.0052	<0.0052	<0.01	0.000058 J	0.0011	<0.0052		<0.0001	<0.0052	0.0353	0.0474	<0.01	0.0073 J	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00069	0.123 J	0.00014	
P58-ROX-041514	4/15/2014	45.66	NE	<0.0053 UJ	0.0013 JB U	0.00072 J	<0.011 UJ	0.00079	0.0017	0.00088 J		0.00072	<0.0053 UJ	0.0284	0.0381	<0.011 UJ	0.0136 J	<0.011 UJ	<0.0053	0.0021 J J	<0.0053 UJ	<0.011 UJ	0.0013	0.123 J	0.00085			
P-59	P59-ROX-102711	10/27/2011	47.91 - 72.91	41.06	NE	<0.0053	<0.0053	<0.0053	<0.011	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	<0.0057	<0.0005 U	<0.0057	<0.011	0.000073 J	0.0008	<0.0057		<0.00011	<0.0057	0.0175	0.0279	0.0045 J	0.0092 J	<0.011 UJ	<0.0057	<0.0057	0.00079 J	<0.011	0.00081	0.0906 J	0.00013	
	P59-ROX-011912-DUP	1/19/2012		42.88	NE	<0.0051	<0.00041 U	<0.0051	<0.01	0.000073 J	0.00063	<0.0051		<0.0001	<0.0051	0.0178	0.029	<0.01	0.0076 J	<0.01 UJ	<0.0051	<0.0051	0.00087 J	<0.01	0.00081	0.0646 J	0.00013	
	P59-ROX-050912	5/9/2012		44.11	NE	<0.005	<0.005	<0.005	<0.01	0.000062 J	0.00034	<0.005	0.0056 JN	<0.0001	<0.005	0.0117	0.018	<0.01	0.0062 J	<0.01	<0.005	<0.005	<0.005	<0.01	0.00053	0.0241	0.000092 J	
	P59-ROX-080212	8/2/2012		44.07	NE	<0.0053	<0.0053	<0.0053	<0.011	0.00015	0.00048	<0.0053		<0.00011	<0.0053	0.0136	0.0207	0.0018 J	0.0032 J	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.001	0.0419	0.00021	
	P59-ROX-110212	11/2/2012		45.98	NE	<0.0053	<0.0053	<0.0053	<0.011	0.000063 J	0.0005	<0.0053		<0.00011	<0.0053	0.0187	0.0282	0.0065 J	0.0137	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00075	0.0766 J	0.00009 J	
	P59-ROX-110212-DUP	11/2/2012		45.98	NE	<0.0052	<0.0052	<0.0052	<0.01	0.000066 J	0.00048	<0.0052		<0.0001	<0.0052	0.0179	0.0268	0.0056 J	0.0116	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00073	0.0656 J	0.000093 J	
	P59-ROX-013013	1/30/2013		46.60	NE	<0.0052 UJ	0.0022 J	<0.0052	<0.01	<0.000079 U	0.00069	<0.0052		<0.0001	<0.0052	0.0222	0.0305	0.154	0.107	<0.01 UJ	<0.0052	<0.0052 UJ	<0.0052	<0.01	0.001	0.141 J	<0.00011 U	
	P59-ROX-041213	4/12/2013		46.95	NE	<0.0054	<0.0054	<0.0054	<0.011	0.000077 J	0.00064	<0.0054		<0.00011	<0.0054	0.0247	0.0369	0.174	0.0842	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.0012	0.119	0.000098 J	
	P59-ROX-041213-DUP	4/12/2013		46.95	NE	<0.0053	<0.0053	<0.0053	<0.011	0.000078 J	0.00065	<0.0053		<0.00011	<0.0053	0.0265	0.0383	0.154	0.0794	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.0012	0.101	0.0001 J	
	P59-ROX-071613	7/16/2013		44.13	NE	<0.0054	<0.0054	<0.0054	<0.011	0.000061 J	0.00063	<0.0054		<0.00011	<0.0054	0.0189	0.0302	0.17	0.042	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00087	0.121 J	<0.000078 U	
	P59-ROX-101013	10/10/2013		45.50	NE	<0.0054	<0.0054	0.00091 J	<0.011	0.00015	0.0007	<0.0054		<0.00011	<0.0054	0.0192	0.0305	0.201	0.0528	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.0014	0.0524	0.00028	
	P59-ROX-020314	2/3/2014		47.35	NE	<0.0052	<0.0052	<0.0052	<0.01	0.00012	0.00067	<0.0052		<0.0001	<0.0052	0.0141	0.0214	0.31 J	0.0142	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.0014	0.0444 J	0.00019	
	P59-ROX-041514	4/15/2014		48.60	NE	<0.0053	<0.0053	<0.0053	<0.011	0.00015	0.00066	<0.0053		<0.00011	<0.0053	0.0233	0.0317	<0.011	0.0186 J	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	0.0016	0.13 J	0.0003	
P-66	P66-ROX-110111	11/1/2011	34.72 - 59.72	28.92	NE	<0.005	<0.005	<0.005	<0.01	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	<0.005	0.00054 J	<0.005	<0.01	0.000056 J	0.0015	<0.005		<0.0001	<0.005	0.0647	0.025	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00057	<0.005	0.000082 J	
	P66-ROX-080312	8/3/2012		30.51	NE	<0.0053	<0.0053	<0.0053	<0.011	0.000082 J	0.0011	<0.0053		<0.00011	<0.0053	0.0541	0.028	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00057	<0.0053	0.00013	
	P66-ROX-103112	10/31/2012		34.75	NE	<0.005	<0.005	<0.005	<0.01	<0.000051 U	0.0017	<0.005		<0.0001	<0.005	0.0689	0.0268	<0.01	<0.01	<0.01	<0.005	<0.005 UJ	<0.005	<0.01	0.00054	<0.005 UJ	<0.00007 U	
	P66-ROX-011813	1/18/2013		35.70	NE	<0.0053 UJ	<0.0053	<0.0053	<0.011	0.000076 J	0.0019	<0.0053		<0.00011	<0.0053	0.0655	0.0315	<0.011	<0.011	<0.011								

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

Screening Values (mg/L)						SVOCs																								
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Dimethyl phthalate	D-n-butyl phthalate	D-n-octyl phthalate	2,6-Dinitrotoluene	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)	2,4-Methylphenol (m & p-Cresol)	o-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene			
						0.7 ¹	0.14 ²	0.00031 ²	0.28 ¹	0.28 ¹	0.00006 ²		0.00043 ¹	1.4 ²	0.49 ³	0.028 ¹	0.35 ¹	0.35 ³		0.014 ¹	0.0006 ³	0.0032 ²	0.001 ¹	0.21 ³	0.1 ¹	0.21 ¹				
Analytical Results (mg/L)																														
P-74	P74-ROX-103111	10/31/2011	44.43 - 69.43	36.26	NE	<0.005	<0.005	<0.005	<0.01	<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	<0.0048	<0.0048	<0.0048	<0.0095	<0.000095	<0.000095	<0.0048		<0.000095	<0.0048	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095
	P74-ROX-050712	5/7/2012		39.92	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	0.00016 J	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.000047 J	0.0089	<0.0001			
	P74-ROX-080612	8/6/2012		40.71	NE	<0.005	<0.00082 U	<0.005	<0.01	<0.0001	0.00021	<0.005		<0.0001	<0.005	0.009	0.0103	0.0014 J	0.001 J	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00012 U	0.0158	<0.0001			
	P74-ROX-110112	11/1/2012		41.72	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	0.0003	<0.0052		<0.0001	<0.0052	0.0123	0.0136	0.0054 J	0.002 J	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00013	0.0307 J	<0.0001			
	P74-ROX-011713	1/17/2013		42.65	NE	<0.0051	<0.0051	<0.0051	<0.01	0.000038 J	0.00038	<0.0051		<0.0001	<0.0051	0.0156	0.0198	<0.01	0.001 J	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.00023	0.0298	0.000048 J			
	P74-ROX-041113	4/11/2013		42.83	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0046 U	<0.0001			
	P74-ROX-071513	7/15/2013		40.11	NE	<0.0054	<0.0054	<0.0054	<0.011	0.00014	0.00011	<0.0054		<0.00011	<0.0054	0.0019	0.00019 J	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.00008 U	0.008	0.000074 J			
	P74-ROX-101413	10/14/2013		41.72	NE	<0.0054	0.00047 J	<0.0054	<0.011	0.00015	0.00025	<0.0054		<0.00011	<0.0054	0.0073	0.0079	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.000079	0.0125	0.000057 J			
	P74-ROX-012414	1/24/2014		43.35	NE	<0.0051	0.00048 J	<0.0051	<0.01	0.000088 J	0.00028	<0.0051		<0.0001	<0.0051	0.0088	0.0106	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.00014 U	0.0278	0.000049 J			
P74-ROX-041514	4/15/2014	44.74	NE	<0.0059	0.0014 JB U	<0.0059	<0.012	<0.00012	<0.00012	<0.0059		<0.00012	<0.0059	0.0017 J	0.0022 J	<0.012	<0.012	<0.012	<0.0059	<0.0059	<0.0059	<0.012	0.000054 JB J	<0.0059	<0.00012					
P-93A	P93A-ROX-081811	8/18/2011	48.17 - 63.17	39.40	NE	<0.005	<0.001 U	<0.005	<0.01	<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	<0.005	<0.005	<0.005	<0.01	<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	<0.0048	<0.00038 U	<0.0048	<0.0095	<0.000095	<0.000095	<0.0048		<0.000095	<0.0048	0.0133	0.0188	<0.0095	0.0029 J	<0.0095	<0.0048	<0.0048	<0.0048	<0.0095	<0.00022 U	0.234	<0.000095			
	P93A-ROX-050812	5/8/2012		42.75	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	0.00021	<0.0051		<0.0001	<0.0051	0.0121	0.0151	<0.01	0.0014 J	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.00021	<0.0051	<0.0001			
	P93A-ROX-080912	8/9/2012		43.66	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00021	<0.0054		<0.00011	<0.0054	0.0097	0.013	<0.011	0.00096 J	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00025	0.208	<0.00011			
	P93A-ROX-110712	11/7/2012		45.00	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	0.00029	<0.0052		<0.0001	<0.0052	0.015	0.0194	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00028 B	0.19	<0.0001			
	P93A-ROX-110712-DUP	11/7/2012		45.00	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	0.00037	<0.0052		<0.0001	<0.0052	0.016	0.0206	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00034 B	0.217	<0.0001			
	P93A-ROX-012313	1/23/2013		45.89	NE	<0.0052 UJ	<0.0052	<0.0052	<0.01	<0.0001	0.00021	<0.0052		<0.0001	<0.0052	0.0096	0.0093	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00024	0.168	<0.0001			
	P93A-ROX-012313-DUP	1/23/2013		45.89	NE	<0.0052 UJ	<0.0052	<0.0052	<0.01	<0.0001	0.00019	<0.0052		<0.0001	<0.0052	0.0094	0.009	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00023	0.165	<0.0001			
	P93A-ROX-041113	4/11/2013		46.29	NE	<0.005	<0.005	<0.005	<0.01	0.000046 J	0.0003	<0.005		<0.0001	<0.005	0.0146 J	0.0098	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00035	0.2	0.00004 J			
	P93A-ROX-041113-DUP	4/11/2013		46.29	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	0.00025	<0.005		<0.0001	<0.005	0.0146 J	0.0096	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00024	0.179	<0.0001			
	P93A-ROX-071813	7/18/2013		43.25	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	0.00023	<0.0056		<0.00011	<0.0056	0.0089	0.0062	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.00021	0.107	<0.00011			
	P93A-ROX-101113	10/11/2013		44.18	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	0.00028	<0.005		<0.0001	<0.005	0.0128	0.0085	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00013	0.0837 J	<0.0001			
	P93A-ROX-012914	1/29/2014		46.53	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00032	<0.0054		<0.00011	<0.0054	0.0133	0.0072	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00022 B	0.105	<0.00011			
P93A-ROX-041714	4/17/2014	47.41	NE	<0.0056	0.0012 J U	<0.0056	<0.011	<0.00011	0.00027	<0.0056		<0.00011	<0.0056	0.0086	0.0048	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.00018 B J	0.0735	<0.00011					
P-93B	P93B-ROX-081811	8/18/2011	74.60 - 76.60	39.44	NE	<0.0052	<0.00077 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	0.116	<0.0001			
	P93B-ROX-102611	10/26/2011		39.48	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	0.122	<0.0001			
	P93B-ROX-012012	1/20/2012		41.72	NE	<0.0048	<0.0048	<0.0048	<0.0095	<0.000095	<0.000095	<0.0048		<0.000095	<0.0048	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095		
	P93B-ROX-050812	5/8/2012		42.79	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001			
	P93B-ROX-080912	8/9/2012		43.69	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	0.178	<0.00011			
	P93B-ROX-110712	11/7/2012		45.05	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	0.00026	0.00045 B	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	0.13	<0.0001			
	P93B-ROX-110712-DUP	11/7/2012		45.05	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	0.0003	0.0005 B	<0.01	<0											

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

Screening Values (mg/L)						SVOCs																					
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Dimethyl phthalate	D-n-butyl phthalate	D-n-octyl phthalate	2,6-Dinitrotoluene	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)	2,4-Methylphenol (m & p-Cresol)	o-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosophenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
						0.7 ¹	0.14 ²	0.00031 ²	0.28 ¹	0.28 ¹	0.00006 ²		0.00043 ¹	1.4 ²	0.49 ³	0.028 ¹	0.35 ¹	0.35 ³		0.014 ¹	0.0006 ³	0.0032 ²	0.001 ¹	0.21 ³	0.1 ¹	0.21 ¹	
Analytical Results (mg/L)																											
P-93C	P93C-ROX-081811	8/18/2011	94.26 - 96.26	39.32	NE	<0.005	<0.00064 U	<0.005	<0.01	<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	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	P93C-ROX-012012	1/20/2012		41.57	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	P93C-ROX-050812	5/8/2012		42.68	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	P93C-ROX-080912	8/9/2012		43.57	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	P93C-ROX-110812	11/8/2012		45.12	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	P93C-ROX-012313	1/23/2013		45.78	NE	<0.0055 UJ	0.0025 J	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	P93C-ROX-041213	4/12/2013		46.21	NE	<0.005 UJ	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005 UJ	<0.005	<0.01	<0.00005	<0.005	<0.0001
	P93C-ROX-071813	7/18/2013		43.31	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.000026 J	0.0352	<0.00011
	P93C-ROX-080813	8/8/2013		43.31	NE																						
P93C-ROX-101613	10/16/2013	44.31	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	0.005 J	<0.0001		
P93C-ROX-012414	1/24/2014	46.44	NE	<0.0051	0.00051 J	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001		
P93C-ROX-041714	4/17/2014	47.34	NE	<0.0052	0.00048 JB U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052 UJ	<0.0001		
P-93D	P93D-ROX-081811	8/18/2011	125.75 - 127.75	39.46	NE	<0.005	<0.0011 U	<0.005	<0.01	<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	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	P93D-ROX-012012	1/20/2012		41.77	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00006 U	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	P93D-ROX-050812	5/8/2012		42.96	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	P93D-ROX-080812	8/8/2012		43.71	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	0.0004	<0.00042 U	0.00076 J	0.0011 J	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.000054	<0.0052	<0.0001
	P93D-ROX-110812	11/8/2012		NM	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	P93D-ROX-012213	1/22/2013		44.21	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.00027	0.00036	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.000042 J	<0.0053	<0.00011
	P93D-ROX-041113	4/11/2013		46.37	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0087 U	<0.0001
	P93D-ROX-071213	7/12/2013		43.51	NE	<0.0056 UJ	0.00045 J	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.000059 U	<0.011	<0.011	<0.011	<0.0056	<0.0056 UJ	<0.0056	<0.011	<0.000056	<0.0056 UJ	<0.00011
	P93D-ROX-013114	10/11/2013		44.24	NE	<0.005	<0.005	<0.005	<0.01	0.000087 J	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01 UJ	<0.01 UJ	<0.01	<0.005	<0.005	<0.005	<0.01 UJ	<0.00005	<0.005 UJ	0.000084 J
P93D-ROX-013114	1/31/2014	46.62	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000024 U	<0.0053	<0.00011		
P93D-ROX-041414	4/14/2014	47.54	NE	<0.0053	0.00036 J	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00003 JB U	<0.0053	<0.00011		
P-114	P114-ROX-102811	10/28/2011	32.67 - 52.67	24.73	NE	<0.0048	<0.0048	<0.0048	<0.0095	<0.000095	<0.000095	<0.0048		<0.000095	<0.0048	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0.0048	<0.0048	<0.0048	<0.0095	<0.000048	<0.0048	<0.000095
	P114-ROX-012012	1/20/2012		27.17	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		0.000066 J	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	P114-ROX-050912	5/9/2012		28.09	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	P114-ROX-080912	8/9/2012		29.13	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	P114-ROX-110912	11/9/2012		30.90	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	P114-ROX-012313	1/23/2013		30.22	NE	<0.0053 UJ	0.0024 J	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	P114-ROX-041513	4/15/2013		31.80	NE	<0.0052	0.00047 J	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	P114-ROX-071813	7/18/2013		27.22	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		0.000071 J	<0.0055	<0.00022	<0.0002										

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

Screening Values (mg/L)						SVOCs																					
Location	Sample ID	Sample Date	Screened Interval (ft bto)	Depth to Water (ft bto)	Product Thickness (ft)	Dimethyl phthalate	D-n-butyl phthalate	D-n-octyl phthalate	2,6-Dinitrotoluene	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)	2 & 4-Methylphenol (m & p-Cresol)	o-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
						0.7 ¹	0.14 ²	0.00031 ²	0.28 ¹	0.28 ¹	0.00006 ²		0.00043 ¹	1.4 ²	0.49 ³	0.028 ¹	0.35 ¹	0.35 ³		0.014 ¹	0.0006 ³	0.0032 ²	0.001 ¹	0.21 ³	0.1 ¹	0.21 ¹	
						Analytical Results (mg/L)																					
ROST-4-PZ(C)	ROST4PZ-C-051412	5/14/2012	34.95 - 44.95	39.04	NE	<0.005	<0.00058 U	<0.005	<0.01	<0.0001	0.00022	<0.005		<0.0001	<0.005	0.0044	0.0049	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00082	<0.005	0.000041 J
	ROST4PZ-C-ROX-072512	7/25/2012		39.10	NE	<0.0053	0.0015 J	<0.0053	<0.011	<0.000041 U	0.00032 B	<0.0053		<0.00011	<0.0053	0.0102	0.0136	<0.011	0.00098 J	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.0014	0.0023 J	<0.000081 U
	ROST4PZC-ROX-102912	10/29/2012		40.75	NE	<0.0052	0.0018 J	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	0.0004	0.00041	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.0002	<0.0052	<0.0001
	ROST4PZ(C)-ROX-011113	1/11/2013		41.42	NE	<0.0053 UJ	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	0.000064 J	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00012	<0.0053	<0.00011
	ROST4PZC-ROX-041013	4/10/2013		42.27	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	0.000069 J	<0.0055		<0.00011	<0.0055	0.00062	0.000078 J	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.00018	<0.0055 U	<0.00011
	ROST4PZC-ROX-071113	7/11/2013		40.18	NE	<0.0054	<0.0054	<0.0054	<0.011	0.000099 J	0.00027	<0.0054		<0.00011	<0.0054	0.0027 J	0.0021	<0.011	<0.011	<0.011 UJ	<0.0054	<0.0054	<0.0054	<0.011	0.00052	0.00057 J J	<0.00009 U
	ROST4PZC-ROX-100913	10/9/2013		39.91	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.002	0.00095	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.0002	<0.0053	<0.00011
	ROST4PZC-ROX-011714	1/17/2014		41.92	NE	<0.0059	<0.0059	<0.0059	<0.012	<0.00012	<0.00012	<0.0059		<0.00012	<0.0059	0.00019 J	<0.00024	<0.01 UJ	<0.01 UJ	<0.012	<0.0059	<0.0059	<0.0059	<0.01 UJ	0.000077	<0.005 UJ	<0.00012
	ROST4PZC-ROX-041014	4/10/2014	34.95 - 44.95	42.05	NE	<0.0056	0.00038 JB U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	0.000065 J	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.000051 J	<0.0056	<0.00011
T-12	T12-ROX-102711	10/27/2011	46.46 - 72.46	38.54	NE	<0.0051	<0.0051	<0.0051	<0.01	<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	<0.0056	<0.00048 U	<0.0056	<0.011	0.000044 J	0.00043	<0.0056		0.000061 J	<0.0056	0.0158	0.0186	0.00091 J	<0.011	<0.011 UJ	<0.0056	<0.0056	<0.0056	<0.011	0.00054	0.0188	0.000067 J
	T12-ROX-050912	5/9/2012		42.62	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	0.00024	<0.005		<0.0001	<0.005	0.0164	0.0254	<0.01	0.0026 J	<0.01	<0.005	<0.005	<0.005	<0.01	0.00062	0.0094	0.000039 J
	T12-ROX-080212	8/2/2012		41.92	NE	<0.0054	<0.0054	<0.0054	<0.011	0.000046 J	0.00029	<0.0054		<0.00011	<0.0054	0.0199	0.0294	0.0021 J	0.0027 J	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00089	0.042	0.000062 J
	T12-ROX-110512	11/5/2012		43.91	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	0.00031	<0.005		<0.0001	<0.005	0.0232	0.0354	0.00096 J	0.0015 J	<0.01	<0.005	<0.005	<0.005	<0.01	0.00083	<0.005 UJ	0.000048 J
	T12-ROX-011813	1/18/2013		44.50	NE	<0.0053 UJ	<0.0053	<0.0053	<0.011	<0.00011	0.00046	<0.0053		<0.00011	<0.0053	0.0241	0.0322	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.0011	0.0265	0.000067 J
	T12-ROX-041513	4/15/2013		44.99	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	0.00037	<0.0051		<0.0001	<0.0051	0.0289	0.0444	0.0047 J	0.0042 J	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.0011	0.0149	0.000063 J
	T12-ROX-071613	7/16/2013		42.33	NE	<0.0054	<0.0054	<0.0054	<0.011	0.000044 J	0.00034	<0.0054		<0.00011	<0.0054	0.0236	0.0331	0.0029 J J	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.0011	0.0514 J	<0.00009 U
	T12-ROX-101513	10/15/2013		43.73	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00029	<0.0054		<0.00011	<0.0054	0.0199	0.0319	0.0018 J	0.0032 J	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00077	0.0083	0.00009 J
		T12-ROX-012414		1/24/2014	46.46 - 72.46	45.26	NE	<0.0051	0.00044 J	<0.0051	<0.01	<0.0001	0.00035	<0.0051		<0.0001	<0.0051	0.0215	0.0326	0.0022 J	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.001
	T12-ROX-041514	4/15/2014	46.72	NE		<0.0056	0.00034 JB U	<0.0056	<0.011	<0.00011	0.0003	<0.0056		<0.00011	<0.0056	0.0189	0.0283	<0.011	<0.011	<0.011	<0.0056	<0.0056 UJ	<0.0056	<0.011	0.00078	0.0672 J	0.00005 J

Notes:

- 1 Denotes screening criteria source from 35 I.A.C. 620, Subpart D.
- 2 Denotes screening criteria source from 35 I.A.C. 742 (TACO), Appendix B, Table E.
- 3 Denotes screening criteria source from IL EPA Toxicity Assessment Unit (Chemicals not in TACO, Tier 1 Tables).
- 4 Beginning in 4Q12, naphthalene was analyzed via 8260 VOC, and prior historical results were reported by PAH analysis.
- 5 Beginning in 4Q13, professional judgment criteria used to review common laboratory contaminants was reevaluated. Acetone, 2-butanone, and methylene chloride are only U-qualified when present in the method blank.
- 6 The laboratory has been requested to perform a library search in all samples for butane, hexane, isopentane, 1,2,3-trimethylbenzene, and indene, which are reported as Tentatively Identified Compounds (TICs), when identified.

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

LABORATORY QUALIFIERS

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

URS QUALIFIERS

- J = The result is estimated.

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.

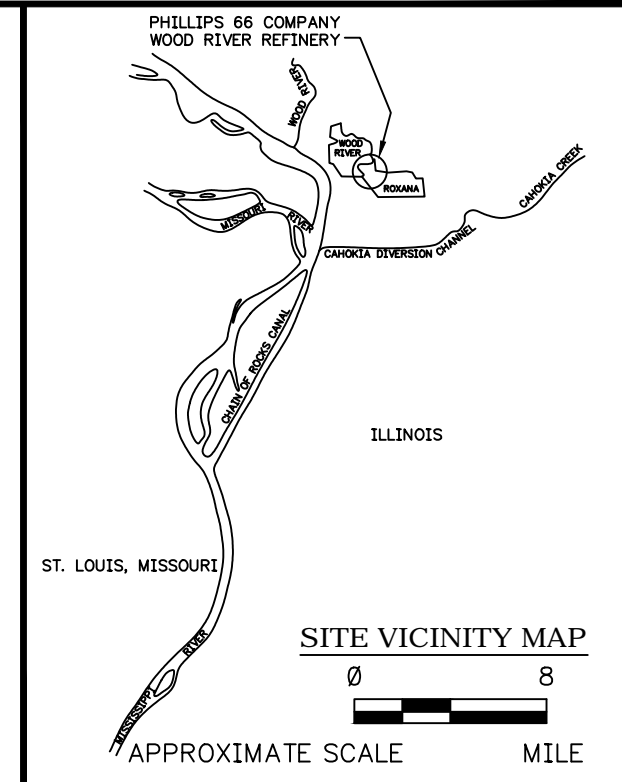
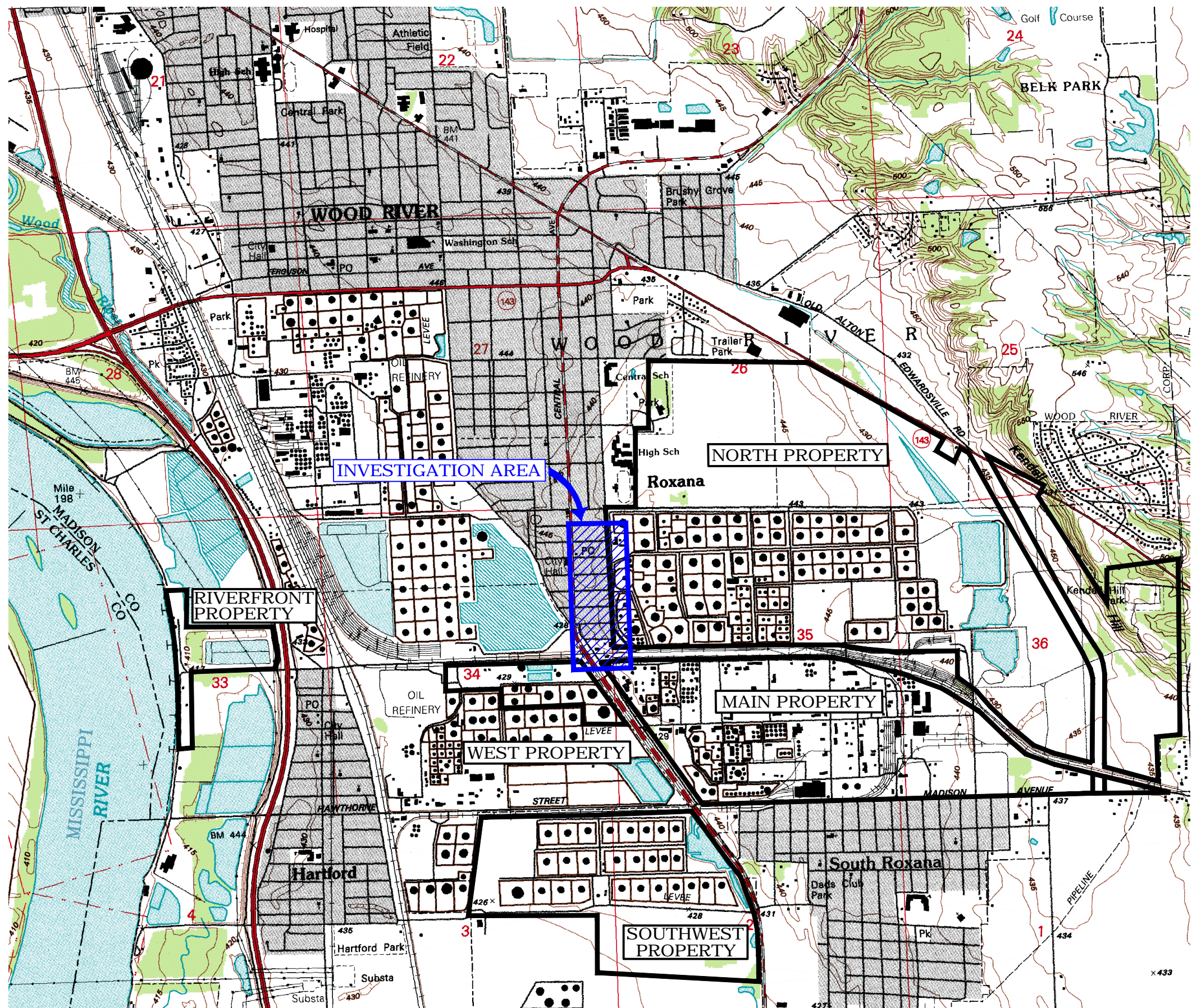
Inward Kriging / Boundary Cut-off – This method of Kriging limits the horizontal extent of data modeling to the extent of the data on the x/y plane in a convex hull.

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.

Fig. P:\ENVIRONMENTAL\SHELL_OIL_PRODUCTS_US_2014\3--ROXANA\10_GROUNDWATER_MONITORING\2014_GW_MONITORING\FIGURES\FIG. 1_INVESTIGATION_AREA_LOCATION_MAP.DWG Last edited: 06/19/14 @ 2:55 p.m. © WCC-ST. LOUIS



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.

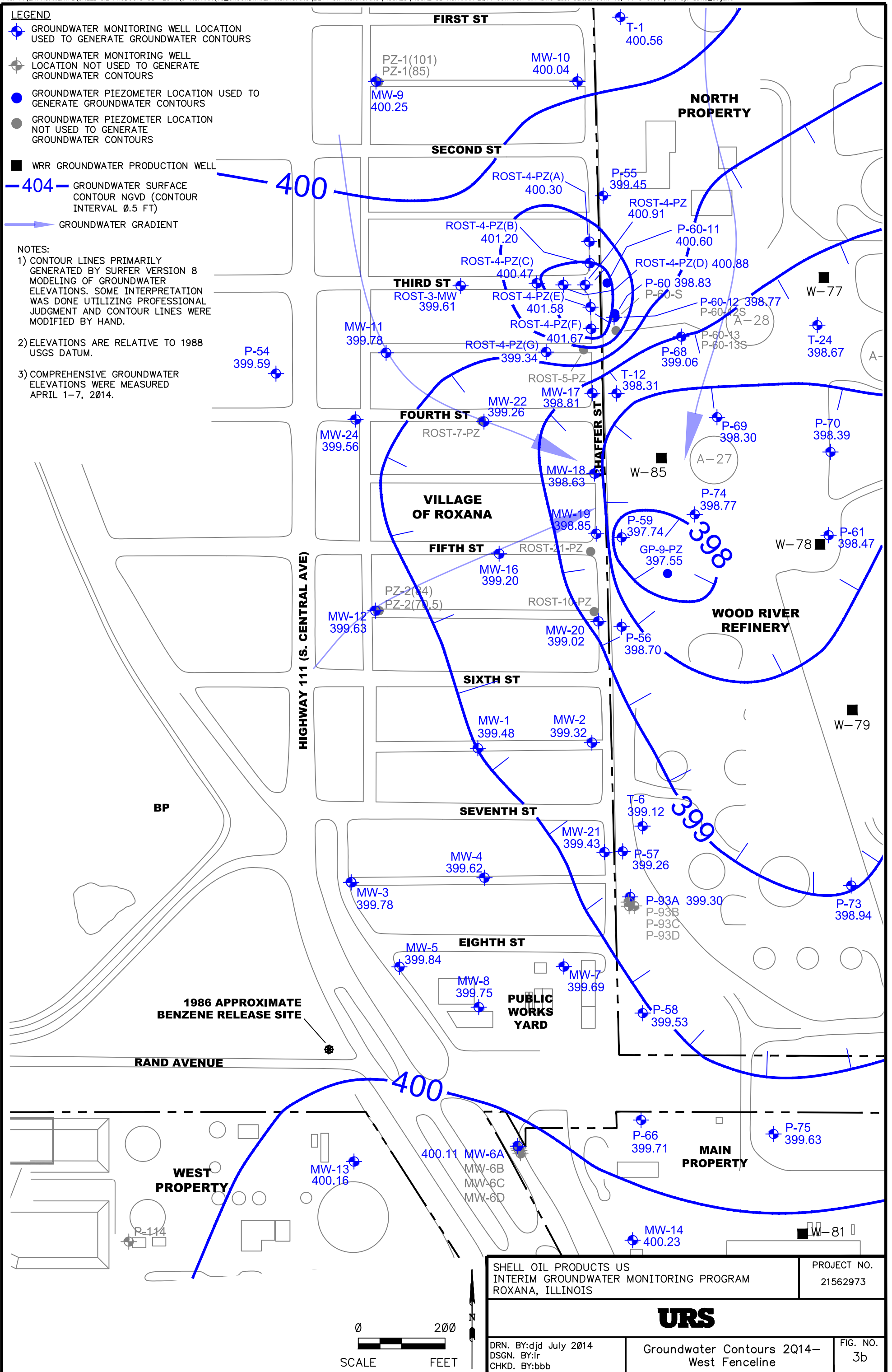
CONTOUR INTERVAL = 5 FT
 0 2000
 APPROXIMATE SCALE MILE

SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS	PROJECT NO. 21562973
DRN. BY:djd July 2014 DSGN. BY:djd CHKD. BY:b3	2Q14 Investigation Area Location Map
FIG. NO. 1	

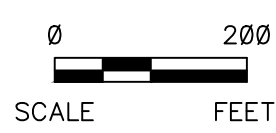
LEGEND

- 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
- GROUNDWATER SURFACE CONTOUR NGVD (CONTOUR INTERVAL 0.5 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 APRIL 1-7, 2014.



SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562973
DRN. BY:djd July 2014 DSGN. BY:lr CHKD. BY:bbb	Groundwater Contours 2Q14- West Fenceline	FIG. NO. 3b



LEGEND

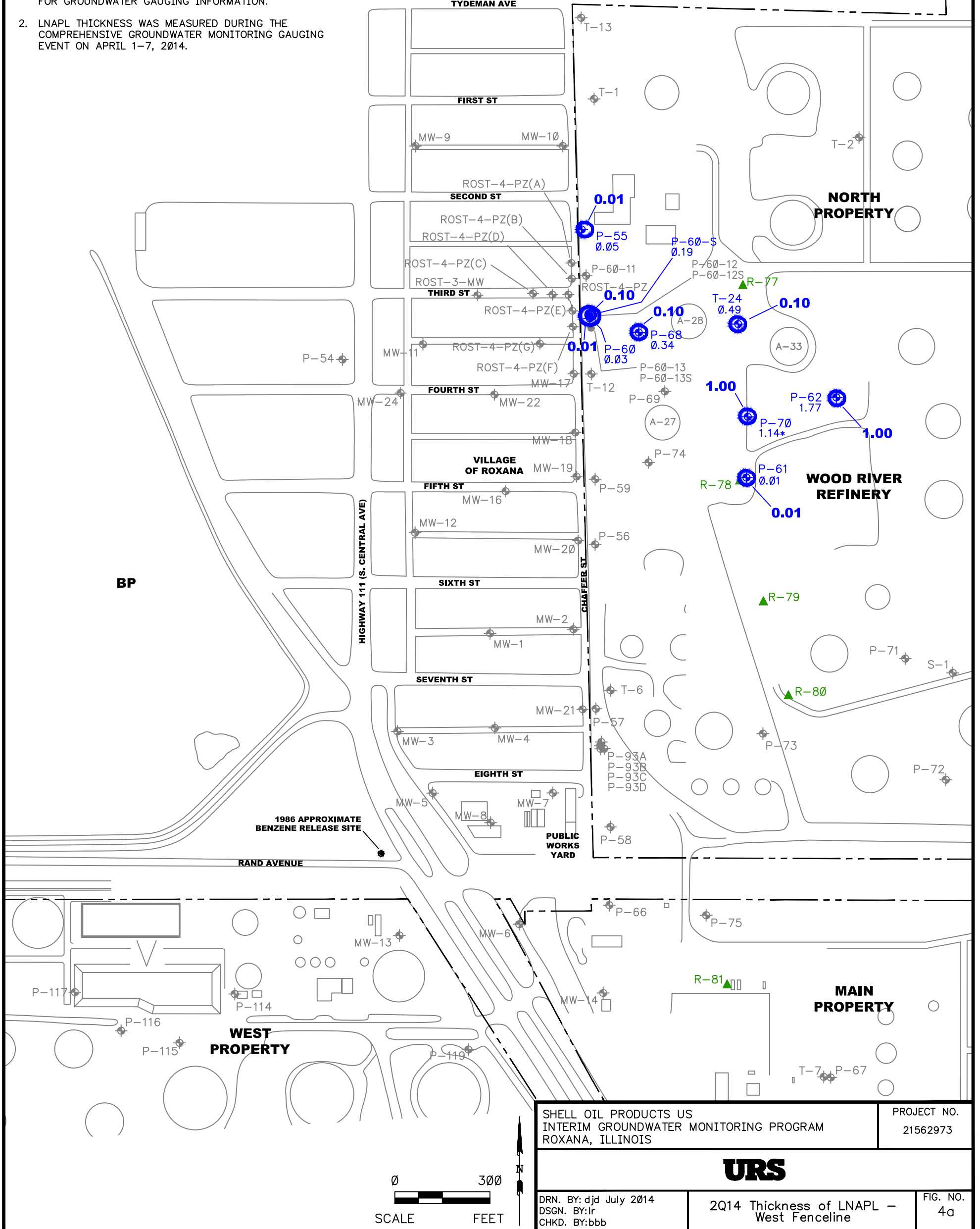
- ◆ GROUNDWATER MONITORING WELL LOCATION, LNAPL THICKNESS IN FEET
- ⊕ GROUNDWATER MONITORING WELL LOCATION (NO LNAPL OBSERVED UNLESS OTHERWISE NOTED)
- GROUNDWATER PIEZOMETER LOCATION, LNAPL THICKNESS IN FEET
- GROUNDWATER PIEZOMETER SAMPLING LOCATION (NO LNAPL OBSERVED UNLESS OTHERWISE NOTED)
- ▲ OIL RECOVERY WELL

— LNAPL THICKNESS CONTOUR (FEET)

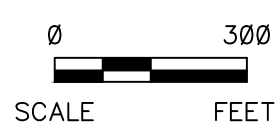
* INDICATES THAT THE LNAPL AND/OR WATER LEVEL IS ABOVE THE TOP OF WELL SCREEN

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 APRIL 1-7, 2014.



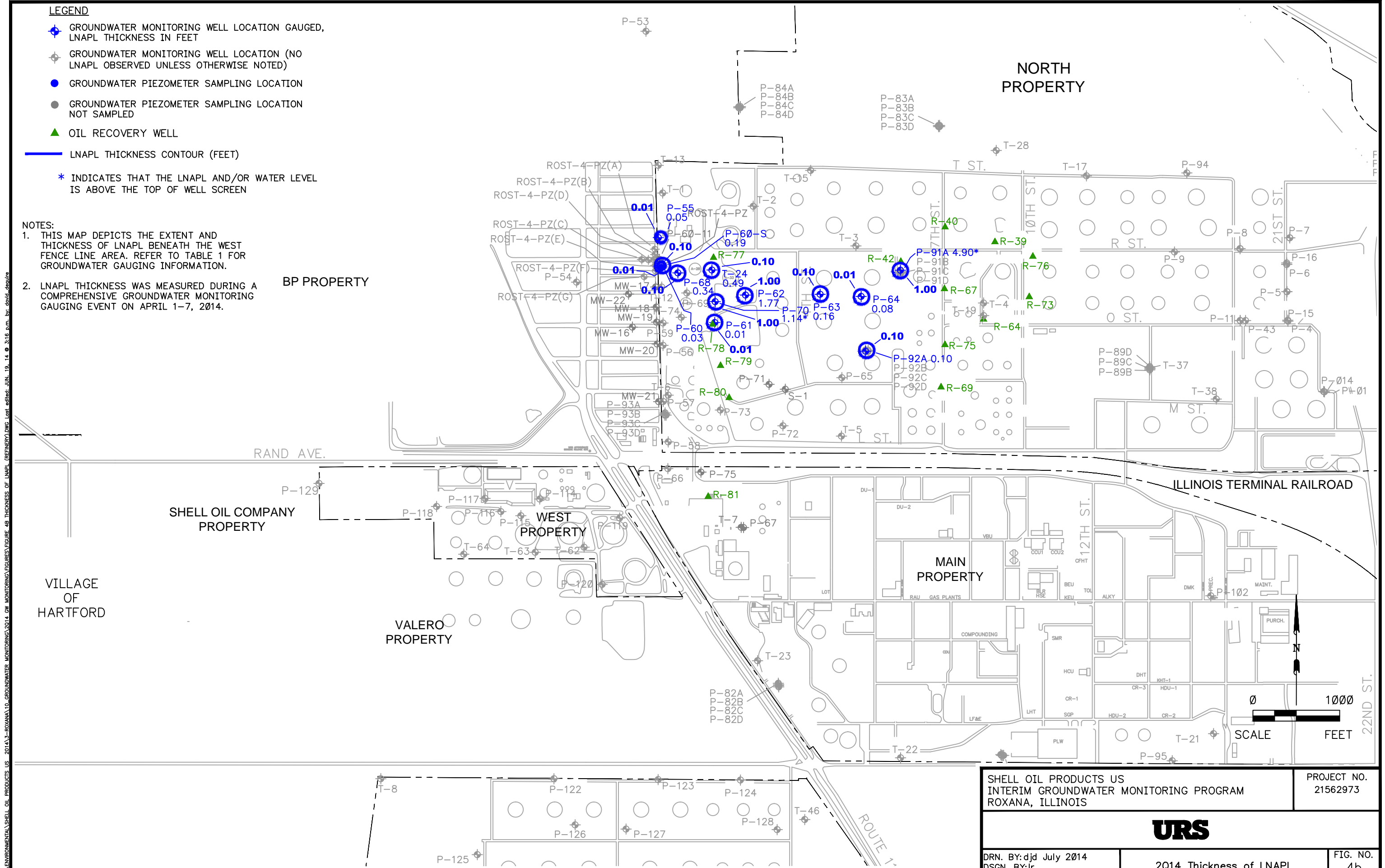
SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562973
DRN. BY: djd July 2014 DSGN. BY: lr CHKD. BY: bbb	2Q14 Thickness of LNAPL - West Fenceline	FIG. NO. 4a



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 APRIL 1-7, 2014.



FILE: F:\ENVIRONMENTAL\SHELL_OIL_PRODUCTS_US_2014\3-ROXANA\10-GROUNDWATER_MONITORING\2014_GW_MONITORING\FIGURES\FIGURE_4B_THICKNESS_OF_LNAPL_THICKNESS_OF_LNAPL_MONITORING\FIGURES\FIGURE_4B_THICKNESS_OF_LNAPL_MONITORING.DWG Last edited: JUN. 19. 14. 3:16 p.m. by: david.dequire

REFERENCE: SHELL DRAWING E-36137-12

SHELL OIL PRODUCTS US
 INTERIM GROUNDWATER MONITORING PROGRAM
 ROXANA, ILLINOIS

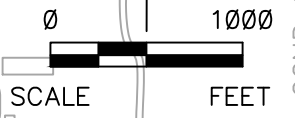
PROJECT NO.
 21562973



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

2Q14 Thickness of LNAPL

FIG. NO.
 4b



- LEGEND**
- ◆ GROUNDWATER MONITORING WELL SAMPLING LOCATION
 - ⊕ GROUNDWATER MONITORING WELL LOCATION NOT SAMPLED
 - GROUNDWATER PIEZOMETER SAMPLING LOCATION
 - GROUNDWATER PIEZOMETER LOCATION NOT SAMPLED

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

Analyte	Screening Criteria (mg/L)
Benzene	0.005
1,2-Dichloropropane	0.005
Ethylbenzene	0.7
2-Hexanone (Methyl N-Butyl Ketone)	0.035
Naphthalene	0.14
Toluene	1.0
1,3,5-Trimethylbenzene	0.07
Xylenes (total)	10
Benzo(a)anthracene	0.00013
Benzo(a)pyrene	0.0002
Benzo(b)fluoranthene	0.00018
Benzo(k)fluoranthene	0.00017
Dibenzo(a,h)anthracene	0.0003
Hexachlorobenzene	0.00006
Indeno(1,2,3-cd)pyrene	0.00043
2-Methylnaphthalene	0.028
N-Nitrosodimethylamine	0.0006
Phenol	0.1

3. J = THE TARGET ANALYTE DETECTED BELOW THE REPORTING LIMIT AND THE RESULT IS ESTIMATED.
4. MULTIPLE RESULTS (e.g., 862/1060) 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 2Q14 DUE TO THE PRESENCE OF LNAPL.

Sample Location	ROST-3-MW
Sampled 4/10/14	Result (mg/L)
Benzene	0.0075

Sample Location	MW-22
Sampled 4/10/14	Result (mg/L)
Benzene	1.7 / 1.56
Ethylbenzene	3.32 / 3.02
Naphthalene	0.334 / 0.28
Toluene	5.95 / 5.52
1,3,5-Trimethylbenzene	0.384 / 0.35
Xylenes (total)	10.2 / 9.35
2-Methylnaphthalene	0.0287 / 0.0322

Sample Location	P-59
Sampled 4/15/14	Result (mg/L)
Benzene	14.8
Ethylbenzene	1.69
2-Hexanone (Methyl N-Butyl Ketone)	0.054
Naphthalene	0.196
1,3,5-Trimethylbenzene	0.214
2-Methylnaphthalene	0.0317
Phenol	0.13 J

Sample Location	MW-4
Sampled 4/16/14	Result (mg/L)
Benzene	0.553

Sample Location	MW-8
Sampled 4/16/14	Result (mg/L)
Benzene	862 / 1060
Phenol	0.135 / 0.118

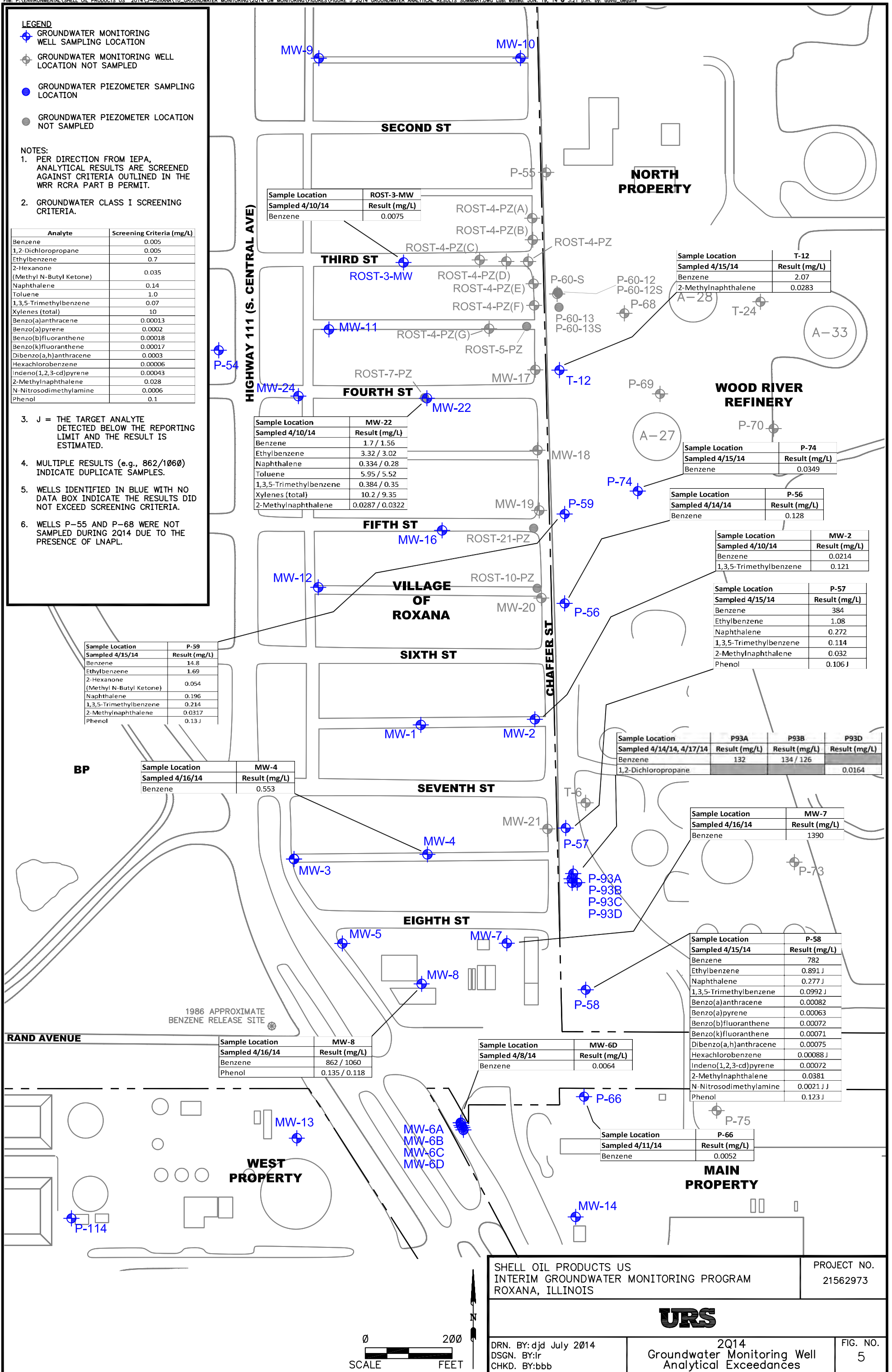
Sample Location	MW-6D
Sampled 4/8/14	Result (mg/L)
Benzene	0.0064

Sample Location	P93A	P93B	P93D
Sampled 4/14/14, 4/17/14	Result (mg/L)	Result (mg/L)	Result (mg/L)
Benzene	132	134 / 126	
1,2-Dichloropropane			0.0164

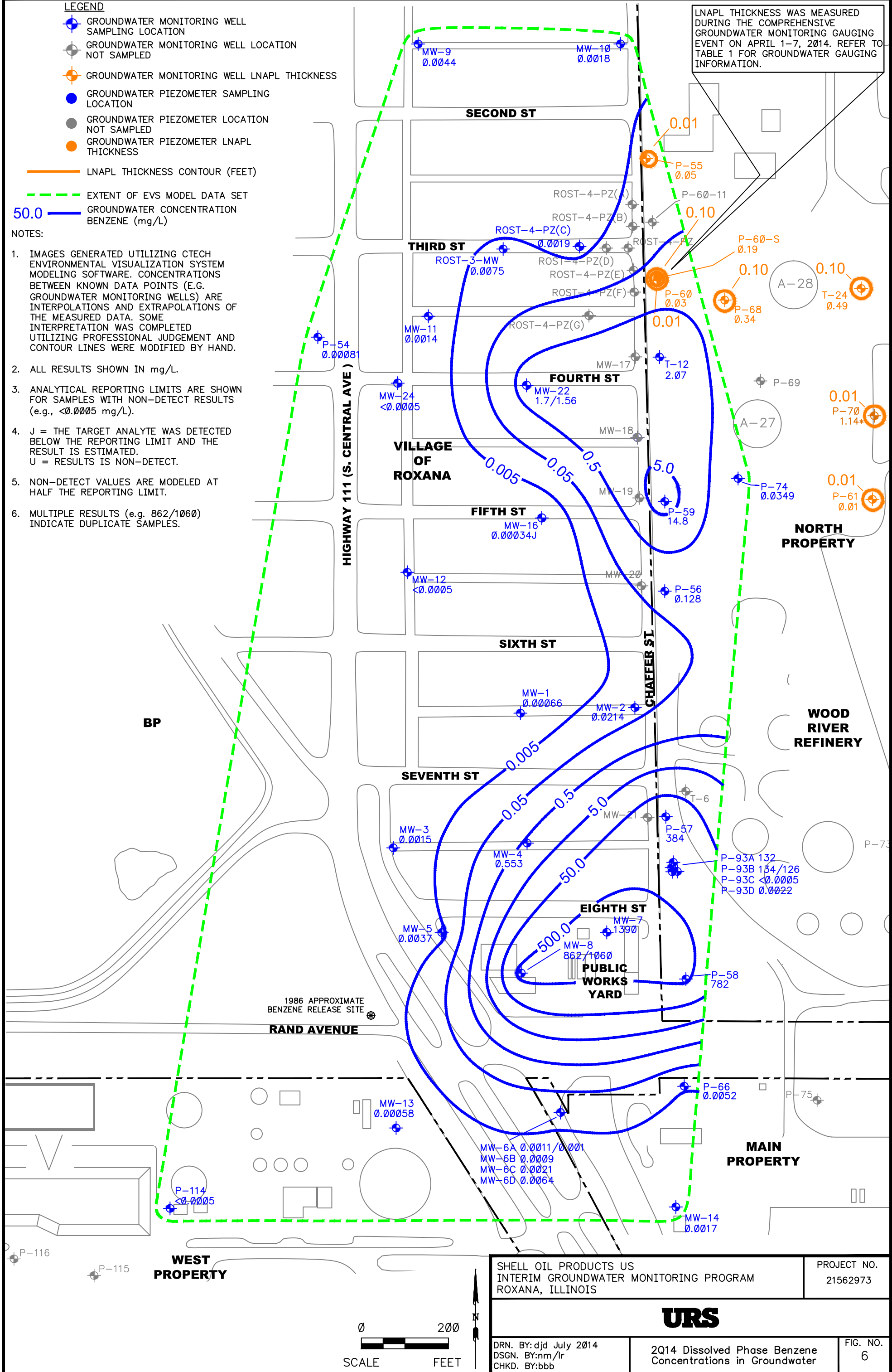
Sample Location	MW-7
Sampled 4/16/14	Result (mg/L)
Benzene	1390

Sample Location	P-58
Sampled 4/15/14	Result (mg/L)
Benzene	782
Ethylbenzene	0.891 J
Naphthalene	0.277 J
1,3,5-Trimethylbenzene	0.0992 J
Benzo(a)anthracene	0.00082
Benzo(a)pyrene	0.00063
Benzo(b)fluoranthene	0.00072
Benzo(k)fluoranthene	0.00071
Dibenzo(a,h)anthracene	0.00075
Hexachlorobenzene	0.00088 J
Indeno(1,2,3-cd)pyrene	0.00072
2-Methylnaphthalene	0.0381
N-Nitrosodimethylamine	0.0021 J J
Phenol	0.123 J

Sample Location	P-66
Sampled 4/11/14	Result (mg/L)
Benzene	0.0052



SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562973
URS		
DRN. BY: djd July 2014 DSGN. BY: lr CHKD. BY: bbb	2Q14 Groundwater Monitoring Well Analytical Exceedances	FIG. NO. 5



LNAPL THICKNESS WAS MEASURED DURING THE COMPREHENSIVE GROUNDWATER MONITORING GAUGING EVENT ON APRIL 1-7, 2014. REFER TO TABLE 1 FOR GROUNDWATER GAUGING INFORMATION.

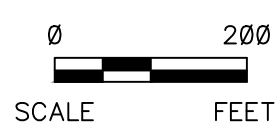
LEGEND

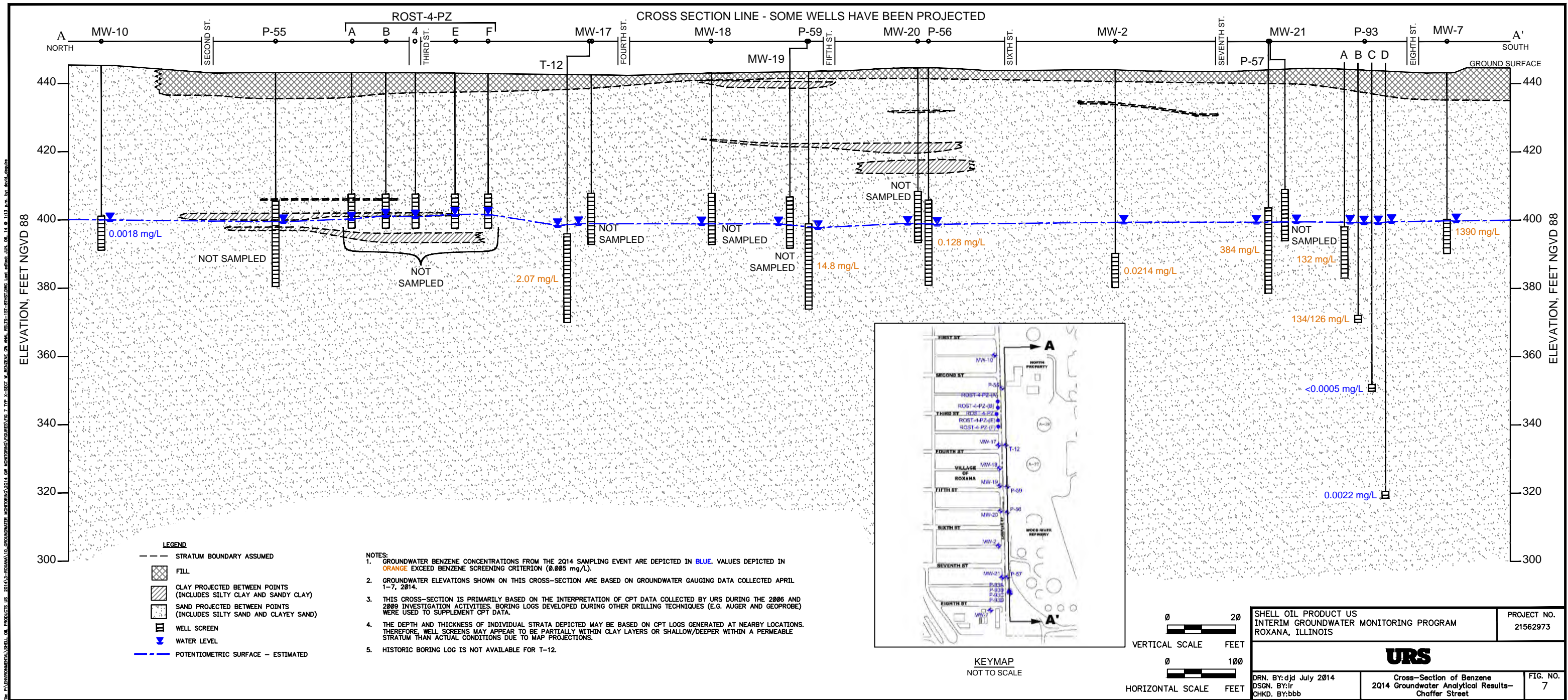
- GROUNDWATER MONITORING WELL SAMPLING LOCATION
- GROUNDWATER MONITORING WELL LOCATION NOT SAMPLED
- GROUNDWATER MONITORING WELL LNAPL THICKNESS
- GROUNDWATER PIEZOMETER SAMPLING LOCATION
- GROUNDWATER PIEZOMETER LOCATION NOT SAMPLED
- GROUNDWATER PIEZOMETER LNAPL THICKNESS
- LNAPL THICKNESS CONTOUR (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., <0.0005 mg/L).
 4. J = THE TARGET ANALYTE WAS DETECTED BELOW THE REPORTING LIMIT AND THE RESULT IS ESTIMATED.
U = RESULTS IS NON-DETECT.
 5. NON-DETECT VALUES ARE MODELED AT HALF THE REPORTING LIMIT.
 6. MULTIPLE RESULTS (e.g. 862/1060) INDICATE DUPLICATE SAMPLES.

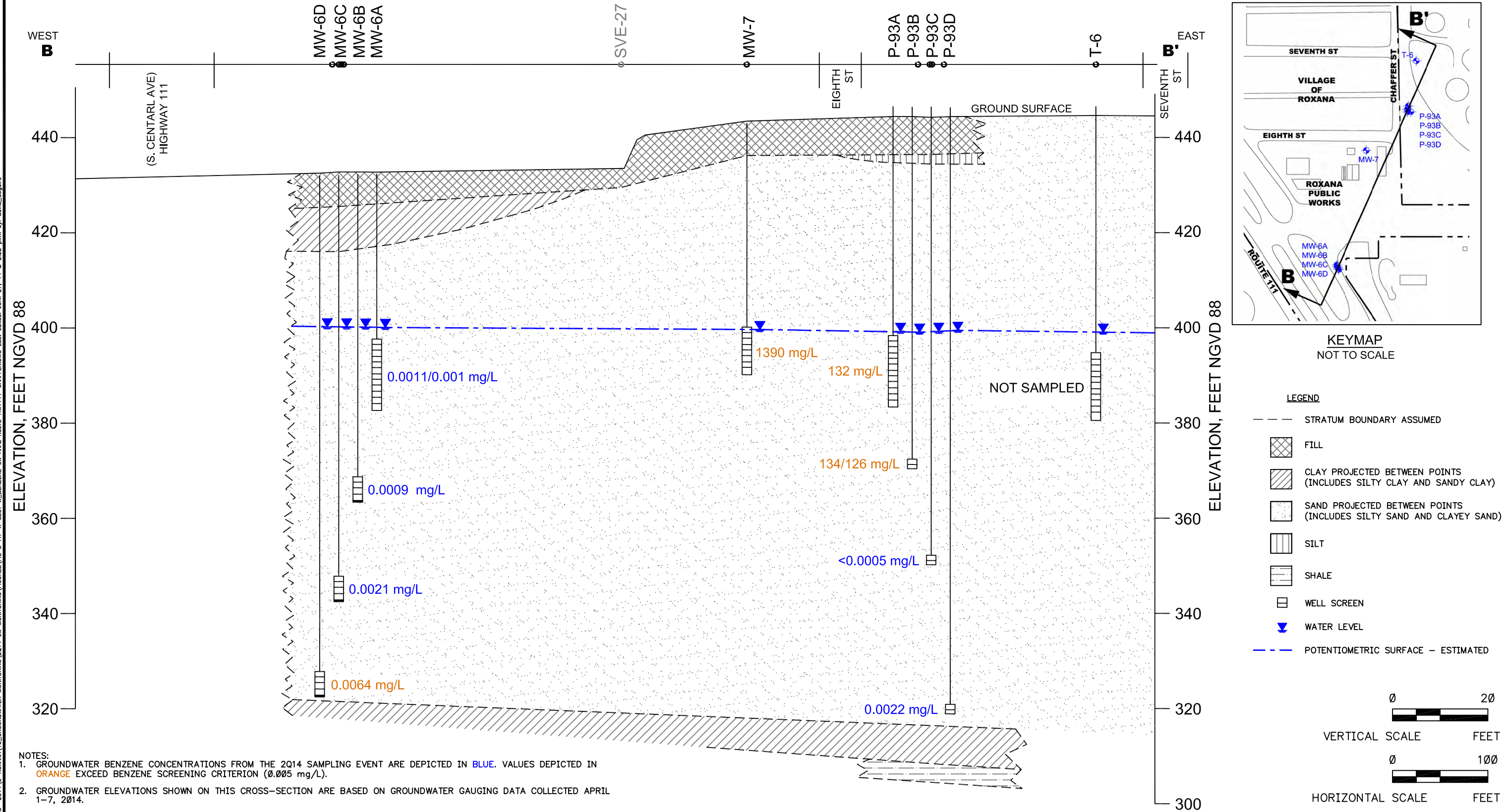
SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562973
URS		
DRN. BY: djd July 2014 DSGN. BY: nm/lr CHKD. BY: bbb	2Q14 Dissolved Phase Benzene Concentrations in Groundwater	FIG. NO. 6





SHELL OIL PRODUCT US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS
 PROJECT NO. 21562973
 DRN. BY: djd July 2014
 DSGN. BY: ir
 CHKD. BY: bbb

CROSS SECTION LINE - SOME WELLS HAVE BEEN PROJECTED



- NOTES:
- GROUNDWATER BENZENE CONCENTRATIONS FROM THE 2014 SAMPLING EVENT ARE DEPICTED IN BLUE. VALUES DEPICTED IN ORANGE EXCEED BENZENE SCREENING CRITERION (0.005 mg/L).
 - GROUNDWATER ELEVATIONS SHOWN ON THIS CROSS-SECTION ARE BASED ON GROUNDWATER GAUGING DATA COLLECTED APRIL 1-7, 2014.
 - THIS CROSS-SECTION IS PRIMARILY BASED ON THE INTERPRETATION OF CPT DATA COLLECTED BY URS DURING THE 2006 AND 2009 INVESTIGATION ACTIVITIES. BORING LOGS DEVELOPED DURING OTHER DRILLING TECHNIQUES (E.G. AUGER AND GEOPROBE) WERE USED TO SUPPLEMENT CPT DATA.
 - 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.
 - LITHOLOGICAL INFORMATION FROM SVE-27 WAS OBTAINED FROM BORING LOG TO SUPPLEMENT SITE GEOLOGY ONLY.
 - 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 July 2014 DSGN. BY:lr CHKD. BY:wmp	Cross-Section of Benzene 2014 Groundwater Analytical Results- Roxana Public Works Yard	FIG. NO. 8

Fig: P:\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\10-GROUNDWATER MONITORING\2014 GW MONITORING\FIGURES\FIG 8 TYP X-SECT W_BENZENE GW ANAL RSLTS-HWT11-CHAFFER.DWG Last edited: JUN. 27, 14 @ 2:22 p.m. by: david_degure

2.12

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW PROJECT NUMBER: 21562973.03002 FIELD PERSONNEL: M Mansker, D. Mattingly

DATE: 4-10-14 WEATHER: Sunny 75° breezy

MONITORING WELL ID: MW-2 SAMPLE ID: MW2-Rox-04/10/14

INITIAL DATA

Well Diameter: 2 in
 Total Well Depth (btoc): 60.20 ft
 Depth to Water (btoc): 44.66 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): 15.54 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) = 55.2 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: 10.4 ppm
 Wellbore PID/FID Reading: 1472 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	1423	44.66	clear	hydrocarbon	6.68	1253	-97	0.69	22.05	21.14
880	1425	44.66	clear		6.68	1265	-100	0.38	21.19	20.78
1760	1428	44.66	clear		6.68	1270	-120	0.21	20.18	20.74
2640	1430	44.66	clear		6.68	1273	-103	0.15	19.06	20.74
3520	1433	44.66	clear		6.68	1277	-104	0.14	17.04	20.76
4400	1435	44.66	clear		6.68	1280	-105	0.10	16.06	20.79
5280	1438	44.66	clear		6.68	1280	-105	0.07	16.03	20.81

Start Time: 1423 Elapsed Time (min): 15 Water Quality Meter ID & SN: TROLL 9500 - R24196
 Stop Time: 1438 Average Purge Rate (mL/min): 400 Date Calibrated: 4-10-14

SAMPLING DATA

Sample Date: 4-10-14 Sample Time: 1445 Lab Analysis: VOC, SVOC
 Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QC Samples: —
 VOA Vials, No Headspace Initials: MM

COMMENTS:

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

Total Purge Volume: 5280 mL

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LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW PROJECT NUMBER: 21562973.03002 FIELD PERSONNEL: D. Mattingly, M. Mansker

DATE: 4-9-14 WEATHER: Sunny, breezy 60°

MONITORING WELL ID: MW-3 SAMPLE ID: MW3-Rox-040914

INITIAL DATA

Well Diameter: 2 in Water Column Height (do not include LNAPL or DNAPL): 14.5 ft btoc
Total Well Depth (btoc): 45.00 ft If Depth to Top of Screen is > Depth to Water, Place Pump at:
Depth to Water (btoc): 30.50 ft Total Well Depth - 0.5 (Screen Length + DNAPL Column Height) = 39.67 ft btoc
Depth to LNAPL/DNAPL (btoc): - ft If Depth to Top of Screen is < Depth to Water, Place Pump at:
Depth to Top of Screen (btoc): 34.67 ft Total Well Depth - (0.5 X Water Column Height + DNAPL Column Height) = - ft btoc
Screen Length: 10 ft 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 ppm
Wellbore PID/FID Reading: 0.2 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump STABLE: +/- 0.2 +/- 3% +/- 20 +/- 0.2 mg/L or +/- 10% <10 or +/- 10% +/- 0.2 °C (over 3 readings)

Table with 11 columns: Purge Volume (mL), Time, Depth to Water (ft), Color, Odor, pH, Specific Cond. (mS/cm), ORP (mV), DO (mg/L), Turbidity (NTUs), Temp (°C). Rows show data from 0 to 7200 mL purge volume.

Start Time: 1422 Elapsed Time (min): 20 Water Quality Meter ID & SN: TROLL 9500 - R224196
Stop Time: 1442 Average Purge Rate (mL/min): 400 Date Calibrated: 4-9-14

SAMPLING DATA

Sample Date: 4-9-14 Sample Time: 1450 Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QC Samples: -
VOA Vials, No Headspace Initials: MM

COMMENTS:

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

Total Purge Volume: 7200 mL

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LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW PROJECT NUMBER: 21562973.03002 FIELD PERSONNEL: M Mansker, P Meetingly

DATE: 4-16-14 WEATHER: Sunny 50°

MONITORING WELL ID: MW-4 SAMPLE ID: MW4-Rox-041614

INITIAL DATA

Well Diameter: 2 in Water Column Height (do not include LNAPL or DNAPL): 14.48 ft btoc
Total Well Depth (btoc): 56.39 ft If Depth to Top of Screen is > Depth to Water, Place Pump at:
Depth to Water (btoc): 41.91 ft Total Well Depth - 0.5 (Screen Length + DNAPL Column Height) = 51.39 ft btoc
Depth to LNAPL/DNAPL (btoc): - ft If Depth to Top of Screen is < Depth to Water, Place Pump at:
Depth to Top of Screen (btoc): 46.06 ft Total Well Depth - (0.5 X Water Column Height + DNAPL Column Height) = - ft btoc
Screen Length: 10 ft 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 ppm
Wellbore PID/FID Reading: 45 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump STABLE: +/- 0.2 +/- 3% +/- 20 +/- 0.2 mg/L or +/- 10% <10 or +/- 10% +/- 0.2 °C

Table with 11 columns: Purge Volume (mL), Time, Depth to Water (ft), Color, Odor, pH, Specific Cond. (mS/cm), ORP (mV), DO (mg/L), Turbidity (NTUs), Temp (°C). Rows show data from 0 to 4800 mL purge volume.

Start Time: 1232 Elapsed Time (min): 14 Water Quality Meter ID & SN: TROLL 9500 - R24196
Stop Time: 1246 Average Purge Rate (mL/min): 400 Date Calibrated: 4-16-14

SAMPLING DATA

Sample Date: 4-16-14 Sample Time: 1255 Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QC Samples: -
VOA Vials, No Headspace Initials: MM

COMMENTS:

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

Total Purge Volume: 4800 mL

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LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW PROJECT NUMBER: 21562973.03002 FIELD PERSONNEL: M. Mansker, D. Mattingly

DATE: 4-10-14 WEATHER: Sunny 70°

MONITORING WELL ID: MW-5 SAMPLE ID: MW5-Rox-04/10/14

INITIAL DATA

Well Diameter: 2 in Water Column Height (do not include LNAPL or DNAPL): 142.1 ft btoc
Total Well Depth (btoc): 44.30 ft If Depth to Top of Screen is > Depth to Water, Place Pump at:
Depth to Water (btoc): 30.09 ft Total Well Depth - 0.5 (Screen Length + DNAPL Column Height) = 39.30 ft btoc
Depth to LNAPL/DNAPL (btoc): - ft If Depth to Top of Screen is < Depth to Water, Place Pump at:
Depth to Top of Screen (btoc): 33.97 ft Total Well Depth - (0.5 X Water Column Height + DNAPL Column Height) = - ft btoc
Screen Length: 10 ft 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 ppm
Wellbore PID/FID Reading: 0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump STABLE: +/- 0.2 +/- 3% +/- 20 +/- 0.2 mg/L or +/- 10% <10 or +/- 10% +/- 0.2 °C (over 3 readings)

Table with 11 columns: Purge Volume (mL), Time, Depth to Water (ft), Color, Odor, pH, Specific Cond. (mS/cm), ORP (mV), DO (mg/L), Turbidity (NTUs), Temp (°C). Rows show data from 0 to 7200 mL purge volume.

Start Time: 1314 Elapsed Time (min): 20 min Water Quality Meter ID & SN: TROLL 9500 - R224196
Stop Time: 1334 Average Purge Rate (mL/min): 400 Date Calibrated: 4-10-14

SAMPLING DATA

Sample Date: 4-10-14 Sample Time: 1340 Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QC Samples: -
VOA Vials, No Headspace Initials: MM

COMMENTS:

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

Total Purge Volume: 7200 mL

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LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW PROJECT NUMBER: 21562973.03002 FIELD PERSONNEL: D. Mattingly, M. Mansker

DATE: 4-8-14 WEATHER: 55° Sunny, breezy

MONITORING WELL ID: MW-6A SAMPLE ID: MW6A-Rox-040814

INITIAL DATA

Well Diameter: 2 in Water Column Height (do not include LNAPL or DNAPL): 13 ft btoc
Total Well Depth (btoc): 45.16 ft If Depth to Top of Screen is > Depth to Water, Place Pump at:
Depth to Water (btoc): 32.16 ft Total Well Depth - 0.5 (Screen Length + DNAPL Column Height) = 39.83 ft btoc
Depth to LNAPL/DNAPL (btoc): - ft If Depth to Top of Screen is < Depth to Water, Place Pump at:
Depth to Top of Screen (btoc): 34.83 ft Total Well Depth - (0.5 X Water Column Height + DNAPL Column Height) = - ft btoc
Screen Length: 10 ft 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: 0.5 ppm
Wellbore PID/FID Reading: 2.5 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump STABLE: +/- 0.2 +/- 0.2 +/- 3% +/- 20 +/- 0.2 mg/L or +/- 10% <10 or +/- 10% +/- 0.2 °C (over 3 readings)

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	1259	32.16	cloudy	-	6.57	1.956	-119	0.78	88.64	19.01
800	1301	32.16	cloudy	-	6.57	1.953	-122	0.47	101.6	19.04
1600	1303	32.16	cloudy	-	6.57	1.953	-124	0.23	83.87	19.03
2400	1305	32.16	cloudy	-	6.57	1.926	-125	0.22	64.17	19.07
3200	1308	32.16	cloudy	-	6.58	1.905	-126	0.18	50.44	19.12
4000	1310	32.16	cloudy	-	6.58	1.890	-127	0.13	37.14	19.17
4800	1312	32.16	cloudy	-	6.58	1.879	-127	0.12	27.62	19.19
5600	1314	32.16	clear	-	6.58	1.869	-127	0.11	21.44	19.23
6400	1317	32.16	clear	-	6.58	1.862	-127	0.09	14.46	19.24
7200	1319	32.16	clear	-	6.58	1.856	-128	0.05	12.08	19.26
8000	1321	32.16	clear	-	6.58	1.852	-128	0.05	9.740	19.29

Start Time: 1259 Elapsed Time (min): 22 Water Quality Meter ID & SN: TROLL 9500 - 274196
Stop Time: 1321 Average Purge Rate (mL/min): 400 Date Calibrated: 4-8-14

SAMPLING DATA

Sample Date: 4-8-14 Sample Time: 1325 Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QC Samples: Dup
VOA Vials, No Headspace Initials: MM

COMMENTS:

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

Total Purge Volume: 8000 mL

2.21

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW

PROJECT NUMBER: 21562973.03002

FIELD PERSONNEL: M Mansker, D Nittingly

DATE: 4-8-14

WEATHER: 55°, Cool, sunny, breezy

MONITORING WELL ID: MW-6B

SAMPLE ID: MW6B-Rox-040814

INITIAL DATA

Well Diameter: 2 in
Total Well Depth (btoc): 69.38 ft
Depth to Water (btoc): 32.21 ft
Depth to LNAPL/DNAPL (btoc): - ft
Depth to Top of Screen (btoc): 64.05 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 37.17 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: - ppm
Wellbore PID/FID Reading: 4.5 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Table with 11 columns: Purge Volume (mL), Time, Depth to Water (ft), Color, Odor, pH, Specific Cond. (mS/cm), ORP (mV), DO (mg/L), Turbidity (NTUs), Temp (°C). Rows show data from 11:37 to 12:16.

Start Time: 11:37
Stop Time: 12:16

Elapsed Time (min): 39
Average Purge Rate (mL/min): 400

Water Quality Meter ID & SN: TROLL 9500 - R24196
Date Calibrated: 4-8-14

SAMPLING DATA

Sample Date: 4-8-14

Sample Time: 12:20

Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow

Sample Flow Rate (mL/min): 400

QA/QCSamples: EB

VOA Vials, No Headspace Initials: MM

COMMENTS:

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

Total Purge Volume: 13800 mL

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LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW

PROJECT NUMBER: 21562973.03002

FIELD PERSONNEL: M Mansker, P Mattingly

DATE: 4-8-14

WEATHER: 50° Sunny, breezy

MONITORING WELL ID: MW-6C

SAMPLE ID: MW6C-Rox-040814

INITIAL DATA

Well Diameter: 2 in
Total Well Depth (btoc): 90.28 ft
Depth to Water (btoc): 32.01 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): 58.27 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth - 0.5 (Screen Length + DNAPL Column Height) = 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: ppm
Wellbore PID/FID Reading: 5.4 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Table with 11 columns: Purge Volume (mL), Time, Depth to Water (ft), Color, Odor, pH, Specific Cond. (mS/cm), ORP (mV), DO (mg/L), Turbidity (NTUs), Temp (°C). Contains 10 rows of data with handwritten entries.

Start Time: 10 33
Stop Time: 10 59

Elapsed Time (min): 26
Average Purge Rate (mL/min): 400

Water Quality Meter ID & SN: TROLL 9500 - R24196
Date Calibrated: 4-8-14

SAMPLING DATA

Sample Date: 4-8-14
Sample Method: Monsoon Pump / Low Flow
VOA Vials, No Headspace Initials: MM

Sample Time: 1105
Sample Flow Rate (mL/min): 400

Lab Analysis: VOC, SVOC
QA/QCSamples: -

COMMENTS:

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

Total Purge Volume: 9540 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW PROJECT NUMBER: 21562973.03002 FIELD PERSONNEL: M Mansker, D Mattingly
 DATE: 4-8-14 WEATHER: Sunny, 45°
 MONITORING WELL ID: MW-6D SAMPLE ID: MW6D-Rox-040814

INITIAL DATA
 Well Diameter: 2 in Water Column Height (do not include LNAPL or DNAPL): 78.2 ft btoc
 Total Well Depth (btoc): 110.05 ft If Depth to Top of Screen is > Depth to Water, Place Pump at:
 Depth to Water (btoc): 31.85 ft Total Well Depth - 0.5 (Screen Length + DNAPL Column Height) = 107.22 ft btoc
 Depth to LNAPL/DNAPL (btoc): — ft If Depth to Top of Screen is < Depth to Water, Place Pump at:
 Depth to Top of Screen (btoc): 104.72 ft Total Well Depth - (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
 Screen Length: 5 ft 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: 80 ppm
 Wellbore PID/FID Reading: 80 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	0911	31.85	cloudy	—	7.04	1.380	-122	0.96	4150	16.76
1160	0914	31.85	cloudy	—	7.06	1.463	-135	0.46	3796	17.03
2320	0917	31.85	cloudy	—	7.05	1.711	-142	0.20	2145	17.14
3480	0921	31.85	cloudy	—	7.05	1.417	-145	0.14	1004	17.18
4640	0924	31.85	cloudy	—	7.04	1.421	-147	0.11	4983	17.23
5800	0927	31.85	cloudy	—	7.04	1.422	-148	0.09	3829	17.20
6960	0930	31.85	clear	—	7.04	1.422	-148	0.09	2911	17.24
8120	0933	31.85	clear	—	7.04	1.422	-149	0.09	2565	17.25
9280	0937	31.85	clear	—	7.04	1.422	-149	0.09	2863	17.31
10440	0940	31.85	clear	—	7.04	1.423	-149	0.07	4579	17.32
11600	0943	31.85	clear	—	7.05	1.424	-149	0.06	3842	17.36
12760	0946	31.85	clear	—	7.04	1.424	-149	0.06	5377	17.34
13920	0949	31.85	clear	—	7.05	1.424	-147	0.08	1524	17.29
15080	0953	31.85	clear	—	7.05	1.424	-147	0.06	8459	17.34

Start Time: 0911 Elapsed Time (min): 42 min Water Quality Meter ID & SN: TROLL 9500 - K24916
 Stop Time: 0953 Average Purge Rate (mL/min): 400 mL Date Calibrated: 4-8-14

SAMPLING DATA
 Sample Date: 4-8-14 Sample Time: 1000 Lab Analysis: VOC, SVOC
 Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 mL/min QA/QC Samples: —
 VOA Vials, No Headspace Initials: MM

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

Total Purge Volume: 15,080 mL

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LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW

PROJECT NUMBER: 21562973.03002

FIELD PERSONNEL: M. Mansker D. Mattingly

DATE: 4-16-14

WEATHER: Sunny, breezy, 50°

MONITORING WELL ID: MW-7

SAMPLE ID: MW7-Rox-041614

INITIAL DATA

Well Diameter: 2 in
Total Well Depth (btoc): 52.92 ft
Depth to Water (btoc): 43.79 ft
Depth to LNAPL/DNAPL (btoc): - ft
Depth to Top of Screen (btoc): 42.92 ft
Screen Length: 10 ft

Water Column Height (do not include LNAPL or DNAPL): 9.13 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) = - 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) = 48.35 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: 896* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2687 mL
Ambient PID/FID Reading: 0 ppm
Wellbore PID/FID Reading: 3.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Table with 11 columns: Purge Volume (mL), Time, Depth to Water (ft), Color, Odor, pH, Specific Cond. (mS/cm), ORP (mV), DO (mg/L), Turbidity (NTUs), Temp (°C). Rows show data for purging volumes from 0 to 4000 mL.

Start Time: 1430
Stop Time: 1442

Elapsed Time (min): 12
Average Purge Rate (mL/min): 400

Water Quality Meter ID & SN: TROLL 9500 - R24196
Date Calibrated: 4-16-14

SAMPLING DATA

Sample Date: 4-16-14
Sample Method: Monsoon Pump / Low Flow
VOA Vials, No Headspace: [checked] Initials: MM

Sample Time: 1450
Sample Flow Rate (mL/min): 400

Lab Analysis: VOC, SVOC
QA/QCSamples: -

COMMENTS:

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

Total Purge Volume: 4000 mL

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LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW

PROJECT NUMBER: 21562973.03002

FIELD PERSONNEL: M. Mansku, D. Mattingly

DATE: 4-16-14

WEATHER: Sunny 50°, breezy

MONITORING WELL ID: MW-8

SAMPLE ID: MW8-Rox-04/16/14

INITIAL DATA

Well Diameter: 2 in
Total Well Depth (btoc): 43.60 ft
Depth to Water (btoc): 34.73 ft
Depth to LNAPL/DNAPL (btoc): - ft
Depth to Top of Screen (btoc): 33.60 ft
Screen Length: 10 ft

Water Column Height (do not include LNAPL or DNAPL): 8.87 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) = 39.16 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: 0.3 ppm
Wellbore PID/FID Reading: 0.3 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

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	1324	34.73	clear	hydrocarbon	6.60	1.720	-53	0.49	21.56	18.12
800	1326	34.73			6.59	1.736	-57	0.30	24.37	18.38
1600	1328	34.73			6.58	1.746	-59	0.18	23.83	18.36
2400	1331	34.73			6.58	1.755	-61	0.12	24.36	18.57
3200	1333	34.73			6.57	1.762	-62	0.11	20.62	18.58
4000	1335	34.73			6.57	1.767	-63	0.09	18.73	18.71
4800	1337	34.73			6.56	1.771	-64	0.06	14.68	18.75
5600	1340	34.73			6.56	1.772	-63	0.03	10.93	18.83
6400	1342	34.73			6.56	1.779	-65	0.02	9.147	18.82

Start Time: 1324
Stop Time: 1342

Elapsed Time (min): 18
Average Purge Rate (mL/min): 400

Water Quality Meter ID & SN: TROLL 9500 - R241916
Date Calibrated: 4-16-14

SAMPLING DATA

Sample Date: 4-16-14
Sample Method: Monsoon Pump / Low Flow
VOA Vials, No Headspace Initials: MM

Sample Time: 1350
Sample Flow Rate (mL/min): 400

Lab Analysis: VOC, SVOC
QA/QCSamples: Dup

COMMENTS:

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

Total Purge Volume: 6400 mL

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LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW PROJECT NUMBER: 21562973.03002 FIELD PERSONNEL: M. Mansker, D. Mattingly

DATE: 4-7-14 WEATHER: Rainy, Cool, Cloudy

MONITORING WELL ID: MW-9 SAMPLE ID: MW9-BOX-040714

INITIAL DATA

Well Diameter: 2 in
 Total Well Depth (btoc): 56.78 ft
 Depth to Water (btoc): 44.99 ft
 Depth to LNAPL/DNAPL (btoc): — ft
 Depth to Top of Screen (btoc): 46.45 ft
 Screen Length: 10 ft

Water Column Height (do not include LNAPL or DNAPL): 11.79 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: — ppm
 Wellbore PID/FID Reading: 14.4 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

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	1057	44.99	clear	—	6.76	1280	-27	1.28	6.440	16.47
800	1100	44.99	clear	—	6.75	1281	-34	0.97	4.187	16.82
1600	1102	44.99	clear	—	6.75	1282	-39	0.71	2.346	16.98
2400	1104	44.99	clear	—	6.75	1279	-44	0.59	1.621	17.16
3200	1107	44.99	clear	—	6.75	1276	-44	0.50	1.316	17.21
4000	1109	44.99	clear	—	6.75	1273	-48	0.42	1.204	17.34

DNAPL

Start Time: 1057 Elapsed Time (min): 12 min Water Quality Meter ID & SN: TROLL 9500 - R224196
 Stop Time: 1109 Average Purge Rate (mL/min): 400 mL/min Date Calibrated: 4-7-14

SAMPLING DATA

Sample Date: 4/7/14 Sample Time: 1115 Lab Analysis: VOC, SVOC
 Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 mL/min QA/QC Samples: —
 VOA Vials, No Headspace: Initials: MM

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

Total Purge Volume: 4000 mL

2.04

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW

PROJECT NUMBER: 21562973.03002

FIELD PERSONNEL: M. Mansker, P. Mathingly

DATE: 4-7-14

WEATHER: 45° Cool, Cloudy, Raining

MONITORING WELL ID: MW-11

SAMPLE ID: MW11-Rox-040714

INITIAL DATA

Well Diameter: 2 in
Total Well Depth (btoc): 51.99 ft
Depth to Water (btoc): 42.70 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): 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) = 46.66 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) = 40.66 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 ppm
Wellbore PID/FID Reading: 0.1 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Table with 11 columns: Purge Volume (mL), Time, Depth to Water (ft), Color, Odor, pH, Specific Cond. (mS/cm), ORP (mV), DO (mg/L), Turbidity (NTUs), Temp (°C). Rows show data from 0 to 12000 mL purge volume.

Start Time: 1458
Stop Time: 1536

Elapsed Time (min): 38 min
Average Purge Rate (mL/min): 400 mL

Water Quality Meter ID & SN: TROLL 9500 - R24196
Date Calibrated: 4-7-14

SAMPLING DATA

Sample Date: 4-7-14
Sample Method: Monsoon Pump / Low Flow
VOA Vials, No Headspace [] Initials: NY

Sample Time: 1545
Sample Flow Rate (mL/min): 400 mL

Lab Analysis: VOC, SVOC
QA/QC Samples: -

COMMENTS:

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

Total Purge Volume: 12800 mL

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LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW PROJECT NUMBER: 21562973.03002 FIELD PERSONNEL: M. Mansker, D. Mattingly

DATE: 4-8-14 WEATHER: Sunny, breezy 60°

MONITORING WELL ID: MW-12 SAMPLE ID: MW12-Rox-040814

INITIAL DATA

Well Diameter: 2 in Water Column Height (do not include LNAPL or DNAPL): 9.1 ft btoc
Total Well Depth (btoc): 52.25 ft If Depth to Top of Screen is > Depth to Water, Place Pump at:
Depth to Water (btoc): 43.15 ft Total Well Depth - 0.5 (Screen Length + DNAPL Column Height) = 46.92 ft btoc
Depth to LNAPL/DNAPL (btoc): ft If Depth to Top of Screen is < Depth to Water, Place Pump at:
Depth to Top of Screen (btoc): 41.92 ft Total Well Depth - (0.5 X Water Column Height + DNAPL Column Height) = 46.92 ft btoc
Screen Length: 10 ft 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 ppm
Wellbore PID/FID Reading: 2.9 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump STABLE: +/- 0.2 +/- 3% +/- 20 +/- 0.2 mg/L or +/- 10% <10 or +/- 10% +/- 0.2 °C

Table with 11 columns: Purge Volume (mL), Time, Depth to Water (ft), Color, Odor, pH, Specific Cond. (mS/cm), ORP (mV), DO (mg/L), Turbidity (NTUs), Temp (°C). Contains 6 rows of data and a large handwritten 'N/A' across the bottom rows.

Start Time: 1454 Elapsed Time (min): 12 min Water Quality Meter ID & SN: TROLL 9500 - R274196
Stop Time: 1506 Average Purge Rate (mL/min): 400 Date Calibrated: 4-8-14

SAMPLING DATA

Sample Date: 4-8-14 Sample Time: 1510 Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QC Samples:
VOA Vials, No Headspace Initials: N/A

COMMENTS:

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

Total Purge Volume: 4000 mL

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LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW PROJECT NUMBER: 21562973.03002 FIELD PERSONNEL: M Manaker, D Mattingly

DATE: 4-11-14 WEATHER: Sunny, breezy 55°

MONITORING WELL ID: MW-13 SAMPLE ID: MW13-Rox-041114

INITIAL DATA
Well Diameter: 2 in
Total Well Depth (btoc): 35.82 ft
Depth to Water (btoc): 30.15 ft
Depth to LNAPL/DNAPL (btoc): - ft
Depth to Top of Screen (btoc): 25.57 ft
Screen Length: 10 ft
Water Column Height (do not include LNAPL or DNAPL): 5.67 ft btoc
Volume of Flow Through Cell: 801* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2402 mL
Ambient PID/FID Reading: 0 ppm
Wellbore PID/FID Reading: 2.0 ppm

PURGE DATA
Pump Type: Monsoon Stainless Steel Submersible Pump
STABLE: +/- 0.2 +/- 3% +/- 20 +/- 0.2 mg/L or +/- 10% <10 or +/- 10% +/- 0.2 °C

Table with 11 columns: Purge Volume (mL), Time, Depth to Water (ft), Color, Odor, pH, Specific Cond. (mS/cm), ORP (mV), DO (mg/L), Turbidity (NTUs), Temp (°C). Contains handwritten data for four purge events.

Start Time: 1010 Elapsed Time (min): 8 Water Quality Meter ID & SN: TROLL 9500 - R24196
Stop Time: 1018 Average Purge Rate (mL/min): 400 Date Calibrated: 4-11-14

SAMPLING DATA
Sample Date: 4-11-14 Sample Time: 1025 Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QC Samples: -

VOA Vials, No Headspace [checked] Initials: MM

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

Total Purge Volume: 2880 mL

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LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW PROJECT NUMBER: 21562973.03002 FIELD PERSONNEL: M. Mansker, D. Mattingly

DATE: 4-11-14 WEATHER: Sunny, breezy 65°

MONITORING WELL ID: MW-14 SAMPLE ID: MW14-Rox-041114

INITIAL DATA
Well Diameter: 2 in
Total Well Depth (btoc): 44.00 ft
Depth to Water (btoc): 34.30 ft
Depth to LNAPL/DNAPL (btoc): - ft
Screen Length: 10 ft
Water Column Height (do not include LNAPL or DNAPL): 9.7 ft btoc
Total Well Depth - 0.5 (Screen Length + DNAPL Column Height) = - ft btoc
Total Well Depth - (0.5 X Water Column Height + DNAPL Column Height) = 39.15 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: 42.3 ppm

PURGE DATA
Pump Type: Monsoon Stainless Steel Submersible Pump
STABLE: +/- 0.2 +/- 3% +/- 20 +/- 0.2 mg/L or +/- 10% <10 or +/- 10% +/- 0.2 °C

Table with 11 columns: Purge Volume (mL), Time, Depth to Water (ft), Color, Odor, pH, Specific Cond. (mS/cm), ORP (mV), DO (mg/L), Turbidity (NTUs), Temp (°C). Rows show data for purging volumes from 0 to 4800 mL.

Start Time: 1220 Elapsed Time (min): 13 Water Quality Meter ID & SN: TROLL 9500 - R24196
Stop Time: 1233 Average Purge Rate (mL/min): 400 Date Calibrated: 4-11-14

SAMPLING DATA
Sample Date: 4-11-14 Sample Time: 1240 Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QC Samples: MS/MSD
VOA Vials, No Headspace Initials: MY

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

Total Purge Volume: 4800 mL

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LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW

PROJECT NUMBER: 21562973.03002

FIELD PERSONNEL: M Mansker D Mattingly

DATE: 4-9-14

WEATHER: 45° Sunny

MONITORING WELL ID: MW-16

SAMPLE ID: MW16-ROX-040914

INITIAL DATA

Well Diameter: 2 in
Total Well Depth (btoc): 47.31 ft
Depth to Water (btoc): 44.63 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): 2.68 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) = 45.97 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = (45.31) ft btoc

Volume of Flow Through Cell : 890* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2670 mL
Ambient PID/FID Reading: 0 ppm
Wellbore PID/FID Reading: 0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Table with 11 columns: Purge Volume (mL), Time, Depth to Water (ft), Color, Odor, pH, Specific Cond. (mS/cm), ORP (mV), DO (mg/L), Turbidity (NTUs), Temp (°C). Rows contain data for purging steps from 0 to 13050 mL.

Start Time: 0914
Stop Time: 1031

Elapsed Time (min): 77 min
Average Purge Rate (mL/min): 300 mL/min

Water Quality Meter ID & SN: TROLL 9500 - R24196
Date Calibrated: 4/9/14

SAMPLING DATA

Sample Date: 4-9-14
Sample Method: Monsoon Pump / Low Flow
VOA Vials, No Headspace [] Initials: MM

Sample Time: 1035
Sample Flow Rate (mL/min): 300

Lab Analysis: VOC, SVOC
QA/QC Samples: -

COMMENTS:

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

Total Purge Volume: 20,880 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: 2014 Rox GW
 DATE: 4-9-14

PROJECT NUMBER: 2156297303002
 FIELD PERSONNEL: D. Mattingly, N. Mansker
 MONITORING WELL ID: MW-16

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp. (°C)
13920	1005	44.61	cloudy	-	6.48	1.439	-94	0.05	100.4	18.44
14790	1009	44.61	cloudy	-	6.48	1.459	-94	0.04	52.44	18.54
15660	1012	44.61	cloudy	-	6.48	1.460	-94	0.05	39.18	18.29
16530	1015	44.61	cloudy	-	6.48	1.468	-94	0.05	31.78	18.22
17400	1018	44.61	cloudy	-	6.48	1.466	-94	0.05	12.98	18.44
18270	1021	44.61	cloudy	-	6.48	1.464	-95	0.06	16.80	18.80
19140	1025	44.61	cloud	-	6.48	1.462	-95	0.06	10.61	19.28
20010	1028	44.61	clear	-	6.47	1.465	-95	0.04	6.54	19.25
20880	1031	44.61	clear	-	6.47	1.466	-95	0.04	4.794	19.14

[Handwritten signature]

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LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW PROJECT NUMBER: 21562973.03002 FIELD PERSONNEL: M. Minsker, D. Mattingly

DATE: 4-10-14 WEATHER: Sunny, breezy 75°

MONITORING WELL ID: MW-22 SAMPLE ID: MW22-Rox-041014

INITIAL DATA
Well Diameter: 2 in
Total Well Depth (btoc): 48.13 ft
Depth to Water (btoc): 43.15 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): 4.98 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth - 0.5 (Screen Length + DNAPL Column Height) = - ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth - (0.5 X Water Column Height + DNAPL Column Height) = 45.64 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 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

Table with 11 columns: Purge Volume (mL), Time, Depth to Water (ft), Color, Odor, pH, Specific Cond. (mS/cm), ORP (mV), DO (mg/L), Turbidity (NTUs), Temp (°C). Rows show data for purging volumes from 0 to 4800 mL.

Start Time: 15:36 Elapsed Time (min): 14 Water Quality Meter ID & SN: TROLL 9500 - R24196
Stop Time: 15:50 Average Purge Rate (mL/min): 400 Date Calibrated: 4-10-14

SAMPLING DATA
Sample Date: 4-10-14 Sample Time: 15:55 Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QC Samples: Dup
VOA Vials, No Headspace [checked] Initials: MM

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

Total Purge Volume: 4800 mL

245

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW

PROJECT NUMBER: 21562973.03002

FIELD PERSONNEL: M. Mansker, D Mattingly

DATE: 4-10-14

WEATHER: Sunny, breezy 60°

MONITORING WELL ID: ROST-3-MW

SAMPLE ID: ROST3MW-Rox-04/10/14

INITIAL DATA

Well Diameter: 2 in
Total Well Depth (btoc): 48.06 ft
Depth to Water (btoc): 42.80 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): 5.26 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth - 0.5 (Screen Length + DNAPL Column Height) = - ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth - (0.5 X Water Column Height + DNAPL Column Height) = 45.43 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: 0.4 ppm
Wellbore PID/FID Reading: 558.6 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Table with 11 columns: Purge Volume (mL), Time, Depth to Water (ft), Color, Odor, pH, Specific Cond. (mS/cm), ORP (mV), DO (mg/L), Turbidity (NTUs), Temp (°C). Contains 10 rows of data with handwritten entries.

Start Time: 1024
Stop Time: 1048

Elapsed Time (min): 24
Average Purge Rate (mL/min): 300

Water Quality Meter ID & SN: TROLL 9500 - R24196
Date Calibrated: 4-10-14

SAMPLING DATA

Sample Date: 4-10-14
Sample Method: Monsoon Pump / Low Flow
VOA Vials, No Headspace Initials: MM

Sample Time: 1055
Sample Flow Rate (mL/min): 300

Lab Analysis: VOC, SVOC
QA/QC Samples: EB

COMMENTS:

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

Total Purge Volume: 6600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW PROJECT NUMBER: 21562973.03002 FIELD PERSONNEL: D Mattingly, M. Mansker

DATE: 4/2/14 WEATHER: cloudy, light rain

MONITORING WELL ID: ROST-10-PZ SAMPLE ID: _____

INITIAL DATA

Well Diameter: 1 in
 Total Well Depth (btoc): 20.00 ft
 Depth to Water (btoc): 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: _____ ppm
 Wellbore PID/FID Reading: _____ ppm

PURGE DATA

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

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

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/QC Samples: _____
 VOA Vials, No Headspace Initials: _____

COMMENTS: Not sampled. Well dry

Total Purge Volume: _____ mL

2.05

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW

PROJECT NUMBER: 21562973.03002

FIELD PERSONNEL: M Mansker, D Mattingly

DATE: 4-9-14

WEATHER: Sunny 55; breezy

MONITORING WELL ID: P-54

SAMPLE ID: P54-Rox-0409H

INITIAL DATA

Well Diameter: 2 in
Total Well Depth (btoc): 63.00 ft
Depth to Water (btoc): 42.80 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): 20.2 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) = 50.5 MM 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) = 52.9 MM 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 ppm
Wellbore PID/FID Reading: 0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Table with 11 columns: Purge Volume (mL), Time, Depth to Water (ft), Color, Odor, pH, Specific Cond. (mS/cm), ORP (mV), DO (mg/L), Turbidity (NTUs), Temp (°C). Rows show data from 0 to 8000 mL purge volume.

Start Time: 1317
Stop Time: 1341

Elapsed Time (min): 24
Average Purge Rate (mL/min): 400

Water Quality Meter ID & SN: TROLL 9500 - R224196
Date Calibrated: 4-9-14

SAMPLING DATA

Sample Date: 4-9-14
Sample Method: Monsoon Pdmp / Low Flow
VOA Vials, No Headspace Initials: MM

Sample Time: 1345
Sample Flow Rate (mL/min): 400

Lab Analysis: VOC, SVOC
QA/QC Samples: -

COMMENTS:

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

Total Purge Volume: 8000 mL

2.15

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW PROJECT NUMBER: 21562973.03002 FIELD PERSONNEL: M. Mansker, D. Mattingly

DATE: 4-14-14 WEATHER: Cloudy, Drizzle, 40°

MONITORING WELL ID: P-56 SAMPLE ID: P56-Rox-041414

INITIAL DATA

Well Diameter: 2 in Water Column Height (do not include LNAPL or DNAPL): 18.27 ft btoc
Total Well Depth (btoc): 65.82 ft If Depth to Top of Screen is > Depth to Water, Place Pump at:
Depth to Water (btoc): 47.55 ft Total Well Depth - 0.5 (Screen Length + DNAPL Column Height) = - ft btoc
Depth to LNAPL/DNAPL (btoc): - ft If Depth to Top of Screen is < Depth to Water, Place Pump at:
Depth to Top of Screen (btoc): 40.82 ft Total Well Depth - (0.5 X Water Column Height + DNAPL Column Height) = 56.68 ft btoc
Screen Length: 25 ft 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 ppm
Wellbore PID/FID Reading: 0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump STABLE: +/- 0.2 +/- 3% +/- 20 +/- 0.2 mg/L or +/- 10% <10 or +/- 10% +/- 0.2 °C

Table with 11 columns: Purge Volume (mL), Time, Depth to Water (ft), Color, Odor, pH, Specific Cond. (mS/cm), ORP (mV), DO (mg/L), Turbidity (NTUs), Temp (°C). Contains 5 rows of data with handwritten values.

Start Time: 1610 Elapsed Time (min): 10 Water Quality Meter ID & SN: TROLL 9500 - 224196
Stop Time: 1620 Average Purge Rate (mL/min): 400 Date Calibrated: 4-14-14

SAMPLING DATA

Sample Date: 4-14-14 Sample Time: 1625 Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QC Samples: -
VOA Vials, No Headspace [checked] Initials: [signature]

COMMENTS:

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

Total Purge Volume: 3140.3 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW PROJECT NUMBER: 21562973.03002 FIELD PERSONNEL: D Mattingly, K Rathnow

DATE: 4/15/14 WEATHER: sunny, 45°F

MONITORING WELL ID: P-58 SAMPLE ID: P58-ROX-041514

INITIAL DATA
 Well Diameter: 2 in
 Total Well Depth (btoc): 65.21 ft
 Depth to Water (btoc): 45.66 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): 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) = 55.44 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: 0.9 ppm
 Wellbore PID/FID Reading: 0.9 ppm

PURGE DATA
 Pump Type: Monsoon Stainless Steel Submersible Pump
 STABLE: ±0.2 ±3% ±/-20 +/-0.2 mg/L or +/-10% <10 or +/-10% +/-0.2 °C
 (over 3 readings)

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	1424	45.66	colorless	HC	6.58	1.174	-52	1.03	22.31	18.98
800	1426	45.66	colorless	HC	6.55	1.182	-57	0.56	13.60	19.33
1600	1428	45.66	colorless	HC	6.54	1.185	-61	0.28	11.86	19.78
2400	1431	45.66	colorless	HC	6.54	1.186	-64	0.15	11.59	19.78
3000	1433	45.66	colorless	HC	6.53	1.187	-65	0.11	11.10	19.72
<u>DN</u>										

Start Time: 1424 Elapsed Time (min): 9 Water Quality Meter ID & SN: TROLL 9500 -- R24196
 Stop Time: 1433 Average Purge Rate (mL/min): 400 Date Calibrated: 4/15/14

SAMPLING DATA
 Sample Date: 4/15/14 Sample Time: 1440 Lab Analysis: VOC, SVOC
 Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QC Samples: none
 VOA Vials, No Headspace Initials: DM

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

Total Purge Volume: 3000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW

PROJECT NUMBER: 21562973.03002

FIELD PERSONNEL: D. Mattingly, L. Rathnow

DATE: 4/15/14

WEATHER: Sunny, 52°F

MONITORING WELL ID: P-59

SAMPLE ID: P59-ROX-041514

INITIAL DATA

Well Diameter: 2 in
 Total Well Depth (btoc): 72.91 ft
 Depth to Water (btoc): 48.67 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): 24.24 ft btoc
 If Depth to Top of Screen is > Depth to Water, Place Pump at:
 Total Well Depth - 0.5 (Screen Length + DNAPL Column Height) = — 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) = 60.79 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: 8.8 ppm
 Wellbore PID/FID Reading: 8.8 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

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	1245	48.67	colorless	HC	6.62	1.549	-79	1.34	15.45	18.14
800	1247	48.67	colorless	HC	6.62	1.538	-85	0.59	17.45	18.78
2000	1250	48.67	colorless	HC	6.61	1.529	-89	0.37	18.91	19.05
3200	1253	48.67	colorless	HC	6.61	1.520	-91	0.16	18.93	19.10
4500	1255	48.67	colorless	HC	6.61	1.514	-92	0.18	17.69	18.96
<u>DM</u>										

Start Time: 1245
 Stop Time: 1256

Elapsed Time (min): 11
 Average Purge Rate (mL/min): 400

Water Quality Meter ID & SN: TROLL 9500 - R2496
 Date Calibrated: 4/15/14

SAMPLING DATA

Sample Date: 4/15/14
 Sample Method: Monsoon Pump / Low Flow
 VOA Vials, No Headspace Initials: DM

Sample Time: 1300
 Sample Flow Rate (mL/min): 400

Lab Analysis: VOC, SVOC
 QA/QCSamples: none

COMMENTS:

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

Total Purge Volume: 4000 mL

2.06

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW

PROJECT NUMBER: 21562973.03002

FIELD PERSONNEL: M. Mansker, P. Mattingly

DATE: 4-11-14

WEATHER: Sunny 65° breezy

MONITORING WELL ID: P-66

SAMPLE ID: P66-Rox-04/11/14

INITIAL DATA

Well Diameter: 2 in
Total Well Depth (btoc): 59.72 ft
Depth to Water (btoc): 37.10 ft
Depth to LNAPL/DNAPL (btoc): - ft
Depth to Top of Screen (btoc): 34.72 ft
Screen Length: 25 ft

Water Column Height (do not include LNAPL or DNAPL): 22.62 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth - 0.5 (Screen Length + DNAPL Column Height) = - ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth - (0.5 X Water Column Height + DNAPL Column Height) = 48.41 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 ppm
Wellbore PID/FID Reading: 0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Table with 11 columns: Purge Volume (mL), Time, Depth to Water (ft), Color, Odor, pH, Specific Cond. (mS/cm), ORP (mV), DO (mg/L), Turbidity (NTUs), Temp (°C). Rows show data from 0 to 7200 mL purge volume.

Start Time: 1349
Stop Time: 1411

Elapsed Time (min): 22
Average Purge Rate (mL/min): 400

Water Quality Meter ID & SN: TROLL 9500 - R24196
Date Calibrated: 4-11-14

SAMPLING DATA

Sample Date: 4-11-14
Sample Method: Monsoon Pump / Low Flow
VOA Vials, No Headspace [checked] Initials: MM

Sample Time: 1420
Sample Flow Rate (mL/min): 400

Lab Analysis: VOC, SVOC
QA/QCSamples: -

COMMENTS:

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

Total Purge Volume: 7200 mL

2.15

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW

PROJECT NUMBER: 21562973.03002

FIELD PERSONNEL: M. Mansker D. Mattingly

DATE: 4-15-14

WEATHER: Sunny breezy 35°

MONITORING WELL ID: P-74

SAMPLE ID: P74-Rox-041514

INITIAL DATA

Well Diameter: 4 in
Total Well Depth (btoc): 69.43 ft
Depth to Water (btoc): 44.74 ft
Depth to LNAPL/DNAPL (btoc): 2 ft
Depth to Top of Screen (btoc): 44.43 ft
Screen Length: 25 ft

Water Column Height (do not include LNAPL or DNAPL): 24.69 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) = 1 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) = 57.08 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = 1 ft btoc

Volume of Flow Through Cell: 968* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2904 mL
Ambient PID/FID Reading: 0 ppm
Wellbore PID/FID Reading: 0.2 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Table with 11 columns: Purge Volume (mL), Time, Depth to Water (ft), Color, Odor, pH, Specific Cond. (mS/cm), ORP (mV), DO (mg/L), Turbidity (NTUs), Temp (°C). Includes handwritten data points and a graph showing depth to water over time.

Start Time: 1034
Stop Time: 1045

Elapsed Time (min): 11
Average Purge Rate (mL/min): 400

Water Quality Meter ID & SN: TROLL 9500 - R24196
Date Calibrated: 4-15-14

SAMPLING DATA

Sample Date: 4-15-14
Sample Method: Monsoon Pump / Low Flow
VOA Vials, No Headspace [checked] Initials: MM

Sample Time: 1055
Sample Flow Rate (mL/min): 400

Lab Analysis: VOC, SVOC
QA/QC Samples: EB @ 10:00

COMMENTS:

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

Total Purge Volume: 3600 mL

2-20

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW

PROJECT NUMBER: 21562973.03002

FIELD PERSONNEL: D. Mattingly, M. Monister

DATE: 4-15-14

WEATHER: Sunny 32°

MONITORING WELL ID: T-12

SAMPLE ID: T12-Rox-041514

INITIAL DATA

Well Diameter: 6 in
Total Well Depth (btoc): 72.46 ft
Depth to Water (btoc): 46.73 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): 25.73 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at: -
Total Well Depth - 0.5 (Screen Length + DNAPL Column Height) = - 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) = 59.59 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = - ft btoc

Volume of Flow Through Cell : 990* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2971 mL
Ambient PID/FID Reading: - ppm
Wellbore PID/FID Reading: 3.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Table with 11 columns: Purge Volume (mL), Time, Depth to Water (ft), Color, Odor, pH, Specific Cond. (mS/cm), ORP (mV), DO (mg/L), Turbidity (NTUs), Temp (°C). Contains 5 rows of data with handwritten values.

Start Time: 0921
Stop Time: 0931

Elapsed Time (min): 10
Average Purge Rate (mL/min): 400

Water Quality Meter ID & SN: TROLL 9500 - R24196
Date Calibrated: 4-15-14

SAMPLING DATA

Sample Date: 4-15-14
Sample Method: Monsoon Pump / Low Flow
VOA Vials, No Headspace [checked] Initials: MM

Sample Time: 0940
Sample Flow Rate (mL/min): 400

Lab Analysis: VOC, SVOC
QA/QC Samples: -

COMMENTS:

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

Total Purge Volume: 3680 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW PROJECT NUMBER: 21562973.03002 FIELD PERSONNEL: DMattungly, D Haxel

DATE: 4/17/14 WEATHER: sunny, 50°F

MONITORING WELL ID: P-93A SAMPLE ID: P93A-ROX-041714

INITIAL DATA
 Well Diameter: 2 in
 Total Well Depth (btoc): 63.17 ft
 Depth to Water (btoc): 47.56 ft
 Depth to LNAPL/DNAPL (btoc): ft
 Depth to Top of Screen (btoc): 48.17 ft
 Screen Length): 15 ft
 Water Column Height (do not include LNAPL or DNAPL): 15.61 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) = 55.67 ft btoc
 If Depth to Top of Screen is < Depth to Water, Place Pump at:
 Total Well Depth - (0.5 X Water Column Height + DNAPL Column Height) = ft btoc
 If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ft btoc
 Volume of Flow Through Cell : 2865* mL
 Minimum Purge Volume = (3 x Flow Cell Volume): 8596 mL
 Ambient PID/FID Reading: 0.0 ppm
 Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA
 Pump Type: Dedicated Well Wizard
 STABLE: +-0.2 +-3% +-20 +/-0.2 mg/L <10 or +/-0.2 °C
 (over 3 readings) or +/-10% +/-10%

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	1103	47.56	colorless	HC	6.82	1.986	-51	3.310	16.66	20.70
2000	1108	47.56	colorless	HC	7.06	2.041	-64	4.816	19.32	20.75
4400	1114	47.56	colorless	HC	7.08	2.070	-64	5.01	23.13	20.73
6400	1119	47.56	colorless	HC	7.06	2.088	-62	5.06	23.00	20.71
8000	1123	47.56	colorless	HC	7.05	2.098	-61	4.91	18.98	20.73
10000	1128	47.56	colorless	HC	7.04	2.103	-61	5.11	17.18	20.71
12000	1133	47.56	colorless	HC	7.03	2.105	-60	5.07	16.46	20.75
14000	1138	47.56	colorless	HC	7.02	2.104	-60	4.97	18.21	20.74
DMM										

Start Time: 1103 Elapsed Time (min): 35 Water Quality Meter ID & SN: TROLL 9500 - R241916
 Stop Time: 1138 Average Purge Rate (mL/min): 400 Date Calibrated: 4/17/14

SAMPLING DATA
 Sample Date: 4/17/14 Sample Time: 1145 Lab Analysis: VOC, SVOC
 Sample Method: Bladder Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples:
 VOA Vials, No Headspace Initials: DMM

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

Total Purge Volume: 14000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW

PROJECT NUMBER: 21562973.03002

FIELD PERSONNEL: D Mattingly, D Avel

DATE: 4/17/14

WEATHER: cloudy, 65°F

MONITORING WELL ID: P-93B

SAMPLE ID: P93B-ROX-041714 + P93B-ROX-041714-DUP

INITIAL DATA

Well Diameter: 2 in
 Total Well Depth (btoc): 76.60 ft
 Depth to Water (btoc): 47.60 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): 29.00 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: 0.0 ppm
 Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Dedicated Well Wizard

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

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	1328	47.60	colorless	HC	7.05	1.424	-111	3.16	5.467	19.19
2400	1334	47.60	colorless	HC	6.97	1.507	-77	3.71	119.5	19.04
4800	1340	47.60	colorless	HC	6.95	1.532	-78	3.52	6.024	19.06
7200	1347	47.60	colorless	HC	6.93	1.537	-78	2.92	2.753	19.04
9600	1355	47.60	colorless	HC	6.93	1.538	-78	3.34	6.466	19.07
12000	1359	47.60	colorless	HC	6.93	1.549	-78	2.90	2.670	19.00
14400	1405	47.60	colorless	HC	6.93	1.525	-78	2.23	5.503	18.94
16800	1411	47.60	colorless	HC	6.93	1.516	-77	2.04	5.121	18.91
19200	1416	47.60	colorless	HC	6.94	1.452	-77	2.73	1.970	18.98
21600	1422	47.60	colorless	HC	6.93	1.468	-76	2.51	30.65	19.17
24000	1428	47.60	colorless	HC	6.93	1.529	-77	3.04	7.903	19.16
26400	1434	47.58	colorless	HC	6.93	1.491	-77	2.42	4.495	19.14
28800	1440	47.58	colorless	HC	6.93	1.496	-77	2.70	1.911	19.12
31200	1446	47.58	colorless	HC	6.93	1.420	-76	3.19	1.822	19.07
33600	1453	47.58	colorless	HC	6.93	1.449	-76	2.38	4.725	18.95
36000	1458	47.58	colorless	HC	6.93	1.454	-76	3.47	3.430	18.96

Start Time: 1328
 Stop Time: 1458

Elapsed Time (min): 90
 Average Purge Rate (mL/min): 400

Water Quality Meter ID & SN: TROLL 9500 - R24196
 Date Calibrated: 4/17/14

SAMPLING DATA

Sample Date: 4/17/14
 Sample Method: Bladder Pump / Low Flow
 VOA Vials, No Headspace Initials: DM

Sample Time: 1505
 Sample Flow Rate (mL/min): 400

Lab Analysis: VOC, SVOC
 QA/QC Samples: DUP

COMMENTS:

* Flow through cell volume calculated by rugged reader, used with Troll 9500
After 1 1/2 hours, the only parameter that did not stabilize was PSD - due to the well wizard pump in the well.
 Total Purge Volume: 36800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW PROJECT NUMBER: 215629-003002 FIELD PERSONNEL: D Mattingly, D Haxel

DATE: 4/17/14 WEATHER: Sunny, 50°F

MONITORING WELL ID: P-93C SAMPLE ID: P93C-ROX-041714

INITIAL DATA
 Well Diameter: 2 in
 Total Well Depth (btoc): 96.26 ft
 Depth to Water (btoc): 47.50 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): 48.76 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: 0.3 ppm

PURGE DATA
 Pump Type: Dedicated Well Wizard

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

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	0948	47.50	Colorless	HC	6.88	1.300	-52	1.43	13.60	18.15
2800	0955	47.50	Colorless	HC	6.88	1.311	-55	1.26	21.21	18.11
4000	1003	47.50	Colorless	HC	6.88	1.313	-56	1.10	12.50	18.15
6000	1010	47.50	Colorless	HC	6.89	1.312	-57	1.56	21.74	18.15
11000	1017	47.50	Colorless	HC	6.89	1.310	-58	0.86	8.478	18.23
14800	1025	47.50	Colorless	HC	6.90	1.315	-58	0.83	0.2901	18.24
16800	1032	47.50	Colorless	HC	6.89	1.308	-57	0.95	7.810	18.31
DN										

Start Time: 0948 Elapsed Time (min): 44 Water Quality Meter ID & SN: TROLL 9500 - R24196
 Stop Time: 1032 Average Purge Rate (mL/min): 400 Date Calibrated: 4/17/14

SAMPLING DATA
 Sample Date: 4/17/14 Sample Time: 1035 Lab Analysis: VOC, SVOC
 Sample Method: Bladder Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QC Samples: _____
 VOA Vials, No Headspace Initials: DM

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

Total Purge Volume: 16,800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 2Q14 GW PROJECT NUMBER: 21562973.03002 FIELD PERSONNEL: K. Hurst, C. Williams

DATE: 4-21-14 WEATHER: cloudy ~~light rain~~ drizzle

MONITORING WELL ID: P-114 SAMPLE ID: P114-Rox-042114

INITIAL DATA
 Well Diameter: 2 in
 Total Well Depth (btoc): 52.67 ft
 Depth to Water (btoc): 32.22 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): 20.45 ft btoc
 If Depth to Top of Screen is > Depth to Water, Place Pump at:
 Total Well Depth - 0.5 (Screen Length + DNAPL Column Height) = 32.44 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: 0.1 ppm
 Wellbore PID/FID Reading: 0.1 ppm

PURGE DATA
 Pump Type: Dedicated Well Wizard
 STABLE: +/-0.2 (over 3 readings) +/-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)
0-0	956	32.50	cloudy	None	7.76	1124	-92	1.83	20.91	20.03
1500	1001	↓	↓	↓	7.58	1150	-100	1.59	51.88	20.09
3000	1006	↓	↓	↓	7.51	1177	-100	1.61	32.98	20.14
4500	1011	32.44	↓	↓	7.46	1199	-97	1.93	28.11	20.14
6000	1016	↓	↓	↓	7.43	1217	-95	1.78	19.26	20.15
7500	1021	↓	clear	↓	7.40	1232	-93	1.81	14.10	20.13
9000	1024	↓	↓	↓	7.36	1245	-91	1.85	18.06	20.07

Start Time: 956 Elapsed Time (min): 30 Water Quality Meter ID & SN: TROLL 9500 -
 Stop Time: 1024 Average Purge Rate (mL/min): 300 Date Calibrated: 4/21/14

SAMPLING DATA
 Sample Date: 4/21/14 Sample Time: 1035 Lab Analysis: VOC, SVOC
 Sample Method: Bladder Pump / Low Flow Sample Flow Rate (mL/min): 300 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: 9000 mL

Roxana Groundwater Quarterly – 2nd Quarter 2014 Data Review

Laboratory SDG: MC29574

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 5/13/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2013

Sample Identification	Sample Identification
MW1-ROX-040714	MW9-ROX-040714
MW10-ROX-040714	MW11-ROX-040714-EB
MW11-ROX-040714	TB-ROX-040714-HCL
TB-ROX-040714-ST	

1.0 Data Package Completeness

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

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated sample MW1-ROX-040714 was re-extracted outside of the extraction holding time criteria. SVOCs and PAHs were detected in the method blank and equipment blank. VOC and SVOC LCS recoveries were outside evaluation criteria. SVOC surrogate recoveries for 2-fluorophenol, phenol-d₅, and 2,4,6-tribromophenol were outside evaluation criteria in MW1-ROX-040714-Run#1. VOC and SVOC MS/MSD recoveries and MS/MSD RPDs were outside evaluation criteria in sample MW1-ROX-040714. These issues are addressed further in the appropriate sections below. Additionally, continuing calibration verification for acrolein and 2-chloroethyl vinyl ether exceeded 40 percent difference (%D).

The cooler receipt form indicated that two of two coolers were received by the laboratory at temperatures of 0.4°C and 1.4°C, which are outside the 4°C ± 2°C 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, sample MW1-ROX-040714 was re-extracted 4 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. 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
MW1-ROX-040714	SVOCs	Benzoic acid	J
MW1-ROX-040714	SVOCs	2-Chlorophenol	UJ
MW1-ROX-040714	SVOCs	4-Chloro-3-methyl phenol	UJ
MW1-ROX-040714	SVOCs	2,4-Dichlorophenol	UJ

Sample ID	Parameter	Analyte	Qualification
MW1-ROX-040714	SVOCs	2,4-Dimethylphenol	UJ
MW1-ROX-040714	SVOCs	2,4-Dinitrophenol	UJ
MW1-ROX-040714	SVOCs	4,6-Dinitro-o-cresol	UJ
MW1-ROX-040714	SVOCs	2-Methylphenol	UJ
MW1-ROX-040714	SVOCs	3&4-Methylphenol	UJ
MW1-ROX-040714	SVOCs	2-Nitrophenol	UJ
MW1-ROX-040714	SVOCs	4-Nitrophenol	UJ
MW1-ROX-040714	SVOCs	Pentachlorophenol	UJ
MW1-ROX-040714	SVOCs	Phenol	UJ
MW1-ROX-040714	SVOCs	2,4,5-Trichlorophenol	UJ
MW1-ROX-040714	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
MW11-ROX-040714-EB	SVOCs	Di-n-butyl phthalate	0.64 µg/L
MW11-ROX-040714-EB	SVOCs	bis(2-Ethylhexyl)phthalate	0.61 µg/L
MW11-ROX-040714-EB	PAHs	Phenanthrene	0.021 µg/L
OP37522-MB	SVOCs	Di-n-butyl phthalate	0.35 µg/L
OP37571-MB	SVOCs	Di-n-butyl phthalate	0.67 µg/L
OP37571-MB	SVOCs	bis(2-Ethylhexyl)phthalate	6.2 µg/L
OP37523-MB	PAHs	Phenanthrene	0.021 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. MW11-ROX-040714-EB is a quality control sample and is not qualified.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
MW1-ROX-040714	SVOCs	Di-n-butyl phthalate	-	U
MW9-ROX-040714	SVOCs	Di-n-butyl phthalate	-	U
MW9-ROX-040714	SVOCs	bis(2-Ethylhexyl)phthalate	-	U
MW10-ROX-040714	SVOCs	Di-n-butyl phthalate	-	U
MW10-ROX-040714	SVOCs	bis(2-Ethylhexyl)phthalate	-	U
MW11-ROX-040714	SVOCs	Di-n-butyl phthalate	-	U
MW11-ROX-040714	SVOCs	bis(2-Ethylhexyl)phthalate	5.6 µg/L	U
MW1-ROX-040714	PAHs	Phenanthrene	-	U
MW9-ROX-040714	PAHs	Phenanthrene	-	U
MW10-ROX-040714	PAHs	Phenanthrene	-	U
MW11-ROX-040714	PAHs	Phenanthrene	-	U

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV1111-BS	VOCs	Acrolein	148	70-130
MSV1111-BS	VOCs	2-Chloroethyl vinyl ether	186	70-130
OP37522-BS	SVOCs	bis(2-Chloroisopropyl)ether	145	40-140
OP37522-BS	SVOCs	Di-n-octyl phthalate	145	40-140
OP37571-BS	SVOCs	4-Nitrophenol	14	30-130
OP37571-BS	SVOCs	Benzyl alcohol	31	40-140
OP37571-BS	SVOCs	Pyridine	36	40-140
OP37657-BS	SVOCs	Benzoic acid	22	30-130

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Benzoic acid in sample MW1-ROX-040714 was previously qualified in Section 3.0 of this Review due to holding time criteria; no further qualification of benzoic acid was required.

Sample ID	Parameter	Analyte	Qualification
MW9-ROX-040714	SVOCs	4-Nitrophenol	UJ
MW9-ROX-040714	SVOCs	Benzyl alcohol	UJ
MW9-ROX-040714	SVOCs	Pyridine	UJ
MW10-ROX-040714	SVOCs	4-Nitrophenol	UJ
MW10-ROX-040714	SVOCs	Benzyl alcohol	UJ
MW10-ROX-040714	SVOCs	Pyridine	UJ
MW11-ROX-040714	SVOCs	4-Nitrophenol	UJ
MW11-ROX-040714	SVOCs	Benzyl alcohol	UJ
MW11-ROX-040714	SVOCs	Pyridine	UJ

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW1-ROX-040714-Run#1	SVOCs	2-Fluorophenol	1	15-110
MW1-ROX-040714-Run#1	SVOCs	Phenol-d ₅	1	15-110
MW1-ROX-040714-Run#1	SVOCs	2,4,6-Tribromophenol	3	15-110
MW1-ROX-040714-MS	SVOCs	2-Fluorophenol	2	15-110
MW1-ROX-040714-MS	SVOCs	Phenol-d ₅	1	15-110
MW1-ROX-040714-MS	SVOCs	2,4,6-Tribromophenol	7	15-110
MW1-ROX-040714-MSD	SVOCs	2-Fluorophenol	2	15-110
MW1-ROX-040714-MSD	SVOCs	Phenol-d ₅	1	15-110
MW1-ROX-040714-MSD	SVOCs	2,4,6-Tribromophenol	8	15-110

Analytes associated with surrogate recovery outside evaluation criteria in MW1-ROX-040714-Run#1 were reported from Run#2. MW1-ROX-040714-MS/MSD are quality control samples and are 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, sample MW1-ROX-040714 was spiked and analyzed for VOCs, SVOCs, and PAHs.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
MW1-ROX-040714	VOCs	Acetone	73/57	26	70-130/30
MW1-ROX-040714	VOCs	Acrolein	137/135	1	70-130/30
MW1-ROX-040714	VOCs	2-Chloroethyl vinyl ether	0/0	NA	70-130/30
MW1-ROX-040714	VOCs	1,4-Dioxane	78/62	23	70-130/30
MW1-ROX-040714	VOCs	Naphthalene	63/95	40	70-130/30
MW1-ROX-040714	VOCs	1,2,3-Trichlorobenzene	69/97	33	70-130/30
MW1-ROX-040714	SVOCs	2-Chlorophenol	1/1	20	30-130/20
MW1-ROX-040714	SVOCs	4-Chloro-3-methyl phenol	4/4	14	30-130/20
MW1-ROX-040714	SVOCs	2,4-Dichlorophenol	3/3	19	30-130/20
MW1-ROX-040714	SVOCs	2,4-Dimethylphenol	22/23	2	30-130/20
MW1-ROX-040714	SVOCs	2-Methylphenol	6/6	0	30-130/20
MW1-ROX-040714	SVOCs	3&4-Methylphenol	3/4	3	30-130/20
MW1-ROX-040714	SVOCs	Pentachlorophenol	17/20	14	30-130/20
MW1-ROX-040714	SVOCs	Phenol	1/1	6	30-130/20
MW1-ROX-040714	SVOCs	2,4,5-Trichlorophenol	7/10	27	30-130/20
MW1-ROX-040714	SVOCs	2,4,6-Trichlorophenol	6/7	9	30-130/20
MW1-ROX-040714	SVOCs	Aniline	29/29	1	40-140/20
MW1-ROX-040714	SVOCs	2,6-Dinitrotoluene	91/69	30	40-140/20
MW1-ROX-040714	SVOCs	3,3'-Dichlorobenzidine	35/33	10	40-140/20
MW1-ROX-040714	SVOCs	Di-n-octyl phthalate	128/80	49	40-140/20
MW1-ROX-040714	SVOCs	Dimethyl phthalate	77/59	30	40-140/20
MW1-ROX-040714	SVOCs	2-Nitroaniline	90/74	22	40-140/20
MW1-ROX-040714	SVOCs	3-Nitroaniline	76/60	28	40-140/20
MW1-ROX-040714	SVOCs	Pyridine	31/35	7	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 analytes listed and qualified as appropriate in Section 5.0 of this data review. No further qualification of data was

required.

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

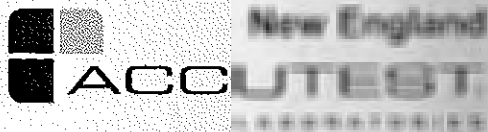
For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; samples analyzed did not require dilution.

12.0 Additional Qualifications

Were additional qualifications applied?

No



Technical Report for

Shell Oil

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana,

Accutest Job Number: MC29574

Sampling Date: 04/07/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: 99



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
5/13/2014 MM*
Reza Fand
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 (I1791) 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: MC29574

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
MC29574-1	04/07/14	09:50	MMDM	04/08/14	AQ Ground Water	MW1-ROX-040714 ✓
MC29574-1D	04/07/14	09:50	MMDM	04/08/14	AQ Water Dup/MSD	MW1-ROX-040714 ✓
MC29574-1S	04/07/14	09:50	MMDM	04/08/14	AQ Water Matrix Spike	MW1-ROX-040714 ✓
MC29574-2	04/07/14	11:15	MMDM	04/08/14	AQ Ground Water	MW9-ROX-040714 ✓
MC29574-3	04/07/14	14:05	MMDM	04/08/14	AQ Ground Water	MW10-ROX-040714 ✓
MC29574-4	04/07/14	14:20	MMDM	04/08/14	AQ Equipment Blank	MW11-ROX-040714-EB ✓
MC29574-5	04/07/14	15:45	MMDM	04/08/14	AQ Ground Water	MW11-ROX-040714 ✓
MC29574-6	04/07/14	00:00	MMDM	04/08/14	AQ Trip Blank Water	TB-ROX-040714-HCL ✓
MC29574-7	04/07/14	00:00	MMDM	04/08/14	AQ Trip Blank Water	TB-ROX-040714-ST ✓



SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Shell Oil

Job No MC29574

Site: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Centra

Report Date 4/22/2014 4:28:20 PM

5 Sample(s) and 2 Trip Blank(s) were collected on 04/07/2014 and were received at Accutest on 04/08/2014 properly preserved, at 0.4 Deg. C and intact. These Samples received an Accutest job number of MC29574. 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: MSV1111

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29574-1MS, MC29574-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- 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 1,2,3-Trichlorobenzene, 2-Chloroethyl vinyl ether, Naphthalene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 1,4-Dioxane, 2-Chloroethyl vinyl ether, Acetone are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 1,2,3-Trichlorobenzene, Naphthalene are outside control limits for sample MC29574-1MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- Continuing calibration check standard MSV1111-CC1058 for acrolein, 2-chloroethyl vinyl ether exceed 40% difference (response bias high). Associated samples are non-detect for these compounds.
- MC29574-1MS/MSD for Acrolein: Outside control limits. Associated samples are non-detect for this compound.

Extractables by GCMS By Method SW846 8270D

2

Matrix: AQ

Batch ID: OP37522

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29574-1MS, MC29574-1MSD were used as the QC samples indicated.
- Sample(s) MC29574-1, MC29574-4 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- Blank Spike Recovery(s) for bis(2-Chloroisopropyl)ether, Di-n-octyl phthalate are outside control limits. Blank Spike meets program technical requirements.
- OP37522-MS/MSD Recovery(s) for 2,4,5-Trichlorophenol, 2,4,6-Trichlorophenol, 2,4-Dichlorophenol, 2,4-Dimethylphenol, 2-Chlorophenol, 2-Methylphenol, 3&4-Methylphenol, 3,3'-Dichlorobenzidine, 4-Chloro-3-methyl phenol, Aniline, Pentachlorophenol, Phenol, Pyridine are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2,4,5-Trichlorophenol, 2,6-Dinitrotoluene, 2-Nitroaniline, 3-Nitroaniline, Dimethyl phthalate are outside control limits for sample OP37522-MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- MC29574-1 for 2-Fluorophenol, Phenol-d5, 2,4,6-Tribromophenol: Outside control limits. Sample re-extracted/reanalyzed.
- RPD of OP37522-MSD for Di-n-octyl phthalate: Outside control limits. Blank Spike meets program technical requirements.
- OP37522-MS/MSD for 2-Fluorophenol, Phenol-d5, 2,4,6-Tribromophenol: Outside control limits due to possible matrix interference.
- Calibration check standard MSR 1404-ECC 1399 not associated with this job.

Matrix: AQ

Batch ID: OP37571

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29574-2, MC29574-3, MC29574-5 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- Blank Spike Recovery(s) for 4-Nitrophenol, Benzyl Alcohol, Pyridine are outside control limits. Blank Spike meets program technical requirements.
- MC29300-23MS, MC29300-23MSD were used as the QC samples indicated.
- OP37571-MS/MSD for Phenol: Outside control limits due to possible matrix interference. Refer to Blank Spike.
- OP37571-MS/MSD for 4-Nitrophenol, Benzyl Alcohol, Pyridine: Outside control limits. Blank Spike meets program technical requirements.

Matrix: AQ

Batch ID: OP37657

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29400-19MS, MC29400-19MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- OP37657-BS/MS/MSD Recovery(s) for Benzoic Acid are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Duplicate Recovery(s) for Phenol are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- MC29574-1: Sample re-extracted beyond recommended holding time.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix: AQ

Batch ID: OP37523

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29574-1MS, MC29574-1MSD were used as the QC samples indicated.
- Sample(s) MC29574-1, MC29574-2, MC29574-3, MC29574-4, MC29574-5 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: OP37559

2

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29574-IMS, MC29574-IMSD 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(MC29574).

Tuesday, April 22, 2014

Page 3 of 3

Summary of Hits

Job Number: MC29574
 Account: Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Collected: 04/07/14



Lab Sample ID	Client Sample ID	Result/ Analyte	Qual	RL	MDL	Units	Method
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MC29574-1 MW1-ROX-040714

Benzene	0.66	0.50	0.32	ug/l	SW846 8260C
Benzoic Acid ^a	3.0 J	11	2.9	ug/l	SW846 8270D
Di-n-butyl phthalate	0.29 JB	5.4	0.19	ug/l	SW846 8270D
Phenanthrene	0.023 JB	0.054	0.014	ug/l	SW846 8270D BY SIM

MC29574-2 MW9-ROX-040714

Benzene	4.4	0.50	0.32	ug/l	SW846 8260C
Di-n-butyl phthalate	0.62 JB	5.6	0.19	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate	0.54 JB	2.2	0.37	ug/l	SW846 8270D
Benzo(a)anthracene	0.024 J	0.056	0.022	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene	0.10 J	0.22	0.082	ug/l	SW846 8270D BY SIM
Phenanthrene	0.056 B	0.056	0.014	ug/l	SW846 8270D BY SIM

MC29574-3 MW10-ROX-040714

Acetone	68.4	10	2.4	ug/l	SW846 8260C
Benzene	1.8	0.50	0.32	ug/l	SW846 8260C
Chloromethane	3.2	2.0	1.1	ug/l	SW846 8260C
Di-n-butyl phthalate	0.85 JB	5.3	0.18	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate	0.68 JB	2.1	0.35	ug/l	SW846 8270D
Phenanthrene	0.042 JB	0.053	0.013	ug/l	SW846 8270D BY SIM

MC29574-4 MW11-ROX-040714-EB

Di-n-butyl phthalate	0.64 JB	5.1	0.18	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate	0.61 J	2.0	0.34	ug/l	SW846 8270D
Phenanthrene	0.021 JB	0.051	0.013	ug/l	SW846 8270D BY SIM

MC29574-5 MW11-ROX-040714

Benzene	1.4	0.50	0.32	ug/l	SW846 8260C
Di-n-butyl phthalate	0.70 JB	5.6	0.19	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate	5.6 B	2.2	0.37	ug/l	SW846 8270D
Phenanthrene	0.023 JB	0.056	0.014	ug/l	SW846 8270D BY SIM

MC29574-6 TB-ROX-040714-HCL

No hits reported in this sample.

MC29574-7 TB-ROX-040714-ST

No hits reported in this sample.

Summary of Hits

Job Number: MC29574

Account: Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Collected: 04/07/14



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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(a) Sample re-extracted beyond recommended holding time.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW1-ROX-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-1	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29680.D	1	04/11/14	AMY	n/a	n/a	MSV1111
Run #2							

Run #	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	2.4	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	0.66	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	MW1-ROX-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-1	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW1-ROX-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-1	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	86%		70-130%
460-00-4	4-Bromofluorobenzene	92%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0.1	ug/l	

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

J = Indicates 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-040714	Date Sampled: 04/07/14
Lab Sample ID: MC29574-1	Date Received: 04/08/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38055.D	1	04/11/14	KR	04/09/14	OP37522	MSR1403
Run #2 ^a	R38284.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411

Run #	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2	870 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	3.0 ^b	11	2.9	ug/l	JJ WJ ↓ JB WJ
95-57-8	2-Chlorophenol	ND ^b	5.7	0.36	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND ^b	11	0.95	ug/l	
120-83-2	2,4-Dichlorophenol	ND ^b	11	0.46	ug/l	
105-67-9	2,4-Dimethylphenol	ND ^b	11	0.64	ug/l	
51-28-5	2,4-Dinitrophenol	ND ^b	23	2.9	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND ^b	11	2.2	ug/l	
95-48-7	2-Methylphenol	ND ^b	11	0.26	ug/l	
	3&4-Methylphenol	ND ^b	11	0.54	ug/l	
88-75-5	2-Nitrophenol	ND ^b	11	3.3	ug/l	
100-02-7	4-Nitrophenol	ND ^b	23	0.61	ug/l	
87-86-5	Pentachlorophenol	ND ^b	11	1.3	ug/l	
108-95-2	Phenol	ND ^b	5.7	0.35	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND ^b	11	0.43	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND ^b	11	0.20	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.51	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.58	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.61	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.38	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.36	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.27	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.29	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.28	ug/l	
84-74-2	Di-n-butyl phthalate	0.29 W	5.4	0.19	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.31	ug/l	

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

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Report of Analysis

Client Sample ID:	MW1-ROX-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-1	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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	5.4	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.37	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.36	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.33	ug/l	
78-59-1	Isophorone	ND	5.4	0.49	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.43	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.44	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	1% ^c	47%	15-110%
4165-62-2	Phenol-d5	1% ^c	29%	15-110%
118-79-6	2,4,6-Tribromophenol	3% ^c	92%	15-110%
4165-60-0	Nitrobenzene-d5	71%	74%	30-130%
321-60-8	2-Fluorobiphenyl	68%	78%	30-130%
1718-51-0	Terphenyl-d14	87%	94%	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.

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

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

Report of Analysis

Page 1 of 1

Client Sample ID:	MW1-ROX-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-1	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38026.D	1	04/10/14	KR	04/09/14	OP37523	MSR1402
Run #2							

Run #	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.075	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.081	ug/l	
85-01-8	Phenanthrene	0.023 ND	0.054	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	102%		30-130%
321-60-8	2-Fluorobiphenyl	72%		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

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Report of Analysis

Client Sample ID: MW1-ROX-040714	Date Sampled: 04/07/14
Lab Sample ID: MC29574-1	Date Received: 04/08/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89187.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539
Run #2							

Run #	Initial Volume	Final Volume
Run #1	37.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0051	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)	101%		36-173%
460-00-4	Bromofluorobenzene (S)	75%		36-173%

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

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Report of Analysis

Client Sample ID:	MW9-ROX-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-2	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29681.D	1	04/11/14	AMY	n/a	n/a	MSV1111
Run #2							

Run #	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	2.4	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	4.4	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ng/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ng/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW9-ROX-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-2	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates 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-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-2	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-130%
2037-26-5	Toluene-D8	88%		70-130%
460-00-4	4-Bromofluorobenzene	93%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW9-ROX-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-2	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38158.D	1	04/15/14	WK	04/11/14	OP37571	MSR1407
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chloropheuol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl pheuol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Diuethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitropheuol	ND	22	0.59	ug/l	UJ
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.71	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.59	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	UJ
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.62	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	0.62 U	5.6	0.19	ug/l	JB U
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

ND = Not detected MDL = Method Detection Limit
 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-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-2	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Per cent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.54 U	2.2	0.37	ug/l	JB ✓
118-74-1	Hexachlorobenzene	ND	5.6	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ng/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	38%		15-110%
4165-62-2	Phenol-d5	25%		15-110%
118-79-6	2,4,6-Tribromophenol	68%		15-110%
4165-60-0	Nitrobenzene-d5	64%		30-130%
321-60-8	2-Fluorobiphenyl	63%		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 J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW9-ROX-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-2	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38027.D	1	04/10/14	KR	04/09/14	OP37523	MSR1402
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.055	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	0.024	0.056	0.022	ug/l	J
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.22	0.055	ug/l	
91-57-6	2-Methylnaphthalene	0.10	0.22	0.082	ug/l	J
85-01-8	Phenanthrene	0.056 u	0.056	0.014	ug/l	B u
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	68%		30-130%
321-60-8	2-Fluorobiphenyl	63%		30-130%
1718-51-0	Terphenyl-d14	87%		30-130%

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

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

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Report of Analysis

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Client Sample ID:	MW9-ROX-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-2	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89188.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539
Run #2							

Run #	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)	95%		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:	MW10-ROX-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-3	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29682.D	1	04/11/14	AMY	n/a	n/a	MSV1111
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	68.4	10	2.4	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	1.8	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	3.2	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW10-ROX-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-3	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ng/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ng/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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 E = Indicates value exceeds calibration range

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

Report of Analysis

Client Sample ID: MW10-ROX-040714	Date Sampled: 04/07/14
Lab Sample ID: MC29574-3	Date Received: 04/08/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	80%		70-130%
2037-26-5	Toluene-D8	90%		70-130%
460-00-4	4-Bromofluorobenzene	94%		70-130%

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

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Report of Analysis

Client Sample ID:	MW10-ROX-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-3	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38159.D	1	04/15/14	WK	04/11/14	OP37571	MSR1407
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.6	ug/l	
95-57-8	2-Chlorophenol	ND	5.3	0.33	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.87	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.42	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.59	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.0	ug/l	
95-48-7	2-Methylphenol	ND	11	0.24	ug/l	
	3&4-Methylphenol	ND	11	0.49	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.0	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.56	ug/l	UJ
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.3	0.32	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.39	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.18	ug/l	
62-53-3	Aniline	ND	11	0.67	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.50	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.56	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.4	ug/l	UJ
91-58-7	2-Chloronaphthalene	ND	5.3	0.33	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.59	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.30	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.37	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.35	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.25	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.48	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.28	ug/l	
132-64-9	Dihenzofuran	ND	2.1	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	0.85 UJ	5.3	0.18	ug/l	JB UJ
117-84-0	Di-n-octyl phthalate	ND	5.3	0.30	ug/l	

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Report of Analysis

Client Sample ID:	MW10-ROX-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-3	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.3	0.21	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.36	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.68 <i>W</i>	2.1	0.35	ug/l	JB <i>W</i>
118-74-1	Hexachlorobenzene	ND	5.3	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.3	0.32	ug/l	
78-59-1	Isophorone	ND	5.3	0.47	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.42	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.41	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.42	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.20	ug/l	
110-86-1	Pyridine	ND	11	0.54	ug/l	<i>WJ</i>

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	39%		15-110%
4165-62-2	Phenol-d5	25%		15-110%
118-79-6	2,4,6-Tribromophenol	75%		15-110%
4165-60-0	Nitrobenzene-d5	67%		30-130%
321-60-8	2-Fluorobiphenyl	66%		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
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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

Page 1 of 1

Client Sample ID:	MW10-ROX-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-3	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38028.D	1	04/10/14	KR	04/09/14	OP37523	MSR1402
Run #2							

Run #	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	0.042 u	0.053	0.013	ug/l	JB u
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	64%		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: MW10-ROX-040714	Date Sampled: 04/07/14
Lab Sample ID: MC29574-3	Date Received: 04/08/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89189.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539
Run #2							

Run #	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)	79%		36-173%
460-00-4	Bromofluorobenzene (S)	70%		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

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Report of Analysis

Client Sample ID:	MW11-ROX-040714-EB	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-4	Date Received:	04/08/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29678.D	1	04/11/14	AMY	n/a	n/a	MSV1111
Run #2							

Run #	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	2.4	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ng/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

4.4
 4

Report of Analysis

Client Sample ID:	MW11-ROX-040714-EB	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-4	Date Received:	04/08/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW11-ROX-040714-EB	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-4	Date Received:	04/08/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		70-130%
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	92%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW11-ROX-040714-EB	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-4	Date Received:	04/08/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38058.D	1	04/11/14	KR	04/09/14	OP37522	MSR1403
Run #2							

Run #	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	2.6	ug/l	
95-57-8	2-Chlorophenol	ND	5.1	0.32	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.84	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.57	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.48	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.55	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.1	0.31	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.38	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.65	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.1	0.48	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.1	0.54	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.1	0.32	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.57	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	0.36	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.1	0.34	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.1	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.47	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.31	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.1	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	0.64	5.1	0.18	ug/l	JB
117-84-0	Di-n-octyl phthalate	ND	5.1	0.29	ug/l	

ND = Not detected MDL = Method Detection Limit
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J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW11-ROX-040714-EB	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-4	Date Received:	04/08/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.1	0.35	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.61	2.0	0.34	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.1	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.1	0.31	ug/l	
78-59-1	Isophorone	ND	5.1	0.46	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.1	0.40	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.1	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	0.41	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	0.20	ug/l	
110-86-1	Pyridine	ND	10	0.53	ug/l	

CAS No.	Surr ogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	31%		15-110%
4165-62-2	Phenol-d5	21%		15-110%
118-79-6	2,4,6-Tribromophenol	49%		15-110%
4165-60-0	Nitrobenzene-d5	50%		30-130%
321-60-8	2-Fluorobiphenyl	46%		30-130%
1718-51-0	Terphenyl-d14	75%		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-040714-EB	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-4	Date Received:	04/08/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38029.D	1	04/10/14	KR	04/09/14	OP37523	MSR1402
Run #2							

Run #	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	0.021	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	51%		30-130%
321-60-8	2-Fluorobiphenyl	47%		30-130%
1718-51-0	Terphenyl-d14	76%		30-130%

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

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Report of Analysis

Page 1 of 1

Client Sample ID:	MW11-ROX-040714-EB	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-4	Date Received:	04/08/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89190.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539
Run #2							

Run #	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)	97%		36-173%
460-00-4	Bromofluorobenzene (S)	80%		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-040714	Date Sampled: 04/07/14
Lab Sample ID: MC29574-5	Date Received: 04/08/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29683.D	1	04/11/14	AMY	n/a	n/a	MSV1111
Run #2							

Run #	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	2.4	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	1.4	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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J = Indicates 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-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-5	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ng/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ng/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ng/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
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J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW11-ROX-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-5	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project:	
URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL			

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		70-130%
2037-26-5	Toluene-D8	90%		70-130%
460-00-4	4-Bromofluorobenzene	93%		70-130%

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

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

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

Report of Analysis

Client Sample ID:	MW11-ROX-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-5	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38160.D	1	04/15/14	WK	04/11/14	OP37571	MSR1407
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	WJ
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.71	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.59	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	WJ
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.62	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ng/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	0.70 W	5.6	0.19	ug/l	JB W
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

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

4.5
 4

Report of Analysis

Client Sample ID:	MW11-ROX-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-5	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	5.6 u	2.25.6	0.37	ug/l	B u
118-74-1	Hexachlorobenzene	ND	5.6	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	uJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	40%		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	71%		30-130%
321-60-8	2-Fluorobiphenyl	73%		30-130%
1718-51-0	Terphenyl-d14	96%		30-130%

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

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
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 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID:	MW11-ROX-040714	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-5	Date Received:	04/08/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38030.D	1	04/10/14	KR	04/09/14	OP37523	MSR1402
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.055	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.22	0.055	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.082	ug/l	
85-01-8	Phenanthrene	0.023 u	0.056	0.014	ug/l	JB u
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	45%		30-130%
321-60-8	2-Fluorobiphenyl	61%		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: MW11-ROX-040714	Date Sampled: 04/07/14
Lab Sample ID: MC29574-5	Date Received: 04/08/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89191.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539
Run #2							

Run #	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)	91%		36-173%		
460-00-4	Bromofluorobenzene (S)	82%		36-173%		

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

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Report of Analysis

Client Sample ID:	TB-ROX-040714-HCL	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-6	Date Received:	04/08/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29675.D	1	04/11/14	AMY	n/a	n/a	MSV1111
Run #2							

Run #	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	2.4	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB-ROX-040714-HCL	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-6	Date Received:	04/08/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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 E = Indicates value exceeds calibration range

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

Report of Analysis

Client Sample ID:	TB-ROX-040714-HCL	Date Sampled:	04/07/14
Lab Sample ID:	MC29574-6	Date Received:	04/08/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	88%		70-130%
2037-26-5	Toluene-D8	86%		70-130%
460-00-4	4-Bromofluorobenzene	91%		70-130%

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

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

J = Indicates 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-040714-ST	Date Sampled: 04/07/14
Lab Sample ID: MC29574-7	Date Received: 04/08/14
Matrix: AQ - Trip Blank Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89192.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539
Run #2							

Run #	Initial Volume	Final Volume
Run #1	37.6 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0050	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)	103%		36-173%
460-00-4	Bromofluorobenzene (S)	82%		36-173%

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

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Misc. Forms



Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

LAB (LOCATION)

- REMO ()
- CALCULATED
- OTHER
- SKY



Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:

<input checked="" type="checkbox"/> ENV. SERVICES	<input type="checkbox"/> MOTIVE RETAIL	<input type="checkbox"/> SHELL RETAIL
<input type="checkbox"/> MOTIVE SPECIAL	<input type="checkbox"/> CONSULTANT	<input type="checkbox"/> LUBES
<input type="checkbox"/> SHELL PIPELINE	<input type="checkbox"/> OTHER	

Print Bill To Contact Name:

Bob Berman

INCIDENT # (ENV SERVICES)

9 7 2 1 6 6 4 0

CHECK IF NO INCIDENT # APPLIES

DATE: 4-7-14

PO #

SAP #

PAGE: 1 of 1

Lab Vendor #

LABORATORY LOCATION	LAB CODE	SITE ADDRESS: Street and City	STATE	COUNTY	ZIP
URS CORPORATION		100 South Central Ave. ROXANA	IL		

ADDRESS	CONSULTANT PROJECT NO.
1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110	Roxana Quarterly GW / 2156 2973 03002

PROJECT CONTACT PERSONS & FOR REPORT TO:	LAB USE ONLY
Elizabeth Kunkel, Wendy Pennington, Bob Berman	mc29574

PHONE	FAX	EE FREIGHT RATE	LAB USE ONLY
314-429-0100	314-429-0402	2003-2008: 0.0000, 2009-2010: 0.0000, 2011-2012: 0.0000, 2013-2014: 0.0000	mc29574

TURNOVER/DELIVERY TIME (CALC FROM DELIVERY DATE)	REQUESTED ANALYSIS
<input checked="" type="checkbox"/> STANDARD (10 DAYS) <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 3 DAYS <input type="checkbox"/> 2 DAYS <input type="checkbox"/> 24 HOURS <input type="checkbox"/> RESULTS NEEDED ON TUESDAY	

DELIVERABLES	TEMPERATURE ON RECEIPT C°
<input type="checkbox"/> LEVEL 1 <input type="checkbox"/> LEVEL 2 <input type="checkbox"/> LEVEL 3 <input type="checkbox"/> LEVEL 4 <input checked="" type="checkbox"/> OTHER (SPECIFY) EDD	

SPECIAL INSTRUCTIONS OR NOTES:	FIELD NOTES:
* Please include "J" values on Reports. * Please provide sample receipt upon login. * Please contact Elizabeth Kunkel regarding SVOC extractions.	TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT.	VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
		DATE	TIME		1CL	1N03	10S04	10M06	OTHER							
	1 MW1-Rox-040714	4/7/14	0950	water	2					2	2	6	X	X	X	
	15 MW1-Rox-040714-MS		0950		2					2	2	6	X	X	X	
	150 MW1-Rox-040714-MSD		0950		2					2	2	6	X	X	X	
	2 MW9-Rox-040714		1115		2					2	2	6	X	X	X	
	3 MW10-Rox-040714		1405		2					2	2	6	X	X	X	
	4 MW11-Rox-040714-EB		1420		2					2	2	6	X	X	X	
	5 MW11-Rox-040714		1545		2					2	2	6	X	X	X	18B, 4I2
	6 TB-Rox-040714-HCL		0000		2					2	2	X	X			
	7 TB-Rox-040714-ST		0000							2	2	X	X			

Requested by (Signature)	Date	Time
<i>[Signature]</i>	4-7-14	1730
Requested by (Signature)	Date	Time
FED	4-8-14	930
Requested by (Signature)	Date	Time
<i>[Signature]</i>		

14.04°C

MC29574: Chain of Custody Page 1 of 2



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC29574 Client: URS Immediate Client Services Action Required: No
 Date / Time Received: 4/8/2014 Delivery Method: _____ Client Service Action Required at Login: No
 Project: 900 SOUTH CENTRAL AVE 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: Infrared 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

485 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www.accutest.com

5.1
5

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC29574

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

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Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC29574-1 Collected: 07-APR-14 09:50 By: MMDM Received: 08-APR-14 By: MW1-ROX-040714						
MC29574-1	SW846 8270D BY SIM	10-APR-14 16:26	KR	09-APR-14	MEW	B8270SIMSL
MC29574-1	SW846 8270D	11-APR-14 05:19	KR	09-APR-14	AZ	AB8270SL+
MC29574-1	SW846 8260C	11-APR-14 14:18	AMY			V8260SL+
MC29574-1	SW846 8011	11-APR-14 19:03	SZ	10-APR-14	AW	V8011SL
MC29574-1	SW846 8270D	21-APR-14 12:12	WK	18-APR-14	MD	AB8270SL+
MC29574-2 Collected: 07-APR-14 11:15 By: MMDM Received: 08-APR-14 By: MW9-ROX-040714						
MC29574-2	SW846 8270D BY SIM	10-APR-14 16:53	KR	09-APR-14	MEW	B8270SIMSL
MC29574-2	SW846 8260C	11-APR-14 14:44	AMY			V8260SL+
MC29574-2	SW846 8011	11-APR-14 19:29	SZ	10-APR-14	AW	V8011SL
MC29574-2	SW846 8270D	15-APR-14 01:42	WK	11-APR-14	AJ	AB8270SL+
MC29574-3 Collected: 07-APR-14 14:05 By: MMDM Received: 08-APR-14 By: MW10-ROX-040714						
MC29574-3	SW846 8270D BY SIM	10-APR-14 17:19	KR	09-APR-14	MEW	B8270SIMSL
MC29574-3	SW846 8260C	11-APR-14 15:10	AMY			V8260SL+
MC29574-3	SW846 8011	11-APR-14 19:55	SZ	10-APR-14	AW	V8011SL
MC29574-3	SW846 8270D	15-APR-14 02:08	WK	11-APR-14	AJ	AB8270SL+
MC29574-4 Collected: 07-APR-14 14:20 By: MMDM Received: 08-APR-14 By: MW11-ROX-040714-EB						
MC29574-4	SW846 8270D BY SIM	10-APR-14 17:46	KR	09-APR-14	MEW	B8270SIMSL
MC29574-4	SW846 8270D	11-APR-14 06:38	KR	09-APR-14	MEW	AB8270SL+
MC29574-4	SW846 8260C	11-APR-14 13:26	AMY			V8260SL+
MC29574-4	SW846 8011	11-APR-14 20:21	SZ	10-APR-14	AW	V8011SL
MC29574-5 Collected: 07-APR-14 15:45 By: MMDM Received: 08-APR-14 By: MW11-ROX-040714						
MC29574-5	SW846 8270D BY SIM	10-APR-14 18:12	KR	09-APR-14	MEW	B8270SIMSL
MC29574-5	SW846 8260C	11-APR-14 15:36	AMY			V8260SL+
MC29574-5	SW846 8011	11-APR-14 20:47	SZ	10-APR-14	AW	V8011SL
MC29574-5	SW846 8270D	15-APR-14 02:34	WK	11-APR-14	AJ	AB8270SL+

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC29574

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

5.2
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Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
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MC29574-6 Collected: 07-APR-14 00:00 By: MMDM Received: 08-APR-14 By: TB-ROX-040714-HCL

MC29574-6 SW846 8260C 11-APR-14 12:07 AMY V8260SL+

MC29574-7 Collected: 07-APR-14 00:00 By: MMDM Received: 08-APR-14 By: TB-ROX-040714-ST

MC29574-7 SW846 8011 11-APR-14 21:15 SZ 10-APR-14 AW V8011SL

Accutest Internal Chain of Custody

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Received: 04/08/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29574-1.1	Walk In Ref #22	Alireza Zeighami	04/09/14 10:41	Retrieve from Storage
MC29574-1.1	Alireza Zeighami		04/09/14 14:45	Depleted
MC29574-1.2	Walk In Ref #22	Alireza Zeighami	04/09/14 10:41	Retrieve from Storage
MC29574-1.2	Alireza Zeighami		04/09/14 14:45	Depleted
MC29574-1.3	Walk In Ref #22	Alireza Zeighami	04/09/14 10:41	Retrieve from Storage
MC29574-1.3	Alireza Zeighami		04/09/14 14:45	Depleted
MC29574-1.5	Walk In Ref #22	Thomas Abruzzise	04/18/14 19:10	Retrieve from Storage
MC29574-1.5	Thomas Abruzzise		04/30/14 21:28	Depleted
MC29574-1.8	VOC Ref #4	Amy Min Yang	04/11/14 11:26	Retrieve from Storage
MC29574-1.8	Amy Min Yang	GCMSV	04/11/14 11:26	Load on Instrument
MC29574-1.8	GCMSV	Amy Min Yang	04/14/14 12:55	Unload from Instrument
MC29574-1.8	Amy Min Yang	VOC Ref #4	04/14/14 12:55	Return to Storage
MC29574-1.9	VOC Ref #4	Amy Miu Yang	04/11/14 11:26	Retrieve from Storage
MC29574-1.9	Amy Min Yang	GCMSV	04/11/14 11:26	Load on Instrument
MC29574-1.9	GCMSV	Amy Min Yang	04/14/14 12:55	Unload from Instrument
MC29574-1.9	Amy Min Yang	VOC Ref #4	04/14/14 12:55	Return to Storage
MC29574-1.10	VOC Ref #4	Amy Miu Yang	04/11/14 11:26	Retrieve from Storage
MC29574-1.10	Amy Min Yang	GCMSV	04/11/14 11:26	Load on Instrument
MC29574-1.10	GCMSV	Amy Min Yang	04/14/14 12:55	Unload from Instrument
MC29574-1.10	Amy Min Yang	VOC Ref #4	04/14/14 12:55	Return to Storage
MC29574-1.12	VOC Ref #4	Amy Min Yang	04/11/14 11:26	Retrieve from Storage
MC29574-1.12	Amy Min Yang	GCMSV	04/11/14 11:26	Load on Instrument
MC29574-1.12	GCMSV	Amy Min Yang	04/14/14 12:55	Unload from Instrument
MC29574-1.12	Amy Min Yang	VOC Ref #4	04/14/14 12:55	Return to Storage
MC29574-1.13	VOC Ref #4	Marc Tahtamoni	04/10/14 14:38	Retrieve from Storage
MC29574-1.13	Marc Tahtamoni		04/10/14 20:16	Depleted
MC29574-1.16	VOC Ref #4	Marc Tahtamoni	04/10/14 14:38	Retrieve from Storage
MC29574-1.16	Marc Tahtamoni		04/10/14 20:16	Depleted
MC29574-1.18	VOC Ref #4	Marc Tahtamoni	04/10/14 14:38	Retrieve from Storage
MC29574-1.18	Marc Tahtamoni		04/10/14 20:16	Depleted
MC29574-2.1	Walk In Ref #22	Michael DiBuono	04/11/14 13:55	Retrieve from Storage
MC29574-2.2	Walk In Ref #22	Alireza Zeighami	04/09/14 10:41	Retrieve from Storage

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Accutest Internal Chain of Custody

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Received: 04/08/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29574-2.2	Alireza Zeighami		04/09/14 14:45	Depleted
MC29574-2.3	VOC Ref #4	Amy Min Yang	04/11/14 11:26	Retrieve from Storage
MC29574-2.3	Amy Min Yang	GCMSV	04/11/14 11:26	Load on Instrument
MC29574-2.3	GCMSV	Amy Min Yang	04/14/14 12:55	Unload from Instrument
MC29574-2.3	Amy Min Yang	VOC Ref #4	04/14/14 12:55	Return to Storage
MC29574-2.5	VOC Ref #4	Marc Tahtamoni	04/10/14 14:38	Retrieve from Storage
MC29574-2.5	Marc Tahtamoni		04/10/14 20:16	Depleted
MC29574-3.1	Walk In Ref #22	Michael DiBuono	04/11/14 13:55	Retrieve from Storage
MC29574-3.2	Walk In Ref #22	Alireza Zeighami	04/09/14 10:41	Retrieve from Storage
MC29574-3.2	Alireza Zeighami		04/09/14 14:45	Depleted
MC29574-3.4	VOC Ref #4	Amy Min Yang	04/11/14 11:26	Retrieve from Storage
MC29574-3.4	Amy Min Yang	GCMSV	04/11/14 11:26	Load on Instrument
MC29574-3.4	GCMSV	Amy Min Yang	04/14/14 12:55	Unload from Instrument
MC29574-3.4	Amy Min Yang	VOC Ref #4	04/14/14 12:55	Return to Storage
MC29574-3.6	VOC Ref #4	Marc Tahtamoni	04/10/14 14:38	Retrieve from Storage
MC29574-3.6	Marc Tahtamoni		04/10/14 20:16	Depleted
MC29574-4.2	Walk In Ref #22	Alireza Zeighami	04/09/14 10:41	Retrieve from Storage
MC29574-4.2	Alireza Zeighami		04/09/14 14:45	Depleted
MC29574-4.3	VOC Ref #4	Amy Min Yang	04/11/14 11:26	Retrieve from Storage
MC29574-4.3	Amy Min Yang	GCMSV	04/11/14 11:26	Load on Instrument
MC29574-4.3	GCMSV	Amy Min Yang	04/14/14 12:55	Unload from Instrument
MC29574-4.3	Amy Min Yang	VOC Ref #4	04/14/14 12:55	Return to Storage
MC29574-4.5	VOC Ref #4	Marc Tahtamoni	04/10/14 14:38	Retrieve from Storage
MC29574-4.5	Marc Tahtamoni		04/10/14 20:16	Depleted
MC29574-5.1	Walk In Ref #22	Alireza Zeighami	04/09/14 10:41	Retrieve from Storage
MC29574-5.1	Alireza Zeighami		04/09/14 14:45	Depleted
MC29574-5.2	Walk In Ref #22	Michael DiBuono	04/11/14 13:55	Retrieve from Storage
MC29574-5.4	VOC Ref #4	Amy Min Yang	04/11/14 11:26	Retrieve from Storage
MC29574-5.4	Amy Min Yang	GCMSV	04/11/14 11:26	Load on Instrument
MC29574-5.4	GCMSV	Amy Min Yang	04/14/14 12:55	Unload from Instrument
MC29574-5.4	Amy Min Yang	VOC Ref #4	04/14/14 12:55	Return to Storage



Accutest Internal Chain of Custody

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Received: 04/08/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29574-5.6	VOC Ref #4	Marc Tahtamoni	04/10/14 14:38	Retrieve from Storage
MC29574-5.6	Marc Tahtamoni		04/10/14 20:16	Depleted
MC29574-6.1	VOC Ref #4	Amy Min Yang	04/11/14 11:26	Retrieve from Storage
MC29574-6.1	Amy Min Yang	GCMSV	04/11/14 11:26	Load on Instrument
MC29574-6.1	GCMSV	Amy Min Yang	04/14/14 12:55	Unload from Instrument
MC29574-6.1	Amy Min Yang	VOC Ref #4	04/14/14 12:55	Return to Storage
MC29574-7.2	VOC Ref #4	Marc Tahtamoni	04/10/14 14:38	Retrieve from Storage
MC29574-7.2	Marc Tahtamoni		04/10/14 20:16	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: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1111-MB	V29674.D	1	04/11/14	AMY	n/a	n/a	MSV1111

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29574-1, MC29574-2, MC29574-3, MC29574-4, MC29574-5, MC29574-6

6.1.1
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CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.4	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1111-MB	V29674.D	1	04/11/14	AMY	n/a	n/a	MSV1111

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29574-1, MC29574-2, MC29574-3, MC29574-4, MC29574-5, MC29574-6

6.1.1

6

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styreue	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

Method Blank Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1111-MB	V29674.D	1	04/11/14	AMY	n/a	n/a	MSV1111

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29574-1, MC29574-2, MC29574-3, MC29574-4, MC29574-5, MC29574-6

6.1.1


CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	86%	70-130%
2037-26-5	Toluene-D8	87%	70-130%
460-00-4	4-Bromofluorobenzene	91%	70-130%

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

Blank Spike Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1111-BS	V29671.D	1	04/11/14	AMY	n/a	n/a	MSV1111

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29574-1, MC29574-2, MC29574-3, MC29574-4, MC29574-5, MC29574-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	39.2	78	70-130
107-02-8	Acrolein	250	371	148* a	70-130
107-13-1	Acrylonitrile	50	40.3	81	70-130
71-43-2	Benzene	50	48.3	97	70-130
108-86-1	Bromobenzene	50	54.7	109	70-130
74-97-5	Bromochloromethane	50	45.7	91	70-130
75-27-4	Bromodichloromethane	50	51.4	103	70-130
75-25-2	Bromoform	50	45.9	92	70-130
74-83-9	Bromomethane	50	48.4	97	70-130
78-93-3	2-Butanone (MEK)	50	42.9	86	70-130
104-51-8	n-Butylbenzene	50	55.0	110	70-130
135-98-8	sec-Butylbenzene	50	55.0	110	70-130
98-06-6	tert-Butylbenzene	50	55.5	111	70-130
75-15-0	Carbon disulfide	50	43.4	87	70-130
56-23-5	Carbon tetrachloride	50	58.3	117	70-130
108-90-7	Chlorobenzene	50	50.7	101	70-130
75-00-3	Chloroethane	50	50.1	100	70-130
110-75-8	2-Chloroethyl vinyl ether	50	93.1	186* a	70-130
67-66-3	Chloroform	50	46.8	94	70-130
74-87-3	Chloromethane	50	48.0	96	70-130
95-49-8	o-Chlorotoluene	50	52.0	104	70-130
106-43-4	p-Chlorotoluene	50	54.1	108	70-130
124-48-1	Dibromochloromethane	50	48.2	96	70-130
95-50-1	1,2-Dichlorobenzene	50	49.6	99	70-130
541-73-1	1,3-Dichlorobenzene	50	52.1	104	70-130
106-46-7	1,4-Dichlorobenzene	50	52.3	105	70-130
75-71-8	Dichlorodifluoromethane	50	44.2	88	70-130
75-34-3	1,1-Dichloroethane	50	47.0	94	70-130
107-06-2	1,2-Dichloroethane	50	49.0	98	70-130
75-35-4	1,1-Dichloroethene	50	50.0	100	70-130
156-59-2	cis-1,2-Dichloroethene	50	47.0	94	70-130
156-60-5	trans-1,2-Dichloroethene	50	46.4	93	70-130
78-87-5	1,2-Dichloropropane	50	49.8	100	70-130
142-28-9	1,3-Dichloropropane	50	49.0	98	70-130
594-20-7	2,2-Dichloropropane	50	49.7	99	70-130
563-58-6	1,1-Dichloropropene	50	51.8	104	70-130

* = Outside of Control Limits.

6.2.1
 6

Blank Spike Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1111-BS	V29671.D	1	04/11/14	AMY	n/a	n/a	MSV1111

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29574-1, MC29574-2, MC29574-3, MC29574-4, MC29574-5, MC29574-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	45.1	90	70-130
10061-02-6	trans-1,3-Dichloropropene	50	57.3	115	70-130
123-91-1	1,4-Dioxane	250	177	71	70-130
97-63-2	Ethyl methacrylate	50	44.0	88	77-137
100-41-4	Ethylbenzene	50	55.0	110	70-130
87-68-3	Hexachlorobutadiene	50	50.2	100	70-130
591-78-6	2-Hexanone	50	43.8	88	70-130
98-82-8	Isopropylbenzene	50	55.0	110	70-130
99-87-6	p-Isopropyltoluene	50	56.2	112	70-130
1634-04-4	Methyl Tert Butyl Ether	50	44.5	89	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	44.3	89	70-130
74-95-3	Methylene bromide	50	48.9	98	70-130
75-09-2	Methylene chloride	50	45.0	90	70-130
91-20-3	Naphthalene	50	51.9	104	70-130
103-65-1	n-Propylbenzene	50	53.1	106	70-130
100-42-5	Styrene	50	55.3	111	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	57.5	115	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	50.9	102	70-130
127-18-4	Tetrachloroethene	50	54.4	109	70-130
108-88-3	Toluene	50	52.5	105	70-130
87-61-6	1,2,3-Trichlorobenzene	50	55.6	111	70-130
120-82-1	1,2,4-Trichlorobenzene	50	47.8	96	70-130
71-55-6	1,1,1-Trichloroethane	50	51.9	104	70-130
79-00-5	1,1,2-Trichloroethane	50	49.3	99	70-130
79-01-6	Trichloroethene	50	50.4	101	70-130
75-69-4	Trichlorofluoromethane	50	53.3	107	70-130
96-18-4	1,2,3-Trichloropropane	50	50.3	101	70-130
95-63-6	1,2,4-Trimethylbenzene	50	54.6	109	70-130
108-67-8	1,3,5-Trimethylbenzene	50	55.7	111	70-130
108-05-4	Vinyl Acetate	50	42.8	86	70-130
75-01-4	Vinyl chloride	50	45.9	92	70-130
	m,p-Xylene	100	108	108	70-130
95-47-6	o-Xylene	50	53.4	107	70-130
1330-20-7	Xylene (total)	150	161	107	70-130

* = Outside of Control Limits.

6.2.1
 6

Blank Spike Summary

Job Number: MC29574
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1111-BS	V29671.D	1	04/11/14	AMY	n/a	n/a	MSV1111

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29574-1, MC29574-2, MC29574-3, MC29574-4, MC29574-5, MC29574-6

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	79%	70-130%
2037-26-5	Toluene-D8	88%	70-130%
460-00-4	4-Bromofluorobenzene	90%	70-130%

(a) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

6.2.1
6

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29574-1MS	V29694.D	1	04/11/14	AMY	n/a	n/a	MSV1111
MC29574-1MSD	V29695.D	1	04/11/14	AMY	n/a	n/a	MSV1111
MC29574-1	V29680.D	1	04/11/14	AMY	n/a	n/a	MSV1111

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29574-1, MC29574-2, MC29574-3, MC29574-4, MC29574-5, MC29574-6

CAS No.	Compound	MC29574-1 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	50	36.6	73	50	28.3	57* a	26	70-130/30
107-02-8	Acrolein	ND	250	342	137* b	250	338	135* b	1	70-130/30
107-13-1	Acrylonitrile	ND	50	40.4	81	50	41.8	84	3	70-130/30
71-43-2	Benzene	0.66	50	48.6	96	50	47.1	93	3	70-130/30
108-86-1	Bromobenzene	ND	50	53.4	107	50	53.3	107	0	70-130/30
74-97-5	Bromochloromethane	ND	50	43.9	88	50	44.1	88	0	70-130/30
75-27-4	Bromodichloromethane	ND	50	52.0	104	50	50.6	101	3	70-130/30
75-25-2	Bromoform	ND	50	45.7	91	50	44.8	90	2	70-130/30
74-83-9	Bromomethane	ND	50	50.4	101	50	46.4	93	8	70-130/30
78-93-3	2-Butanone (MEK)	ND	50	36.5	73	50	36.1	72	1	70-130/30
104-51-8	n-Butylbenzene	ND	50	54.3	109	50	51.9	104	5	70-130/30
135-98-8	sec-Butylbenzene	ND	50	54.2	108	50	51.9	104	4	70-130/30
98-06-6	tert-Butylbenzene	ND	50	55.5	111	50	52.2	104	6	70-130/30
75-15-0	Carbon disulfide	ND	50	43.8	88	50	41.7	83	5	70-130/30
56-23-5	Carbon tetrachloride	ND	50	63.1	126	50	59.3	119	6	70-130/30
108-90-7	Chlorobenzene	ND	50	50.3	101	50	49.7	99	1	70-130/30
75-00-3	Chloroethane	ND	50	51.4	103	50	49.8	100	3	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND	50	ND	0* a	50	ND	0* a	nc	70-130/30
67-66-3	Chloroform	ND	50	47.3	95	50	45.9	92	3	70-130/30
74-87-3	Chloromethane	ND	50	49.3	99	50	47.3	95	4	70-130/30
95-49-8	o-Chlorotoluene	ND	50	52.1	104	50	50.4	101	3	70-130/30
106-43-4	p-Chlorotoluene	ND	50	54.1	108	50	53.1	106	2	70-130/30
124-48-1	Dibromochloromethane	ND	50	49.9	100	50	47.9	96	4	70-130/30
95-50-1	1,2-Dichlorobenzene	ND	50	48.1	96	50	48.4	97	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND	50	51.1	102	50	50.1	100	2	70-130/30
106-46-7	1,4-Dichlorobenzene	ND	50	51.1	102	50	50.6	101	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND	50	44.4	89	50	41.7	83	6	70-130/30
75-34-3	1,1-Dichloroethane	ND	50	47.0	94	50	45.5	91	3	70-130/30
107-06-2	1,2-Dichloroethane	ND	50	52.5	105	50	49.9	100	5	70-130/30
75-35-4	1,1-Dichloroethene	ND	50	49.6	99	50	49.1	98	1	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND	50	45.3	91	50	45.3	91	0	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	50	46.2	92	50	45.2	90	2	70-130/30
78-87-5	1,2-Dichloropropane	ND	50	50.7	101	50	48.8	98	4	70-130/30
142-28-9	1,3-Dichloropropane	ND	50	49.6	99	50	48.4	97	2	70-130/30
594-20-7	2,2-Dichloropropane	ND	50	47.1	94	50	44.7	89	5	70-130/30
563-58-6	1,1-Dichloropropene	ND	50	53.3	107	50	51.3	103	4	70-130/30

* = Outside of Control Limits.

6.3.1
 6

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29574-1MS	V29694.D	1	04/11/14	AMY	n/a	n/a	MSV1111
MC29574-1MSD	V29695.D	1	04/11/14	AMY	n/a	n/a	MSV1111
MC29574-1	V29680.D	1	04/11/14	AMY	n/a	n/a	MSV1111

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29574-1, MC29574-2, MC29574-3, MC29574-4, MC29574-5, MC29574-6

CAS No.	Compound	MC29574-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND	50	43.0	86	50	42.5	85	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND	50	57.9	116	50	58.0	116	0	70-130/30
123-91-1	1,4-Dioxane	ND	250	196	78	250	156	62* a	23	70-130/30
97-63-2	Ethyl methacrylate	ND	50	44.9	90	50	46.1	92	3	72-139/30
100-41-4	Ethylbenzene	ND	50	55.6	111	50	53.6	107	4	70-130/30
87-68-3	Hexachlorobutadiene	ND	50	45.6	91	50	47.9	96	5	70-130/30
591-78-6	2-Hexanone	ND	50	38.2	76	50	38.9	78	2	70-130/30
98-82-8	Isopropylbenzene	ND	50	54.3	109	50	51.9	104	5	70-130/30
99-87-6	p-Isopropyltoluene	ND	50	55.4	111	50	53.4	107	4	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	50	46.1	92	50	45.7	91	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	50	44.5	89	50	43.2	86	3	70-130/30
74-95-3	Methylene bromide	ND	50	51.4	103	50	48.4	97	6	70-130/30
75-09-2	Methylene chloride	ND	50	43.6	87	50	43.1	86	1	70-130/30
91-20-3	Naphthalene	ND	50	31.6	63* a	50	47.3	95	40* c	70-130/30
103-65-1	n-Propylbenzene	ND	50	52.7	105	50	50.6	101	4	70-130/30
100-42-5	Styrene	ND	50	54.4	109	50	53.2	106	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND	50	58.1	116	50	54.6	109	6	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	50.7	101	50	50.0	100	1	70-130/30
127-18-4	Tetrachloroethene	ND	50	55.5	111	50	52.6	105	5	70-130/30
108-88-3	Toluene	ND	50	53.0	106	50	51.4	103	3	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND	50	34.6	69* a	50	48.3	97	33* c	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND	50	38.9	78	50	44.8	90	14	70-130/30
71-55-6	1,1,1-Trichloroethane	ND	50	54.7	109	50	51.7	103	6	70-130/30
79-00-5	1,1,2-Trichloroethane	ND	50	50.8	102	50	49.6	99	2	70-130/30
79-01-6	Trichloroethene	ND	50	50.9	102	50	48.2	96	5	70-130/30
75-69-4	Trichlorofluoromethane	ND	50	57.7	115	50	53.0	106	8	70-130/30
96-18-4	1,2,3-Trichloropropane	ND	50	48.4	97	50	48.9	98	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND	50	54.1	108	50	52.0	104	4	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND	50	54.8	110	50	52.3	105	5	70-130/30
108-05-4	Vinyl Acetate	ND	50	42.6	85	50	41.5	83	3	70-130/30
75-01-4	Vinyl chloride	ND	50	48.1	96	50	45.4	91	6	70-130/30
	m,p-Xylene	ND	100	108	108	100	105	105	3	70-130/30
95-47-6	o-Xylene	ND	50	53.4	107	50	51.1	102	4	70-130/30
1330-20-7	Xylene (total)	ND	150	161	107	150	156	104	3	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29574

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29574-1MS	V29694.D	1	04/11/14	AMY	n/a	n/a	MSV1111
MC29574-1MSD	V29695.D	1	04/11/14	AMY	n/a	n/a	MSV1111
MC29574-1	V29680.D	1	04/11/14	AMY	n/a	n/a	MSV1111

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29574-1, MC29574-2, MC29574-3, MC29574-4, MC29574-5, MC29574-6

CAS No.	Surrogate Recoveries	MS	MSD	MC29574-1	Limits
1868-53-7	Dibromofluoromethane	80%	80%	92%	70-130%
2037-26-5	Toluene-D8	88%	89%	86%	70-130%
460-00-4	4-Bromofluorobenzene	89%	91%	92%	70-130%

- (a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
- (b) Outside control limits. Associated samples are non-detect for this compound.
- (c) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

6.3.1


Volatile Internal Standard Area Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSV1111-CC1058	Injection Date:	04/11/14
Lab File ID:	V29670.D	Injection Time:	09:56
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	300021	6.55	399854	7.73	184124	11.08	197689	13.29	34571	3.49
Upper Limit ^a	600042	7.05	799708	8.23	368248	11.58	395378	13.79	69142	3.99
Lower Limit ^b	150011	6.05	199927	7.23	92062	10.58	98845	12.79	17286	2.99

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
MSV1111-BS	309777	6.55	409864	7.74	193009	11.08	202898	13.29	36807	3.50
MSV1111-MB	259007	6.56	356819	7.74	175741	11.08	167631	13.29	34778	3.50
MC29574-6	228816	6.55	320141	7.73	155764	11.08	152425	13.29	33547	3.49
ZZZZZZ	246623	6.56	347160	7.74	171040	11.08	167501	13.29	36615	3.50
ZZZZZZ	235965	6.56	330943	7.74	165725	11.08	162150	13.29	36719	3.50
MC29574-4	232479	6.56	325158	7.74	153201	11.08	150067	13.29	44615	3.50
ZZZZZZ	237139	6.56	329327	7.74	159884	11.08	151797	13.29	46031	3.50
MC29574-1	222377	6.56	312757	7.74	159127	11.08	151929	13.29	32999	3.50
MC29574-2	225237	6.56	320484	7.74	160677	11.08	152348	13.29	29840	3.50
MC29574-3	250889	6.56	317151	7.74	162987	11.08	153418	13.29	36723	3.50
MC29574-5	220319	6.56	307295	7.74	155805	11.08	147405	13.29	34711	3.50
ZZZZZZ	205928	6.55	297866	7.74	152523	11.08	146963	13.29	33219	3.50
ZZZZZZ	207218	6.56	296503	7.74	153363	11.08	145784	13.29	31341	3.51
ZZZZZZ	189423	6.55	268435	7.74	136770	11.08	132176	13.29	29099	3.49
ZZZZZZ	213474	6.56	297714	7.74	154139	11.08	151347	13.29	33355	3.50
ZZZZZZ	202228	6.55	282495	7.74	144311	11.08	141198	13.29	32268	3.50
ZZZZZZ	196787	6.55	274854	7.74	142355	11.08	137215	13.29	28195	3.50
ZZZZZZ	234576	6.56	311674	7.74	158511	11.08	171009	13.29	37483	3.50
ZZZZZZ	248527	6.55	321977	7.73	169842	11.08	175444	13.29	38866	3.50
MC29574-1MS	266742	6.55	347382	7.73	166716	11.08	179177	13.29	36221	3.49
MC29574-1MSD	303138	6.55	396937	7.74	192339	11.08	205672	13.29	38387	3.50

- 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: MC29574

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29574-1	V29680.D	92	86	92
MC29574-2	V29681.D	93	88	93
MC29574-3	V29682.D	80	90	94
MC29574-4	V29678.D	91	84	92
MC29574-5	V29683.D	91	90	93
MC29574-6	V29675.D	88	86	91
MC29574-1MS	V29694.D	80	88	89
MC29574-1MSD	V29695.D	80	89	91
MSV1111-BS	V29671.D	79	88	90
MSV1111-MB	V29674.D	86	87	91

Surrogate Compounds

Recovery Limits

S1 = Dibromofluoromethane

70-130%

S2 = Toluene-D8

70-130%

S3 = 4-Bromofluorobenzene

70-130%

6.5.1
6



New England
ACCUTEST
LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

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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: MC29574
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37522-MB	R38038.D	1	04/10/14	KR	04/09/14	OP37522	MSR1403

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29574-1, MC29574-4

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Beuzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	0.35	5.0	0.17	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

7.1.1
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Method Blank Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37522-MB	R38038.D	1	04/10/14	KR	04/09/14	OP37522	MSR1403

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29574-1, MC29574-4

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	51% 15-110%
4165-62-2	Phenol-d5	34% 15-110%
118-79-6	2,4,6-Tribromophenol	75% 15-110%
4165-60-0	Nitrobenzene-d5	83% 30-130%
321-60-8	2-Fluorobiphenyl	76% 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	

7.1.1
7

Method Blank Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37571-MB	R38148.D	1	04/14/14	WK	04/11/14	OP37571	MSR1407

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29574-2, MC29574-3, MC29574-5

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ng/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	0.67	5.0	0.17	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	6.2	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

7.1.2



Method Blank Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37571-MB	R38148.D	1	04/14/14	WK	04/11/14	OP37571	MSR1407

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29574-2, MC29574-3, MC29574-5

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	42%	15-110%
4165-62-2	Phenol-d5	27%	15-110%
118-79-6	2,4,6-Tribromophenol	67%	15-110%
4165-60-0	Nitrobenzene-d5	69%	30-130%
321-60-8	2-Fluorobiphenyl	67%	30-130%
1718-51-0	Terphenyl-d14	96%	30-130%

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

7.1.2
7

Method Blank Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37657-MB	R38279.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29574-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	42%	15-110%
4165-62-2	Phenol-d5	28%	15-110%
118-79-6	2,4,6-Tribromophenol	73%	15-110%
4165-60-0	Nitrobenzene-d5	72%	30-130%
321-60-8	2-Fluorobiphenyl	74%	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	

7.1.3
7

Method Blank Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37523-MB	R38019.D	1	04/10/14	KR	04/09/14	OP37523	MSR1402

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29574-1, MC29574-2, MC29574-3, MC29574-4, MC29574-5

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.032	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	ug/l	
85-01-8	Phenanthrene	0.021	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	77% 30-130%
1718-51-0	Terphenyl-d14	94% 30-130%

7.1.4
7

Blank Spike Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37522-BS	R38039.D	1	04/10/14	KR	04/09/14	OP37522	MSR1403

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29574-1, MC29574-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	22.4	45	30-130
95-57-8	2-Chlorophenol	50	40.3	81	30-130
59-50-7	4-Chloro-3-methyl phenol	50	41.0	82	30-130
120-83-2	2,4-Dichlorophenol	50	42.4	85	30-130
105-67-9	2,4-Dimethylphenol	50	32.0	64	30-130
51-28-5	2,4-Dinitrophenol	50	40.3	81	30-130
534-52-1	4,6-Dinitro-o-cresol	50	46.1	92	30-130
95-48-7	2-Methylphenol	50	47.0	94	30-130
	3&4-Methylphenol	100	89.0	89	30-130
88-75-5	2-Nitrophenol	50	41.8	84	30-130
100-02-7	4-Nitrophenol	50	18.9	38	30-130
87-86-5	Pentachlorophenol	50	39.2	78	30-130
108-95-2	Phenol	50	19.5	39	30-130
95-95-4	2,4,5-Trichlorophenol	50	43.6	87	30-130
88-06-2	2,4,6-Trichlorophenol	50	42.7	85	30-130
62-53-3	Aniline	50	30.1	60	40-140
101-55-3	4-Bromophenyl phenyl ether	50	45.8	92	40-140
85-68-7	Butyl benzyl phthalate	50	51.3	103	40-140
100-51-6	Benzyl Alcohol	50	39.2	78	40-140
91-58-7	2-Chloronaphthalene	50	48.4	97	40-140
106-47-8	4-Chloroaniline	50	37.9	76	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	44.4	89	40-140
111-44-4	bis(2-Chloroethyl)ether	50	45.1	90	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	72.4	145* a	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	36.2	72	40-140
122-66-7	1,2-Diphenylhydrazine	50	45.4	91	40-140
121-14-2	2,4-Dinitrotoluene	50	39.5	79	40-140
606-20-2	2,6-Dinitrotoluene	50	49.5	99	40-140
91-94-1	3,3'-Dichlorobenzidine	50	44.7	89	40-140
132-64-9	Dibenzofuran	50	34.2	68	40-140
84-74-2	Di-n-butyl phthalate	50	47.2	94	40-140
117-84-0	Di-n-octyl phthalate	50	72.4	145* a	40-140
84-66-2	Diethyl phthalate	50	33.2	66	40-140
131-11-3	Dimethyl phthalate	50	28.7	57	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	52.6	105	40-140
118-74-1	Hexachlorobenzene	50	45.2	90	40-140

* = Outside of Control Limits.

7.2.1


Blank Spike Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37522-BS	R38039.D	1	04/10/14	KR	04/09/14	OP37522	MSR1403

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29574-1, MC29574-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	22.7	45	40-140
67-72-1	Hexachloroethane	50	32.8	66	40-140
78-59-1	Isophorone	50	42.9	86	40-140
88-74-4	2-Nitroaniline	50	51.1	102	40-140
99-09-2	3-Nitroaniline	50	43.2	86	40-140
100-01-6	4-Nitroaniline	50	35.6	71	40-140
98-95-3	Nitrobenzene	50	52.7	105	40-140
62-75-9	n-Nitrosodimethylamine	50	36.0	72	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	60.9	122	40-140
86-30-6	N-Nitrosodiphenylamine	50	43.2	86	40-140
110-86-1	Pyridine	50	29.1	58	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	64%	15-110%
4165-62-2	Phenol-d5	35%	15-110%
118-79-6	2,4,6-Tribromophenol	80%	15-110%
4165-60-0	Nitrobenzene-d5	102%	30-130%
321-60-8	2-Fluorobiphenyl	79%	30-130%
1718-51-0	Terphenyl-d14	89%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

7.2.1


Blank Spike Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37571-BS	R38149.D	1	04/14/14	WK	04/11/14	OP37571	MSR1407

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29574-2, MC29574-3, MC29574-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	14.9	30	30-130
95-57-8	2-Chlorophenol	50	35.0	70	30-130
59-50-7	4-Chloro-3-methyl phenol	50	36.2	72	30-130
120-83-2	2,4-Dichlorophenol	50	38.4	77	30-130
105-67-9	2,4-Dimethylphenol	50	30.8	62	30-130
51-28-5	2,4-Dinitrophenol	50	33.8	68	30-130
534-52-1	4,6-Dinitro-o-cresol	50	47.5	95	30-130
95-48-7	2-Methylphenol	50	31.8	64	30-130
	3&4-Methylphenol	100	57.8	58	30-130
88-75-5	2-Nitrophenol	50	38.2	76	30-130
100-02-7	4-Nitrophenol	50	7.0	14* a	30-130
87-86-5	Pentachlorophenol	50	28.1	56	30-130
108-95-2	Phenol	50	17.3	35	30-130
95-95-4	2,4,5-Trichlorophenol	50	40.3	81	30-130
88-06-2	2,4,6-Trichlorophenol	50	34.7	69	30-130
62-53-3	Aniline	50	24.5	49	40-140
101-55-3	4-Bromophenyl phenyl ether	50	45.6	91	40-140
85-68-7	Butyl benzyl phthalate	50	53.3	107	40-140
100-51-6	Benzyl Alcohol	50	15.4	31* a	40-140
91-58-7	2-Chloronaphthalene	50	41.8	84	40-140
106-47-8	4-Chloroaniline	50	35.4	71	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	38.6	77	40-140
111-44-4	bis(2-Chloroethyl)ether	50	38.9	78	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	46.7	93	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	44.3	89	40-140
122-66-7	1,2-Diphenylhydrazine	50	44.6	89	40-140
121-14-2	2,4-Dinitrotoluene	50	46.7	93	40-140
606-20-2	2,6-Dinitrotoluene	50	45.6	91	40-140
91-94-1	3,3'-Dichlorobenzidine	50	41.7	83	40-140
132-64-9	Dibenzofuran	50	41.8	84	40-140
84-74-2	Di-n-butyl phthalate	50	47.3	95	40-140
117-84-0	Di-n-octyl phthalate	50	55.7	111	40-140
84-66-2	Diethyl phthalate	50	48.8	98	40-140
131-11-3	Dimethyl phthalate	50	46.8	94	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	53.7	107	40-140
118-74-1	Hexachlorobenzene	50	45.0	90	40-140

* = Outside of Control Limits.

7.2.2
7

Blank Spike Summary

Job Number: MC29574

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37571-BS	R38149.D	1	04/14/14	WK	04/11/14	OP37571	MSR1407

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29574-2, MC29574-3, MC29574-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	21.8	44	40-140
67-72-1	Hexachloroethane	50	23.0	46	40-140
78-59-1	Isophorone	50	38.1	76	40-140
88-74-4	2-Nitroaniline	50	43.6	87	40-140
99-09-2	3-Nitroaniline	50	41.7	83	40-140
100-01-6	4-Nitroaniline	50	41.8	84	40-140
98-95-3	Nitrobenzene	50	36.5	73	40-140
62-75-9	n-Nitrosodimethylamine	50	23.1	46	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	40.8	82	40-140
86-30-6	N-Nitrosodiphenylamine	50	43.0	86	40-140
110-86-1	Pyridine	50	18.2	36* a	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	40%	15-110%
4165-62-2	Phenol-d5	28%	15-110%
118-79-6	2,4,6-Trihromophenol	67%	15-110%
4165-60-0	Nitrobenzene-d5	70%	30-130%
321-60-8	2-Fluorobiphenyl	65%	30-130%
1718-51-0	Terphenyl-d14	94%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.



Blank Spike Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37657-BS	R38280.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29574-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	10.9	22* a	30-130
95-57-8	2-Chlorophenol	50	38.9	78	30-130
59-50-7	4-Chloro-3-methyl phenol	50	37.0	74	30-130
120-83-2	2,4-Dichlorophenol	50	40.1	80	30-130
105-67-9	2,4-Dimethylphenol	50	32.5	65	30-130
51-28-5	2,4-Dinitrophenol	50	27.8	56	30-130
534-52-1	4,6-Dinitro-o-cresol	50	38.5	77	30-130
95-48-7	2-Methylphenol	50	27.6	55	30-130
	3&4-Methylphenol	100	53.3	53	30-130
88-75-5	2-Nitrophenol	50	40.6	81	30-130
100-02-7	4-Nitrophenol	50	15.8	32	30-130
87-86-5	Pentachlorophenol	50	40.6	81	30-130
108-95-2	Phenol	50	17.6	35	30-130
95-95-4	2,4,5-Trichlorophenol	50	43.4	87	30-130
88-06-2	2,4,6-Trichlorophenol	50	44.1	88	30-130

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	55%	15-110%
4165-62-2	Phenol-d5	33%	15-110%
118-79-6	2,4,6-Tribromophenol	91%	15-110%
4165-60-0	Nitrobenzene-d5	79%	30-130%
321-60-8	2-Fluorobiphenyl	83%	30-130%
1718-51-0	Terphenyl-d14	96%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

7.2.3
 7

Blank Spike Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37523-BS	R38020.D	1	04/10/14	KR	04/09/14	OP37523	MSR1402

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29574-1, MC29574-2, MC29574-3, MC29574-4, MC29574-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	44.2	88	40-140
208-96-8	Acenaphthylene	50	43.2	86	40-140
120-12-7	Anthracene	50	45.1	90	40-140
56-55-3	Benzo(a)anthracene	50	49.0	98	40-140
50-32-8	Benzo(a)pyrene	50	46.7	93	40-140
205-99-2	Benzo(b)fluoranthene	50	52.5	105	40-140
191-24-2	Benzo(g,h,i)perylene	50	51.4	103	40-140
207-08-9	Benzo(k)fluoranthene	50	50.2	100	40-140
218-01-9	Chrysene	50	44.2	88	40-140
53-70-3	Dibenzo(a,h)anthracene	50	52.9	106	40-140
206-44-0	Fluoranthene	50	47.6	95	40-140
86-73-7	Fluorene	50	47.1	94	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	42.9	86	40-140
90-12-0	1-Methylnaphthalene	50	39.4	79	40-140
91-57-6	2-Methylnaphthalene	50	38.3	77	40-140
85-01-8	Phenanthrene	50	45.4	91	40-140
129-00-0	Pyrene	50	46.3	93	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	85%	30-130%
321-60-8	2-Fluorobiphenyl	80%	30-130%
1718-51-0	Terphenyl-d14	89%	30-130%

* = Outside of Control Limits.

7.2.4
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37522-MS	R38053.D	1	04/11/14	KR	04/09/14	OP37522	MSR1403
OP37522-MSD	R38054.D	1	04/11/14	KR	04/09/14	OP37522	MSR1403
MC29574-1	R38055.D	1	04/11/14	KR	04/09/14	OP37522	MSR1403

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29574-1, MC29574-4

CAS No.	Compound	MC29574-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
65-85-0	Benzoic Acid	ND		54.3	26.3	48	52.6	25.9	49	2	30-130/20
95-57-8	2-Chlorophenol	ND		54.3	0.60	1* a	52.6	0.73	1* a	20	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		54.3	2.2	4* a	52.6	2.0	4* a	10	30-130/20
120-83-2	2,4-Dichlorophenol	ND		54.3	1.4	3* a	52.6	1.7	3* a	19	30-130/20
105-67-9	2,4-Dimethylphenol	ND		54.3	12.1	22* a	52.6	12.3	23* a	2	30-130/20
51-28-5	2,4-Dinitrophenol	ND		54.3	42.5	78	52.6	41.1	78	3	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		54.3	49.5	91	52.6	57.2	109	14	30-130/20
95-48-7	2-Methylphenol	ND		54.3	3.2	6* a	52.6	3.2	6* a	0	30-130/20
	3&4-Methylphenol	ND		109	3.6	3* a	105	3.7	4* a	3	30-130/20
88-75-5	2-Nitrophenol	ND		54.3	30.1	55	52.6	31.5	60	5	30-130/20
100-02-7	4-Nitrophenol	ND		54.3	19.5	36	52.6	19.5	37	0	30-130/20
87-86-5	Pentachlorophenol	ND		54.3	9.1	17* a	52.6	10.5	20* a	14	30-130/20
108-95-2	Phenol	ND		54.3	0.69	1* a	52.6	0.65	1* a	6	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		54.3	3.9	7* a	52.6	5.1	10* a	27* b	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		54.3	3.3	6* a	52.6	3.6	7* a	9	30-130/20
62-53-3	Aniline	ND		54.3	15.6	29* a	52.6	15.4	29* a	1	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		54.3	48.1	89	52.6	43.2	82	11	40-140/20
85-68-7	Butyl benzyl phthalate	ND		54.3	58.5	108	52.6	51.7	98	12	40-140/20
100-51-6	Benzyl Alcohol	ND		54.3	37.4	69	52.6	35.2	67	6	40-140/20
91-58-7	2-Chloronaphthalene	ND		54.3	46.2	85	52.6	44.9	85	3	40-140/20
106-47-8	4-Chloroaniline	ND		54.3	26.9	49	52.6	26.6	51	1	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		54.3	44.8	82	52.6	41.9	80	7	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		54.3	46.6	86	52.6	44.1	84	6	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		54.3	55.8	103	52.6	51.8	98	7	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		54.3	48.0	88	52.6	45.1	86	6	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		54.3	46.2	85	52.6	45.3	86	2	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		54.3	51.9	95	52.6	47.8	91	8	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		54.3	49.2	91	52.6	36.3	69	30* b	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		54.3	19.2	35* a	52.6	17.3	33* a	10	40-140/20
132-64-9	Dibenzofuran	ND		54.3	45.2	83	52.6	40.5	77	11	40-140/20
84-74-2	Di-n-butyl phthalate	0.29	JB	54.3	50.4	92	52.6	56.6	107	12	40-140/20
117-84-0	Di-n-octyl phthalate	ND		54.3	69.6	128	52.6	42.3	80	49* c	40-140/20
84-66-2	Diethyl phthalate	ND		54.3	50.4	93	52.6	49.4	94	2	40-140/20
131-11-3	Dimethyl phthalate	ND		54.3	42.1	77	52.6	31.1	59	30* b	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		54.3	57.2	105	52.6	51.3	97	11	40-140/20
118-74-1	Hexachlorobenzene	ND		54.3	46.9	86	52.6	42.2	80	11	40-140/20

* = Outside of Control Limits.

7.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37522-MS	R38053.D	1	04/11/14	KR	04/09/14	OP37522	MSR1403
OP37522-MSD	R38054.D	1	04/11/14	KR	04/09/14	OP37522	MSR1403
MC29574-1	R38055.D	1	04/11/14	KR	04/09/14	OP37522	MSR1403

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29574-1, MC29574-4

CAS No.	Compound	MC29574-1 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND	54.3	25.3	47	52.6	24.3	46	4	40-140/20
67-72-1	Hexachloroethane	ND	54.3	31.4	58	52.6	30.9	59	2	40-140/20
78-59-1	Isophorone	ND	54.3	43.3	80	52.6	42.1	80	3	40-140/20
88-74-4	2-Nitroaniline	ND	54.3	48.8	90	52.6	39.0	74	22* b	40-140/20
99-09-2	3-Nitroaniline	ND	54.3	41.5	76	52.6	31.4	60	28* b	40-140/20
100-01-6	4-Nitroaniline	ND	54.3	45.4	84	52.6	42.4	81	7	40-140/20
98-95-3	Nitrobenzene	ND	54.3	43.8	81	52.6	43.0	82	2	40-140/20
62-75-9	n-Nitrosodimethylamine	ND	54.3	28.8	53	52.6	30.2	57	5	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND	54.3	46.5	86	52.6	42.7	81	9	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND	54.3	44.9	83	52.6	43.1	82	4	40-140/20
110-86-1	Pyridine	ND	54.3	16.9	31* a	52.6	18.2	35* a	7	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29574-1	Limits
367-12-4	2-Fluorophenol	2%* e	2%* e	1%* d	15-110%
4165-62-2	Phenol-d5	1%* e	1%* e	1%* d	15-110%
118-79-6	2,4,6-Tribromophenol	7%* e	8%* e	3%* d	15-110%
4165-60-0	Nitrobenzene-d5	78%	78%	71%	30-130%
321-60-8	2-Fluorobiphenyl	73%	69%	68%	30-130%
1718-51-0	Terphenyl-d14	92%	82%	87%	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. Sample re-extracted/reanalyzed.
- (e) Outside control limits due to possible matrix interference.

* = Outside of Control Limits.

7.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37571-MS	R38150.D	1	04/14/14	WK	04/11/14	OP37571	MSR1407
OP37571-MSD	R38151.D	1	04/14/14	WK	04/11/14	OP37571	MSR1407
MC29300-23	R38152.D	1	04/14/14	WK	04/11/14	OP37571	MSR1407

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29574-2, MC29574-3, MC29574-5

CAS No.	Compound	MC29300-23 Spike		MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
		ug/l	Q								
65-85-0	Benzoic Acid	ND		50.5	15.5	31	50.5	15.9	31	3	30-130/20
95-57-8	2-Chlorophenol	ND		50.5	33.3	66	50.5	33.1	66	1	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50.5	36.2	72	50.5	35.9	71	1	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50.5	37.0	73	50.5	35.9	71	3	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50.5	29.0	57	50.5	33.1	66	13	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50.5	38.4	76	50.5	35.4	70	8	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50.5	48.6	96	50.5	45.7	90	6	30-130/20
95-48-7	2-Methylphenol	ND		50.5	29.6	59	50.5	30.0	59	1	30-130/20
	3&4-Methylphenol	ND		101	53.0	52	101	52.7	52	1	30-130/20
88-75-5	2-Nitrophenol	ND		50.5	36.4	72	50.5	35.7	71	2	30-130/20
100-02-7	4-Nitrophenol	ND		50.5	7.0	14* a	50.5	7.9	16* a	12	30-130/20
87-86-5	Pentachlorophenol	ND		50.5	35.9	71	50.5	30.4	60	17	30-130/20
108-95-2	Phenol	ND		50.5	11.6	23* b	50.5	11.8	23* b	2	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50.5	40.8	81	50.5	40.4	80	1	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50.5	33.1	66	50.5	32.7	65	1	30-130/20
62-53-3	Aniline	ND		50.5	23.7	47	50.5	24.0	48	1	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50.5	43.7	87	50.5	43.0	85	2	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50.5	51.3	102	50.5	50.5	100	2	40-140/20
100-51-6	Benzyl Alcohol	ND		50.5	15.1	30* a	50.5	12.6	25* a	18	40-140/20
91-58-7	2-Chloronaphthalene	ND		50.5	40.0	79	50.5	39.2	78	2	40-140/20
106-47-8	4-Chloroaniline	ND		50.5	33.9	67	50.5	33.5	66	1	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50.5	36.1	71	50.5	36.0	71	0	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50.5	36.2	72	50.5	36.5	72	1	40-140/20
108-60-1	his(2-Chloroisopropyl)ether	ND		50.5	44.5	88	50.5	44.3	88	0	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50.5	41.1	81	50.5	41.1	81	0	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50.5	42.3	84	50.5	41.3	82	2	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50.5	43.8	87	50.5	43.5	86	1	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50.5	42.0	83	50.5	41.5	82	1	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50.5	34.3	68	50.5	33.9	67	1	40-140/20
132-64-9	Dibenzofuran	ND		50.5	38.7	77	50.5	38.6	76	0	40-140/20
84-74-2	Di-n-butyl phthalate	0.41	J	50.5	45.2	89	50.5	44.2	87	2	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50.5	52.9	105	50.5	51.9	103	2	40-140/20
84-66-2	Diethyl phthalate	ND		50.5	45.8	91	50.5	45.7	90	0	40-140/20
131-11-3	Dimethyl phthalate	ND		50.5	43.7	87	50.5	43.5	86	0	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50.5	51.8	103	50.5	50.4	100	3	40-140/20
118-74-1	Hexachlorobenzene	ND		50.5	42.9	85	50.5	42.1	83	2	40-140/20

* = Outside of Control Limits.

7.3.2
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37571-MS	R38150.D	1	04/14/14	WK	04/11/14	OP37571	MSR1407
OP37571-MSD	R38151.D	1	04/14/14	WK	04/11/14	OP37571	MSR1407
MC29300-23	R38152.D	1	04/14/14	WK	04/11/14	OP37571	MSR1407

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29574-2, MC29574-3, MC29574-5

CAS No.	Compound	MC29300-23 Spike		MS	MS	Spike	MSD	MSD	RPD	Limits
		ug/l	Q ug/l	ug/l	%	ug/l	ug/l	%		Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND	50.5	23.4	46	50.5	22.3	44	5	40-140/20
67-72-1	Hexachloroethane	ND	50.5	26.2	52	50.5	24.9	49	5	40-140/20
78-59-1	Isophorone	ND	50.5	35.5	70	50.5	35.1	69	1	40-140/20
88-74-4	2-Nitroaniline	ND	50.5	40.9	81	50.5	40.2	80	2	40-140/20
99-09-2	3-Nitroaniline	ND	50.5	39.2	78	50.5	38.9	77	1	40-140/20
100-01-6	4-Nitroaniline	ND	50.5	38.8	77	50.5	38.7	77	0	40-140/20
98-95-3	Nitrobenzene	ND	50.5	35.1	69	50.5	34.9	69	1	40-140/20
62-75-9	n-Nitrosodimethylamine	ND	50.5	21.9	43	50.5	22.2	44	1	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND	50.5	37.7	75	50.5	37.5	74	1	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND	50.5	41.5	82	50.5	40.7	81	2	40-140/20
110-86-1	Pyridine	ND	50.5	18.6	37* a	50.5	18.4	36* a	1	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29300-23 Limits
367-12-4	2-Fluorophenol	35%	37%	0%* c 15-110%
4165-62-2	Phenol-d5	24%	25%	0%* c 15-110%
118-79-6	2,4,6-Tribromophenol	59%	65%	0%* c 15-110%
4165-60-0	Nitrobenzene-d5	66%	65%	74% 30-130%
321-60-8	2-Fluorobiphenyl	67%	65%	66% 30-130%
1718-51-0	Terphenyl-d14	89%	87%	77% 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.
- (c) Surrogate standard not added.

* = Outside of Control Limits.

7.3.2
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29574

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37657-MS	R38281.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411
OP37657-MSD	R38282.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411
MC29400-19	R38283.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29574-1

CAS No.	Compound	MC29400-19 Spike		MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
		ug/l	Q							
65-85-0	Benzoic Acid	ND	50	12.7	25* a	50	12.9	26* a	2	30-130/20
95-57-8	2-Chlorophenol	ND	50	36.2	72	50	34.3	69	5	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND	50	39.3	79	50	36.7	73	7	30-130/20
120-83-2	2,4-Dichlorophenol	ND	50	41.7	83	50	39.0	78	7	30-130/20
105-67-9	2,4-Dimethylphenol	ND	50	33.8	68	50	30.1	60	12	30-130/20
51-28-5	2,4-Dinitrophenol	ND	50	30.7	61	50	30.9	62	1	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND	50	41.6	83	50	41.0	82	1	30-130/20
95-48-7	2-Methylphenol	ND	50	30.6	61	50	28.3	57	8	30-130/20
	3&4-Methylphenol	ND	100	60.6	61	100	54.5	55	11	30-130/20
88-75-5	2-Nitrophenol	ND	50	43.2	86	50	39.0	78	10	30-130/20
100-02-7	4-Nitrophenol	ND	50	16.1	32	50	15.7	31	3	30-130/20
87-86-5	Pentachlorophenol	ND	50	41.5	83	50	40.0	80	4	30-130/20
108-95-2	Phenol	ND	50	15.5	31	50	14.7	29* b	5	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND	50	44.6	89	50	41.6	83	7	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND	50	44.9	90	50	42.6	85	5	30-130/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29400-19 Limits
367-12-4	2-Fluorophenol	45%	47%	38% 15-110%
4165-62-2	Phenol-d5	30%	28%	24% 15-110%
118-79-6	2,4,6-Tribromophenol	91%	89%	74% 15-110%
4165-60-0	Nitrobenzene-d5	76%	74%	72% 30-130%
321-60-8	2-Fluorobiphenyl	84%	78%	64% 30-130%
1718-51-0	Terphenyl-d14	93%	91%	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.

7.3.3
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29574

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37523-MS	R38021.D	1	04/10/14	KR	04/09/14	OP37523	MSR1402
OP37523-MSD	R38024.D	1	04/10/14	KR	04/09/14	OP37523	MSR1402
MC29574-1	R38026.D	1	04/10/14	KR	04/09/14	OP37523	MSR1402

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29574-1, MC29574-2, MC29574-3, MC29574-4, MC29574-5

CAS No.	Compound	MC29574-1 ug/l	Spike Q	ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		54.3	45.4	84	52.6	42.4	81	7	40-140/20
208-96-8	Acenaphthylene	ND		54.3	44.4	82	52.6	41.4	79	7	40-140/20
120-12-7	Anthracene	ND		54.3	46.9	86	52.6	43.2	82	8	40-140/20
56-55-3	Benzo(a)anthracene	ND		54.3	52.2	96	52.6	47.5	90	9	40-140/20
50-32-8	Benzo(a)pyrene	ND		54.3	47.8	88	52.6	43.1	82	10	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		54.3	56.4	104	52.6	51.5	98	9	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		54.3	54.7	101	52.6	49.5	94	10	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		54.3	53.0	98	52.6	47.6	90	11	40-140/20
218-01-9	Chrysene	ND		54.3	47.7	88	52.6	43.2	82	10	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		54.3	56.5	104	52.6	64.8	123	14	40-140/20
206-44-0	Fluoranthene	ND		54.3	51.6	95	52.6	46.5	88	10	40-140/20
86-73-7	Fluorene	ND		54.3	49.1	90	52.6	45.1	86	8	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		54.3	45.0	83	52.6	53.0	101	16	40-140/20
90-12-0	1-Methylnaphthalene	ND		54.3	41.3	76	52.6	41.8	79	1	40-140/20
91-57-6	2-Methylnaphthalene	ND		54.3	40.2	74	52.6	36.0	68	11	40-140/20
85-01-8	Phenanthrene	0.023	JB	54.3	48.2	89	52.6	44.5	85	8	40-140/20
129-00-0	Pyrene	ND		54.3	49.7	91	52.6	45.0	86	10	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29574-1	Limits
4165-60-0	Nitrobenzene-d5	79%	55%	102%	30-130%
321-60-8	2-Fluorobiphenyl	74%	71%	72%	30-130%
1718-51-0	Terphenyl-d14	89%	83%	85%	30-130%

* = Outside of Control Limits.

7.3.4
7

Semivolatile Internal Standard Area Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSR1402-CC1401	Injection Date:	04/10/14
Lab File ID:	R38018.D	Injection Time:	12:59
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	220800	5.44	754829	6.54	442123	8.08	763827	9.38	757866	12.00	1270984	13.71
Upper Limit ^a	441600	5.94	1509658	7.04	884246	8.58	1527654	9.88	1515732	12.50	2541968	14.21
Lower Limit ^b	110400	4.94	377415	6.04	221062	7.58	381914	8.88	378933	11.50	635492	13.21

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37523-MB	201139	5.44	687445	6.54	403888	8.08	701111	9.38	707299	11.99	1152667	13.71
OP37523-BS	196017	5.44	671958	6.54	392583	8.08	680727	9.38	685113	12.00	1121631	13.71
OP37523-MS	212087	5.44	725097	6.54	425962	8.08	737962	9.38	732955	12.00	1209440	13.71
OP37523-MSD	142492	5.44	643955	6.54	283020	8.08	697641	9.38	494105	12.00	816578	13.71
MC29574-1	180582	5.44	508285	6.54	296281	8.08	515476	9.38	515444	11.99	852605	13.71
MC29574-2	209647	5.44	519935	6.54	305913	8.08	739671	9.38	514234	11.99	848210	13.71
MC29574-3	151861	5.44	652644	6.54	302738	8.08	530550	9.38	533344	11.99	899893	13.71
MC29574-4	180891	5.44	475330	6.54	276434	8.08	482353	9.38	476744	11.99	781529	13.71
MC29574-5	146219	5.44	712157	6.54	287867	8.08	500015	9.38	497818	11.99	819017	13.71

- 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
7

Semivolatile Internal Standard Area Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSR1403-CC1399	Injection Date:	04/10/14
Lab File ID:	R38036.D	Injection Time:	20:48
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	181022	5.42	538184	6.52	314711	8.05	538332	9.36	584266	11.97	563706	13.68
Upper Limit ^a	362044	5.92	1076368	7.02	629422	8.55	1076664	9.86	1168532	12.47	1127412	14.18
Lower Limit ^b	90511	4.92	269092	6.02	157356	7.55	269166	8.86	292133	11.47	281853	13.18

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37522-MB	175785	5.41	669025	6.51	407493	8.05	696010	9.36	724201	11.96	518131	13.67
OP37522-BS	124430	5.42	461986	6.52	345899	8.05	475549	9.36	518221	11.97	510523	13.68
OP37530-MB	191692	5.41	709572	6.51	396296	8.05	540988	9.36	585449	11.96	575922	13.67
OP37530-BS	173531	5.42	579052	6.51	336251	8.05	589176	9.36	644727	11.97	631951	13.68
OP37530-MS	215939	5.42	821645	6.51	497389	8.05	879454	9.36	942735	11.97	914518	13.68
OP37530-MSD	205279	5.42	709932	6.52	449623	8.05	593734	9.36	634730	11.97	623020	13.68
MC29300-14	158727	5.41	492107	6.51	415432	8.05	526137	9.36	569139	11.96	710645	13.67
ZZZZZZ	223962	5.41	828558	6.51	508870	8.05	805587	9.36	694589	11.96	680795	13.67
ZZZZZZ	207876	5.42	789337	6.51	446652	8.05	720998	9.36	610704	11.96	634364	13.67
ZZZZZZ	208342	5.41	778176	6.51	471989	8.05	811102	9.36	870972	11.96	847924	13.67
ZZZZZZ	210411	5.41	788081	6.51	477968	8.05	846027	9.36	889691	11.96	871463	13.67
ZZZZZZ	213828	5.41	803958	6.51	482612	8.05	838364	9.36	762589	11.96	628799	13.67
OP37522-MS	195478	5.42	736654	6.51	449761	8.05	791329	9.36	806989	11.97	653126	13.68
OP37522-MSD	171889	5.42	651974	6.51	396450	8.05	569675	9.36	594434	11.97	722814	13.68
MC29574-1	212316	5.41	792918	6.51	480567	8.05	839326	9.36	866339	11.96	635069	13.67
MC29574-4	194096	5.41	722979	6.51	441362	8.05	764080	9.36	814864	11.96	802020	13.67
ZZZZZZ	210139	5.42	790035	6.51	380738	8.05	786037	9.36	740562	11.96	911104	13.67

- 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.

7.4.2
7

Semivolatile Internal Standard Area Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSR1407-CC1399	Injection Date:	04/14/14
Lab File ID:	R38137.D	Injection Time:	16:43
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	161828	5.27	609042	6.37	368586	7.90	628020	9.21	652692	11.77	626035	13.46
Upper Limit ^a	323656	5.77	1218084	6.87	737172	8.40	1256040	9.71	1305384	12.27	1252070	13.96
Lower Limit ^b	80914	4.77	304521	5.87	184293	7.40	314010	8.71	326346	11.27	313018	12.96

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
ZZZZZZ	201983	5.27	763542	6.37	458775	7.90	767707	9.20	772056	11.77	760302	13.46
ZZZZZZ	212365	5.27	795752	6.37	469421	7.90	782950	9.20	790622	11.77	751394	13.46
ZZZZZZ	204574	5.27	769017	6.37	458326	7.90	770332	9.20	772021	11.77	750762	13.46
ZZZZZZ	218347	5.27	811613	6.37	485963	7.90	809198	9.20	810553	11.77	757911	13.46
ZZZZZZ	203720	5.27	761402	6.37	456269	7.90	765046	9.20	757961	11.77	726223	13.46
ZZZZZZ	203697	5.27	750754	6.37	441736	7.90	733953	9.20	746844	11.77	721953	13.46
ZZZZZZ	218224	5.27	813235	6.37	484831	7.90	799026	9.20	793885	11.77	743438	13.46
ZZZZZZ	214867	5.27	801486	6.37	478054	7.90	796157	9.20	786009	11.77	751393	13.46
ZZZZZZ	231676	5.27	857040	6.37	512503	7.90	847888	9.20	859384	11.77	814280	13.46
ZZZZZZ	205626	5.27	773510	6.37	463708	7.90	766380	9.20	770364	11.77	726695	13.46
OP37571-MB	158479	5.27	598384	6.37	351537	7.90	591475	9.20	590885	11.77	562616	13.46
OP37571-BS	158815	5.27	595261	6.37	348113	7.90	594331	9.20	602116	11.77	569022	13.46
OP37571-MS	179326	5.27	668072	6.37	392819	7.90	656299	9.21	676297	11.77	648382	13.46
OP37571-MSD	169313	5.27	628741	6.37	367863	7.90	621569	9.21	633539	11.77	612155	13.46
MC29300-23	167568	5.27	627660	6.37	378429	7.90	641807	9.20	654045	11.77	630028	13.46
ZZZZZZ	170073	5.27	639217	6.37	383268	7.90	635715	9.20	646310	11.76	625805	13.45
ZZZZZZ	167682	5.27	622298	6.37	369395	7.90	629945	9.20	651135	11.77	645804	13.47
ZZZZZZ	166133	5.27	619179	6.37	374228	7.90	639962	9.21	675287	11.78	666214	13.47
MC29574-2	165883	5.27	613450	6.37	373495	7.90	629592	9.20	679302	11.77	657594	13.46
MC29574-3	163552	5.27	602467	6.37	365223	7.90	608303	9.20	633415	11.77	617339	13.45
MC29574-5	158926	5.27	585581	6.37	349215	7.90	589635	9.20	607964	11.77	588776	13.46
ZZZZZZ	168375	5.27	615770	6.37	376427	7.90	639549	9.20	658881	11.77	641513	13.46
ZZZZZZ	166572	5.27	615384	6.37	376264	7.90	640238	9.20	654347	11.77	648643	13.47
ZZZZZZ	152043	5.27	559572	6.37	340727	7.90	582371	9.20	607038	11.77	598203	13.46

- 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.

7.4.3
7

Semivolatile Internal Standard Area Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSR1411-CC1410	Injection Date:	04/21/14
Lab File ID:	R38278.D	Injection Time:	09:41
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	119472	5.41	428450	6.51	266822	8.04	473515	9.35	453402	11.94	394254	13.65
Upper Limit ^a	238944	5.91	856900	7.01	533644	8.54	947030	9.85	906804	12.44	788508	14.15
Lower Limit ^b	59736	4.91	214225	6.01	133411	7.54	236758	8.85	226701	11.44	197127	13.15

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37657-MB	135006	5.41	489741	6.50	305204	8.04	538899	9.34	507315	11.94	444856	13.64
OP37657-BS	140201	5.41	472614	6.51	294251	8.04	514369	9.34	489336	11.94	421199	13.64
OP37657-MS	129939	5.41	469854	6.51	292550	8.04	512441	9.35	493469	11.94	427015	13.64
OP37657-MSD	130477	5.41	462134	6.51	290257	8.04	506022	9.34	486758	11.94	428401	13.64
MC29400-19	163993	5.41	581099	6.50	337715	8.04	570831	9.34	548258	11.94	487442	13.64
MC29574-1 ^c	140523	5.41	451574	6.50	276508	8.04	492814	9.34	472387	11.94	415079	13.64
ZZZZZZ	152519	5.41	538696	6.50	346124	8.04	551955	9.34	493276	11.94	446137	13.64
ZZZZZZ	172189	5.41	615115	6.50	384310	8.04	672587	9.34	537100	11.94	481945	13.64
ZZZZZZ	167452	5.41	605031	6.50	343233	8.04	578386	9.34	551960	11.93	472241	13.64
ZZZZZZ	167281	5.41	605849	6.50	380770	8.04	667012	9.34	610631	11.94	483373	13.64
ZZZZZZ	175930	5.41	631190	6.50	393521	8.04	658956	9.34	560351	11.94	472653	13.64
ZZZZZZ	176994	5.41	635207	6.50	402564	8.04	700721	9.34	641216	11.94	558555	13.64
ZZZZZZ	137173	5.41	488477	6.50	303663	8.04	535300	9.34	519084	11.94	466318	13.64
ZZZZZZ	121079	5.41	439990	6.50	279915	8.04	487787	9.34	465322	11.94	413815	13.64

- 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
7

Semivolatile Surrogate Recovery Summary

Job Number: MC29574

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Method: SW846 8270D	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC29574-1	R38284.D	47	29	92	74	78	94
MC29574-1	R38055.D	1* a	1* a	3* a	71	68	87
MC29574-2	R38158.D	38	25	68	64	63	82
MC29574-3	R38159.D	39	25	75	67	66	92
MC29574-4	R38058.D	31	21	49	50	46	75
MC29574-5	R38160.D	40	26	76	71	73	96
OP37522-BS	R38039.D	64	35	80	102	79	89
OP37522-MB	R38038.D	51	34	75	83	76	93
OP37522-MS	R38053.D	2* b	1* b	7* b	78	73	92
OP37522-MSD	R38054.D	2* b	1* b	8* b	78	69	82
OP37571-BS	R38149.D	40	28	67	70	65	94
OP37571-MB	R38148.D	42	27	67	69	67	96
OP37571-MS	R38150.D	35	24	59	66	67	89
OP37571-MSD	R38151.D	37	25	65	65	65	87
OP37657-BS	R38280.D	55	33	91	79	83	96
OP37657-MB	R38279.D	42	28	73	72	74	94
OP37657-MS	R38281.D	45	30	91	76	84	93
OP37657-MSD	R38282.D	47	28	89	74	78	91

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.

7.5.1
7

Semivolatile Surrogate Recovery Summary

Job Number: MC29574

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29574-1	R38026.D	102	72	85
MC29574-2	R38027.D	68	63	87
MC29574-3	R38028.D	65	64	85
MC29574-4	R38029.D	51	47	76
MC29574-5	R38030.D	45	61	77
OP37523-BS	R38020.D	85	80	89
OP37523-MB	R38019.D	85	77	94
OP37523-MS	R38021.D	79	74	89
OP37523-MSD	R38024.D	55	71	83

Surrogate Compounds Recovery Limits

S1 = Nitrobenzene-d5 30-130%
S2 = 2-Fluorobiphenyl 30-130%
S3 = Terphenyl-d14 30-130%

7.5.2
7

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: MC29574
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37559-MB	YZ89183.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539

The QC reported here applies to the following samples: Method: SW846 8011

MC29574-1, MC29574-2, MC29574-3, MC29574-4, MC29574-5, MC29574-7

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	Bromofluorobenzene (S)	74% 36-173%
460-00-4	Bromofluorobenzene (S)	75% 36-173%

8.1.1
8

Blank Spike Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37559-BS	YZ89184.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539

The QC reported here applies to the following samples:

Method: SW846 8011

MC29574-1, MC29574-2, MC29574-3, MC29574-4, MC29574-5, MC29574-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.056	79	60-140
106-93-4	1,2-Dibromoethane	0.071	0.057	80	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	71%	36-173%
460-00-4	Bromofluorobenzene (S)	83%	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37559-MS	YZ89185.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539
OP37559-MSD	YZ89186.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539
MC29574-1	YZ89187.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539

The QC reported here applies to the following samples:

Method: SW846 8011

MC29574-1, MC29574-2, MC29574-3, MC29574-4, MC29574-5, MC29574-7

CAS No.	Compound	MC29574-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0685	0.052	76	0.0672	0.051	76	2	64-141/29
106-93-4	1,2-Dibromoethane	ND	0.0685	0.056	82	0.0672	0.048	71	15	63-163/27

8.3.1
8

CAS No.	Surrogate Recoveries	MS	MSD	MC29574-1	Limits
460-00-4	Bromofluorobenzene (S)	92%	89%	101%	36-173%
460-00-4	Bromofluorobenzene (S)	81%	73%	75%	36-173%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC29574

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29574-1	YZ89187.D	101	75
MC29574-2	YZ89188.D	95	77
MC29574-3	YZ89189.D	79	70
MC29574-4	YZ89190.D	97	80
MC29574-5	YZ89191.D	91	82
MC29574-7	YZ89192.D	103	82
OP37559-BS	YZ89184.D	71	83
OP37559-MB	YZ89183.D	74	75
OP37559-MS	YZ89185.D	92	81
OP37559-MSD	YZ89186.D	89	73

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: MC29574
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7539-ICC7539	Injection Date:	04/11/14
Lab File ID:	YZ89179.D	Injection Time:	14:47
Instrument ID:	GCYZ	Method:	SW846 8011

S1^a S1^b
 RT RT

Check Std	4.08	4.76
-----------	------	------

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
OP37559-MB	YZ89183.D	04/11/14	17:18	4.08	4.76
OP37560-MB	YZ89183A.D	04/11/14	17:18	4.08	4.76
OP37559-BS	YZ89184.D	04/11/14	17:44	4.08	4.76
OP37560-BS	YZ89184A.D	04/11/14	17:44	4.08	4.76
OP37559-MS	YZ89185.D	04/11/14	18:10	4.08	4.76
OP37560-MS	YZ89185A.D	04/11/14	18:10	4.08	4.76
OP37559-MSD	YZ89186.D	04/11/14	18:36	4.08	4.76
OP37560-MSD	YZ89186A.D	04/11/14	18:36	4.08	4.76
MC29300-20	YZ89187A.D	04/11/14	19:03	4.08	4.76
MC29574-1	YZ89187.D	04/11/14	19:03	4.08	4.76
MC29574-2	YZ89188.D	04/11/14	19:29	4.08	4.76
MC29574-3	YZ89189.D	04/11/14	19:55	4.08	4.76
MC29574-4	YZ89190.D	04/11/14	20:21	4.08	4.76
MC29574-5	YZ89191.D	04/11/14	20:47	4.08	4.76
MC29574-7	YZ89192.D	04/11/14	21:15	4.08	4.76

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 – 2nd Quarter 2014 Data Review

Laboratory SDG: MC29594

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 5/13/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2013

Sample Identification	Sample Identification
MW6D-ROX-040814	MW6C-ROX-040814
MW6B-ROX-040814	MW6A-ROX-040814-EB
MW6A-ROX-040814	MW6A-ROX-040814-Dup
MW12-ROX-040814	TB-ROX-040814-HCL
TB-ROX-040814-ST	

1.0 Data Package Completeness

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

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated SVOCs were detected in the method blank; VOCs and SVOCs were also detected in the equipment blank. VOC and SVOC LCS recoveries were outside evaluation criteria. These issues are addressed further in the appropriate sections below. Additionally, continuing calibration verification for acrolein and 2-chloroethyl vinyl ether exceeded 40 percent difference (%D).

The cooler receipt form indicated that two of two coolers were received by the laboratory at temperatures of 1.1°C and 1.5°C, which are outside the 4°C ± 2°C criteria. Samples were received in good condition; therefore, no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

Yes

Blank ID	Parameter	Analyte	Concentration/Amount
MW6A-ROX-040814-EB	VOCs	Acetone	6.5 µg/L
MW6A-ROX-040814-EB	SVOCs	Di-n-butyl phthalate	0.33 µg/L
OP37530-MB	SVOCs	Di-n-butyl phthalate	0.45 µg/L
OP37571-MB	SVOCs	Di-n-butyl phthalate	0.67 µg/L
OP37571-MB	SVOCs	bis(2-Ethylhexyl)phthalate	6.2 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 (10X for common laboratory contaminants) did not require qualification. MW6A-ROX-040814-EB is a quality control sample and is not qualified.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
MW6D-ROX-040814	SVOCs	Di-n-butyl phthalate	-	U
MW6C-ROX-040814	SVOCs	Di-n-butyl phthalate	-	U
MW6B-ROX-040814	SVOCs	Di-n-butyl phthalate	-	U
MW6A-ROX-040814	SVOCs	Di-n-butyl phthalate	-	U
MW6A-ROX-040814	SVOCs	bis(2-Ethylhexyl)phthalate	-	U
MW6A-ROX-040814-Dup	SVOCs	Di-n-butyl phthalate	-	U
MW6A-ROX-040814-Dup	SVOCs	bis(2-Ethylhexyl)phthalate	-	U
MW12-ROX-040814	SVOCs	Di-n-butyl phthalate	-	U
MW12-ROX-040814	SVOCs	bis(2-Ethylhexyl)phthalate	-	U

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV1111-BS	VOCs	Acrolein	148	70-130
MSV1111-BS	VOCs	2-Chloroethyl vinyl ether	186	70-130
OP37571-BS	SVOCs	4-Nitrophenol	14	30-130
OP37571-BS	SVOCs	Benzyl alcohol	31	40-140
OP37571-BS	SVOCs	Pyridine	36	40-140

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Sample ID	Parameter	Analyte	Qualification
MW6A-ROX-040814	SVOCs	4-Nitrophenol	UJ
MW6A-ROX-040814	SVOCs	Benzyl alcohol	UJ
MW6A-ROX-040814	SVOCs	Pyridine	UJ
MW6A-ROX-040814-Dup	SVOCs	4-Nitrophenol	UJ
MW6A-ROX-040814-Dup	SVOCs	Benzyl alcohol	UJ
MW6A-ROX-040814-Dup	SVOCs	Pyridine	UJ
MW12-ROX-040814	SVOCs	4-Nitrophenol	UJ
MW12-ROX-040814	SVOCs	Benzyl alcohol	UJ
MW12-ROX-040814	SVOCs	Pyridine	UJ

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
MW6A-ROX-040814	MW6A-ROX-040814-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 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, MA

Accutest Job Number: MC29594

Sampling Date: 04/08/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: 109



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
5/13/2014
Reza Fard
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: MC29594

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
MC29594-1	04/08/14	10:00	DMMM04/09/14	AQ	Ground Water	MW6D-ROX-040814 ✓
MC29594-2	04/08/14	11:05	DMMM04/09/14	AQ	Ground Water	MW6C-ROX-040814 ✓
MC29594-3	04/08/14	12:20	DMMM04/09/14	AQ	Ground Water	MW6B-ROX-040814 ✓
MC29594-4	04/08/14	12:45	DMMM04/09/14	AQ	Equipment Blank	MW6A-ROX-040814-EB ✓
MC29594-5	04/08/14	13:25	DMMM04/09/14	AQ	Ground Water	MW6A-ROX-040814 ✓
MC29594-6	04/08/14	13:25	DMMM04/09/14	AQ	Ground Water	MW6A-ROX-040814-DUP ✓
MC29594-7	04/08/14	15:10	DMMM04/09/14	AQ	Ground Water	MW12-ROX-040814 ✓
MC29594-8	04/08/14	00:00	DMMM04/09/14	AQ	Trip Blank Water	TB-ROX-040814-HCL ✓
MC29594-9	04/08/14	00:00	DMMM04/09/14	AQ	Trip Blank Water	TB-ROX-040814-ST ✓



SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Shell Oil Job No MC29594
 Site: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Report Date 4/23/2014 9:50:56 AM

7 Sample(s) and 2 Trip Blank(s) were collected on 04/08/2014 and were received at Accutest on 04/09/2014 properly preserved, at 1.1 Deg. C and intact. These Samples received an Accutest job number of MC29594. 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: MSV1111
-----------	-------------------

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29574-IMS, MC29574-IMSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- 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 1,2,3-Trichlorobenzene, 2-Chloroethyl vinyl ether, Naphthalene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 1,4-Dioxane, 2-Chloroethyl vinyl ether, Acetone are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 1,2,3-Trichlorobenzene, Naphthalene are outside control limits for sample MC29574-IMSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- Continuing calibration check standard MSV1111-CC1058 for acrolein, 2-chloroethyl vinyl ether exceed 40% difference (response bias high). Associated samples are non-detect for these compounds.
- MC29574-IMS/MSD for Acrolein: Outside control limits. Associated samples are non-detect for this compound.

Extractables by GCMS By Method SW846 8270D

Matrix	AQ	Batch ID:	OP37530
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- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29300-14MS, MC29300-14MSD were used as the QC samples indicated.
- Sample(s) MC29594-1, MC29594-2, MC29594-3, MC29594-4 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- Matrix Spike Recovery(s) for Pyridine are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 1,2-Diphenylhydrazine, 2-Chloronaphthalene, 2-Nitroaniline, 4,6-Dinitro-o-cresol, Butyl benzyl phthalate, N-Nitrosodiphenylamine are outside control limits for sample OP37530-MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- Calibration check standard MSR1404-ECC1399 not associated with this job.

Matrix	AQ	Batch ID:	OP37571
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- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29300-23MS, MC29300-23MSD were used as the QC samples indicated.
- Sample(s) MC29594-5, MC29594-6, MC29594-7 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- OP37571-BS/MS/MSD Recovery(s) for 4-Nitrophenol, Benzyl Alcohol, Pyridine are outside control limits. Blank Spike meets program technical requirements.
- OP37571-MS/MSD Recovery(s) for Phenol are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix	AQ	Batch ID:	OP37531
--------	----	-----------	---------

- 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) MC29300-15MS, MC29300-15MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8011

Matrix	AQ	Batch ID:	OP37559
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- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29574-1MS, MC29574-1MSD 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 (MC29594).

Summary of Hits

Job Number: MC29594
 Account: Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Collected: 04/08/14



Lab Sample ID	Client Sample ID	Result/ Analyte	Qual	RL	MDL	Units	Method
MC29594-1	MW6D-ROX-040814						
		Benzene	6.4	0.50	0.32	ug/l	SW846 8260C
		Methyl Tert Butyl Ether	0.94 J	1.0	0.51	ug/l	SW846 8260C
		Di-n-butyl phthalate	0.39 JB u	5.5	0.19	ug/l	SW846 8270D
MC29594-2	MW6C-ROX-040814						
		Benzene	2.1	0.50	0.32	ug/l	SW846 8260C
		Di-n-butyl phthalate	0.40 JB u	5.9	0.20	ug/l	SW846 8270D
MC29594-3	MW6B-ROX-040814						
		Benzene	0.90	0.50	0.32	ug/l	SW846 8260C
		Methyl Tert Butyl Ether	4.7	1.0	0.51	ug/l	SW846 8260C
		Di-n-butyl phthalate	0.43 JB u	5.3	0.18	ug/l	SW846 8270D
		Phenanthrene	0.018 J	0.053	0.013	ug/l	SW846 8270D BY SIM
MC29594-4	MW6A-ROX-040814-EB						
		Acetone	6.5 J	10	2.4	ug/l	SW846 8260C
		Di-n-butyl phthalate	0.33 JB	5.1	0.18	ug/l	SW846 8270D
MC29594-5	MW6A-ROX-040814						
		Acetone	110	10	2.4	ug/l	SW846 8260C
		Benzene	1.1	0.50	0.32	ug/l	SW846 8260C
		Methyl Tert Butyl Ether	0.86 J	1.0	0.51	ug/l	SW846 8260C
		Di-n-butyl phthalate	0.75 JB u	5.6	0.19	ug/l	SW846 8270D
		bis(2-Ethylhexyl)phthalate	0.57 JB u	2.2	0.37	ug/l	SW846 8270D
MC29594-6	MW6A-ROX-040814-DUP						
		Acetone	116	10	2.4	ug/l	SW846 8260C
		Benzene	1.0	0.50	0.32	ug/l	SW846 8260C
		Methyl Tert Butyl Ether	1.0	1.0	0.51	ug/l	SW846 8260C
		Di-n-butyl phthalate	0.77 JB u	5.4	0.19	ug/l	SW846 8270D
		bis(2-Ethylhexyl)phthalate	0.66 JB u	2.2	0.36	ug/l	SW846 8270D
MC29594-7	MW12-ROX-040814						
		Di-n-butyl phthalate	0.60 JB u	5.1	0.17	ug/l	SW846 8270D
		bis(2-Ethylhexyl)phthalate	0.30 JB u	2.0	0.34	ug/l	SW846 8270D
		Phenanthrene	0.021 J	0.057	0.014	ug/l	SW846 8270D BY SIM

Summary of Hits

Job Number: MC29594

Account: Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Collected: 04/08/14



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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MC29594-8 TB-ROX-040814-HCL

No hits reported in this sample.

MC29594-9 TB-ROX-040814-ST

No hits reported in this sample.



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW6D-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-1	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29684.D	1	04/11/14	AMY	n/a	n/a	MSV1111
Run #2							

Run #	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	2.4	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	6.4	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW6D-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-1	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Bntyl Ether	0.94	1.0	0.51	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	MW6D-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-1	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		70-130%
2037-26-5	Toluene-D8	89%		70-130%
460-00-4	4-Bromofluorobenzene	90%		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:	MW6D-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-1	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38046.D	1	04/11/14	KR	04/09/14	OP37530	MSR1403
Run #2							

Run #	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.5	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.91	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.5	0.33	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.70	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.5	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.5	0.58	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.5	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.61	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.5	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.5	0.38	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.5	0.36	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.5	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.5	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.5	0.29	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.28	ug/l	
84-74-2	Di-n-butyl phthalate	0.39 u	5.5	0.19	ug/l	JB u
117-84-0	Di-n-octyl phthalate	ND	5.5	0.31	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6D-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-1	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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	5.5	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.5	0.37	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.5	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.5	0.33	ug/l	
78-59-1	Isophorone	ND	5.5	0.49	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.5	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.5	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.5	0.44	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.5	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	29%		15-110%
4165-62-2	Phenol-d5	20%		15-110%
118-79-6	2,4,6-Tribromophenol	66%		15-110%
4165-60-0	Nitrobenzene-d5	71%		30-130%
321-60-8	2-Fluorobiphenyl	72%		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 J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6D-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-1	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88469.D	1	04/10/14	MR	04/09/14	OP37531	MSI3294
Run #2							

Run #	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	Fluorantbene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Iudeno(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	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	66%		30-130%
321-60-8	2-Fluorobiphenyl	65%		30-130%
1718-51-0	Terphenyl-d14	89%		30-130%

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

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Report of Analysis

Client Sample ID:	MW6D-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-1	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89194.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539
Run #2							

Run #	Initial Volume	Final Volume
Run #1	37.2 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0051	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)	120%		36-173%		
460-00-4	Bromofluorobenzene (S)	84%		36-173%		

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

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Report of Analysis

Client Sample ID:	MW6C-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-2	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29685.D	1	04/11/14	AMY	n/a	n/a	MSV1111
Run #2							

Run #	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	2.4	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	2.1	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6C-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-2	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentauone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	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 presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6C-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-2	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%
2037-26-5	Toluene-D8	89%		70-130%
460-00-4	4-Bromofluorobenzene	94%		70-130%

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

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:	MW6C-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-2	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38047.D	1	04/11/14	KR	04/09/14	OP37530	MSR1403
Run #2							

Run #	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	12	2.9	ug/l	
95-57-8	2-Chlorophenol	ND	5.9	0.36	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	12	0.97	ug/l	
120-83-2	2,4-Dichlorophenol	ND	12	0.47	ug/l	
105-67-9	2,4-Dimethylphenol	ND	12	0.66	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	2.9	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	12	2.3	ug/l	
95-48-7	2-Methylphenol	ND	12	0.27	ug/l	
	3&4-Methylphenol	ND	12	0.55	ug/l	
88-75-5	2-Nitrophenol	ND	12	3.4	ng/l	
100-02-7	4-Nitrophenol	ND	24	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	12	1.3	ug/l	
108-95-2	Phenol	ND	5.9	0.36	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	12	0.44	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	12	0.21	ug/l	
62-53-3	Aniline	ND	12	0.75	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.9	0.55	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.9	0.62	ug/l	
100-51-6	Benzyl Alcohol	ND	12	2.7	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.9	0.37	ug/l	
106-47-8	4-Chloroaniline	ND	12	0.66	ug/l	
111-91-1	his(2-Chloroethoxy)methane	ND	5.9	0.34	ng/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.9	0.41	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.9	0.39	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.9	0.30	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.9	0.28	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	12	0.54	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	12	0.35	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.9	0.31	ug/l	
132-64-9	Dibenzofuran	ND	2.4	0.30	ug/l	
84-74-2	Di-n-butyl phthalate	0.40 u	5.9	0.20	ug/l	JB u
117-84-0	Di-n-octyl phthalate	ND	5.9	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit

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E = Indicates value exceeds calibration range

J = Indicates an estimated value

R = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6C-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-2	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.9	0.24	ug/l	
131-11-3	Dimethyl phthalate	ND	5.9	0.40	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.4	0.39	ug/l	
118-74-1	Hexachlorobenzene	ND	5.9	0.34	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	1.5	ug/l	
67-72-1	Hexachloroethane	ND	5.9	0.36	ug/l	
78-59-1	Isophorone	ND	5.9	0.53	ug/l	
88-74-4	2-Nitroaniline	ND	12	0.47	ug/l	
99-09-2	3-Nitroaniline	ND	12	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	12	2.5	ug/l	
98-95-3	Nitrobenzene	ND	5.9	0.46	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.9	1.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.9	0.47	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.9	0.23	ug/l	
110-86-1	Pyridine	ND	12	0.61	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	31%		15-110%
4165-62-2	Phenol-d5	22%		15-110%
118-79-6	2,4,6-Tribromophenol	67%		15-110%
4165-60-0	Nitrobenzene-d5	72%		30-130%
321-60-8	2-Fluorobiphenyl	69%		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	

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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:	MW6C-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-2	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88470.D	1	04/10/14	MR	04/09/14	OP37531	MSI3294
Run #2							

Run #	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.12	0.081	ug/l	
208-96-8	Acenaphthylene	ND	0.12	0.058	ug/l	
120-12-7	Anthracene	ND	0.12	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.059	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.12	0.034	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.059	0.037	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.12	0.032	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.12	0.045	ug/l	
218-01-9	Chrysene	ND	0.12	0.028	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.12	0.038	ug/l	
206-44-0	Fluoranthene	ND	0.12	0.048	ug/l	
86-73-7	Fluorene	ND	0.12	0.12	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.12	0.036	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.24	0.059	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.24	0.087	ug/l	
85-01-8	Phenanthrene	ND	0.059	0.015	ug/l	
129-00-0	Pyrene	ND	0.12	0.045	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	68%		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:	MW6C-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-2	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89195.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539
Run #2							

Run #	Initial Volume	Final Volume
Run #1	36.9 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0051	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)	105%		36-173%		
460-00-4	Bromofluorobenzene (S)	83%		36-173%		

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

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Report of Analysis

Client Sample ID:	MW6B-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-3	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29686.D	1	04/11/14	AMY	n/a	n/a	MSV1111
Run #2							

Run #	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	2.4	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	0.90	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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 4

Report of Analysis

Client Sample ID:	MW6B-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-3	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	4.7	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6B-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-3	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		70-130%
2037-26-5	Toluene-D8	89%		70-130%
460-00-4	4-Bromofluorobenzene	93%		70-130%

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

ND = Not detected MDL = Method Detection Limit
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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-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-3	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38048.D	1	04/11/14	KR	04/09/14	OP37530	MSR1403
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.3	0.33	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.88	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.42	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.60	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.24	ug/l	
	3&4-Methylphenol	ND	11	0.50	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.57	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.3	0.32	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.39	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.68	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.50	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.56	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.4	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.33	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.59	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.30	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.37	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.35	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.27	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.49	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.28	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.28	ug/l	
84-74-2	Di-n-butyl phthalate	0.43 u	5.3	0.18	ug/l	JB u
117-84-0	Di-n-octyl phthalate	ND	5.3	0.30	ug/l	

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

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

4.3
4

Report of Analysis

Client Sample ID:	MW6B-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-3	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.3	0.21	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.36	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.35	ng/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.3	0.32	ug/l	
78-59-1	Isophorone	ND	5.3	0.48	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.42	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.42	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.43	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.55	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	26%		15-110%
4165-62-2	Phenol-d5	18%		15-110%
118-79-6	2,4,6-Tribromophenol	59%		15-110%
4165-60-0	Nitrobenzene-d5	60%		30-130%
321-60-8	2-Fluorobiphenyl	58%		30-130%
1718-51-0	Terphenyl-d14	75%		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: MW6B-ROX-040814	Date Sampled: 04/08/14
Lab Sample ID: MC29594-3	Date Received: 04/09/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D BY SIM SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88471.D	1	04/10/14	MR	04/09/14	OP37531	MSI3294
Run #2							

Run #	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	ng/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	0.018	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	56%		30-130%
321-60-8	2-Fluorobiphenyl	56%		30-130%
1718-51-0	Terphenyl-d14	79%		30-130%

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

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Report of Analysis

Client Sample ID: MW6B-ROX-040814	Date Sampled: 04/08/14
Lab Sample ID: MC29594-3	Date Received: 04/09/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89196.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539
Run #2							

Run #	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)	120%		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

4.3
4

Report of Analysis

Client Sample ID:	MW6A-ROX-040814-EB	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-4	Date Received:	04/09/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29679.D	1	04/11/14	AMY	n/a	n/a	MSV1111
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	6.5	10	2.4	ug/l	J
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ng/l	
104-51-8	n-Butylheuzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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Report of Analysis

Client Sample ID:	MW6A-ROX-040814-EB	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-4	Date Received:	04/09/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
I23-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexauone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW6A-ROX-040814-EB	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-4	Date Received:	04/09/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8260C	Project:	
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%		70-130%
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	91%		70-130%

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

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-040814-EB	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-4	Date Received:	04/09/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38049.D	1	04/11/14	KR	04/09/14	OP37530	MSR1403
Run #2							

Run #	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	2.6	ug/l	
95-57-8	2-Chlorophenol	ND	5.1	0.32	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.84	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.57	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.48	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.55	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.1	0.31	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.38	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.65	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.1	0.48	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.1	0.54	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.1	0.32	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.57	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	0.36	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.1	0.34	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.1	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.47	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.31	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.1	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	0.33	5.1	0.18	ug/l	JB
117-84-0	Di-n-octyl phthalate	ND	5.1	0.29	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:	MW6A-ROX-040814-EB	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-4	Date Received:	04/09/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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	5.1	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.1	0.35	ug/l	
117-81-7	his(2-Ethylhexyl)phthalate	ND	2.0	0.34	ug/l	
118-74-1	Hexachlorobenzene	ND	5.1	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.1	0.31	ug/l	
78-59-1	Isophorone	ND	5.1	0.46	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ng/l	
98-95-3	Nitrobenzene	ND	5.1	0.40	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.1	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	0.41	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	0.20	ug/l	
110-86-1	Pyridine	ND	10	0.53	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	32%		15-110%
4165-62-2	Phenol-d5	22%		15-110%
118-79-6	2,4,6-Trihromophenol	53%		15-110%
4165-60-0	Nitrobenzene-d5	54%		30-130%
321-60-8	2-Fluorohiphenyl	49%		30-130%
1718-51-0	Terphenyl-d14	78%		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 J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID:	MW6A-ROX-040814-EB	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-4	Date Received:	04/09/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88472.D	1	04/10/14	MR	04/09/14	OP37531	MSI3294
Run #2							

Run #	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	50%		30-130%
321-60-8	2-Fluorobiphenyl	45%		30-130%
1718-51-0	Terphenyl-d14	72%		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-040814-EB	Date Sampled: 04/08/14
Lab Sample ID: MC29594-4	Date Received: 04/09/14
Matrix: AQ - Equipment Blank	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89197.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539
Run #2							

Run #	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)	104%		36-173%		
460-00-4	Bromofluorobenzene (S)	98%		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

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Report of Analysis

Client Sample ID:	MW6A-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-5	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29687.D	1	04/11/14	AMY	n/a	n/a	MSV1111
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	110	10	2.4	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	1.1	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6A-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-5	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexauone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.86	1.0	0.51	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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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:	MW6A-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-5	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	89%		70-130%
460-00-4	4-Bromofluorobenzene	91%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW6A-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-5	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38161.D	1	04/15/14	WK	04/11/14	OP37571	MSR1407
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	UJ
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.71	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.59	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	UJ
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.62	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	0.75 U	5.6	0.19	ug/l	JB U
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

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

J = Indicates 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-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-5	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.57 N	2.2	0.37	ug/l	JB N
118-74-1	Hexachlorobenzene	ND	5.6	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	42%		15-110%
4165-62-2	Phenol-d5	28%		15-110%
118-79-6	2,4,6-Tribromophenol	81%		15-110%
4165-60-0	Nitrobenzene-d5	74%		30-130%
321-60-8	2-Fluorobiphenyl	76%		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 J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW6A-ROX-040814	Date Sampled: 04/08/14
Lab Sample ID: MC29594-5	Date Received: 04/09/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D BY SIM SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88473.D	1	04/10/14	MR	04/09/14	OP37531	MSI3294
Run #2							

Run #	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.075	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.081	ug/l	
85-01-8	Phenanthrene	ND	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	66%		30-130%
321-60-8	2-Fluorobiphenyl	67%		30-130%
1718-51-0	Terphenyl-d14	89%		30-130%

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

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Report of Analysis

Client Sample ID: MW6A-ROX-040814	Date Sampled: 04/08/14
Lab Sample ID: MC29594-5	Date Received: 04/09/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89198.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539
Run #2							

Run #	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)	95%		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

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Report of Analysis

Client Sample ID:	MW6A-ROX-040814-DUP	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-6	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29688.D	1	04/11/14	AMY	n/a	n/a	MSV1111
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	116	10	2.4	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	1.0	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW6A-ROX-040814-DUP	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-6	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.0	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW6A-ROX-040814-DUP	Date Sampled: 04/08/14
Lab Sample ID: MC29594-6	Date Received: 04/09/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		70-130%
2037-26-5	Toluene-D8	88%		70-130%
460-00-4	4-Bromofluorobenzene	92%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW6A-ROX-040814-DUP	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-6	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38162.D	1	04/15/14	WK	04/11/14	OP37571	MSR1407
Run #2							

Run #	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.90	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.61	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.58	ug/l	uJ
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.4	0.33	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.40	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.69	ng/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.51	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.58	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	uJ
91-58-7	2-Chloronaphthalene	ND	5.4	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.61	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.38	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.36	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.27	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.29	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.28	ug/l	
84-74-2	Di-n-butyl phthalate	0.77 u	5.4	0.19	ug/l	JB u
117-84-0	Di-n-octyl phthalate	ND	5.4	0.31	ug/l	

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 N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	MW6A-ROX-040814-DUP	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-6	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.37	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.66 <i>14</i>	2.2	0.36	ug/l	JB <i>14</i>
118-74-1	Hexachlorobenzene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.33	ug/l	
78-59-1	Isophorone	ND	5.4	0.49	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.43	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.44	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.56	ug/l	<i>14</i>

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	44%		15-110%
4165-62-2	Phenol-d5	29%		15-110%
118-79-6	2,4,6-Tribromophenol	83%		15-110%
4165-60-0	Nitrobenzene-d5	74%		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	

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-040814-DUP	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-6	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88474.D	1	04/10/14	MR	04/09/14	OP37531	MSI3294
Run #2							

Run #	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	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	69%		30-130%
321-60-8	2-Fluorobiphenyl	67%		30-130%
1718-51-0	Terphenyl-d14	87%		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 evidence of a compound

Report of Analysis

Client Sample ID:	MW6A-ROX-040814-DUP	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-6	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89199.D	1	04/12/14	SZ	04/10/14	OP37559	GYZ7539
Run #2							

Run #	Initial Volume	Final Volume
Run #1	36.9 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0051	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)	105%		36-173%
460-00-4	Bromofluorobenzene (S)	115%		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

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Report of Analysis

Client Sample ID:	MW12-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-7	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29689.D	1	04/11/14	AMY	n/a	n/a	MSV1111
Run #2							

Run #	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	2.4	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ng/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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 E = Indicates value exceeds calibration range

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

Report of Analysis

Client Sample ID:	MW12-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-7	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW12-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-7	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluorometbane	94%		70-130%
2037-26-5	Toluene-D8	90%		70-130%
460-00-4	4-Bromofluorobenzene	92%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW12-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-7	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38163.D	1	04/15/14	WK	04/11/14	OP37571	MSR1407
Run #2							

Run #	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	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.1	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.57	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ng/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.54	ug/l	uJ
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.1	0.31	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.1	0.48	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.1	0.54	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	uJ
91-58-7	2-Chloronaphthalene	ND	5.1	0.32	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.1	0.34	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.1	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.1	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	0.60 u	5.1	0.17	ug/l	JB u
117-84-0	Di-n-octyl phthalate	ND	5.1	0.28	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 compound

Report of Analysis

Client Sample ID:	MW12-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-7	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.1	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.39 U	2.0	0.34	ug/l	JB U
118-74-1	Hexachlorobenzene	ND	5.1	0.29	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.1	0.31	ug/l	
78-59-1	Isophorone	ND	5.1	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.1	0.40	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.1	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	0.41	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	45%		15-110%
4165-62-2	Phenol-d5	29%		15-110%
118-79-6	2,4,6-Tribromophenol	80%		15-110%
4165-60-0	Nitrobenzene-d5	79%		30-130%
321-60-8	2-Fluorobiphenyl	77%		30-130%
1718-51-0	Terphenyl-d14	98%		30-130%

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

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 E = Indicates value exceeds calibration range

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

Report of Analysis

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Client Sample ID:	MW12-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-7	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88475.D	1	04/10/14	MR	04/09/14	OP3753I	MSI3294
Run #2							

Run #	Initial Volume	Final Volume
Run #1	880 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.078	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.056	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.057	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.033	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.057	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.031	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.044	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.036	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.046	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.035	ug/l	
90-12-0	1-Methylaphthalene	ND	0.23	0.057	ug/l	
91-57-6	2-Methylaphthalene	ND	0.23	0.084	ug/l	
85-01-8	Phenanthrene	0.021	0.057	0.014	ug/l	J
129-00-0	Pyrene	ND	0.11	0.044	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	60%		30-130%
321-60-8	2-Fluorobiphenyl	59%		30-130%
1718-51-0	Terphenyl-d14	90%		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 evidence of a compound

Report of Analysis

Client Sample ID:	MW12-ROX-040814	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-7	Date Received:	04/09/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89200.D	1	04/12/14	SZ	04/10/14	OP37559	GYZ7539
Run #2							

Run #	Initial Volume	Final Volume
Run #1	37.2 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0051	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)	106%		36-173%		
460-00-4	Bromofluorobenzene (S)	84%		36-173%		

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

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Report of Analysis

Client Sample ID:	TB-ROX-040814-HCL	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-8	Date Received:	04/09/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29676.D	1	04/11/14	AMY	n/a	n/a	MSV1111
Run #2							

Run #	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	2.4	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Bntylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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 E = Indicates value exceeds calibration range

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

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Report of Analysis

Client Sample ID:	TB-ROX-040814-HCL	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-8	Date Received:	04/09/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ng/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	TB-ROX-040814-HCL	Date Sampled:	04/08/14
Lab Sample ID:	MC29594-8	Date Received:	04/09/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		70-130%
2037-26-5	Toluene-D8	86%		70-130%
460-00-4	4-Bromofluorobenzene	92%		70-130%

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

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

Report of Analysis

Client Sample ID: TB-ROX-040814-ST	Date Sampled: 04/08/14
Lab Sample ID: MC29594-9	Date Received: 04/09/14
Matrix: AQ - Trip Blank Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89201.D	1	04/12/14	SZ	04/10/14	OP37559	GYZ7539
Run #2							

Run #	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)	102%		36-173%
460-00-4	Bromofluorobenzene (S)	80%		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

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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
- GALSCHKE
- OTHER: **Accutest Labs, 495 Technology Ctr W, Marlborough, MA 01752 (508-481-6290)**
- SPL



Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:

<input checked="" type="checkbox"/> ENV. SERVICES	<input type="checkbox"/> MOTIVA RETAIL	<input type="checkbox"/> SHELL RETAIL
<input type="checkbox"/> MOTIVA SOACH	<input type="checkbox"/> CONSULTANT	<input type="checkbox"/> LEADS
<input type="checkbox"/> SHELL PIPELINE	<input type="checkbox"/> OTHER	

Print Bill To Contact Name: **Bob Bilman**

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

DATE: **4/8/14**

PAGE: **1** of **1**

LABORATORY COMPANY: **URS CORPORATION**

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

PROJECT CONTACT (Name & Job Number): **Elizabeth Kunkel, Wendy Pennington, Bob Bilman**

PHONE: **314-428-0100** FAX: **314-428-0462**

SHIP ADDRESS: **900 South Central Ave, ROXANA, IL**

SHIP TO: **IL**

CONTRACT NUMBER: **Roxana Quarterly GW / 21562873.03002**

TEMPERATURE ON RECEIPT (STANDARD (10 DAY) 5 DAYS 3 DAYS 2 DAYS 24 HOURS RESULTS NEEDED (BY RECEIPT) LA - SWAB REPORT FORMAT LIST AGENCY:

TEMPERATURE ON RECEIPT (C) Cooler #1: _____ Cooler #2: _____ Cooler #3: _____

SPECIAL INSTRUCTIONS OR NOTES: ***Please Contact Accutest PM regarding SVOC extractions.**

LAB USE ONLY: **mc29594**

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT.	REQUESTED ANALYSIS				PID (ppm)	FIELD NOTES:
		DATE	TIME		HCL	HAZD	H2SO4	NONE	OTHER		VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL		
-1	MW6D-RDX-040814	4/8/14	1000	water	2		2	2	2	6	X	X	X	X		
-2	MW6A-RDX-040814		1105		2		2	2	2	6	X	X	X	X		
-3	MW6B-RDX-040814		1230		2		2	2	2	6	X	X	X	X		
-4	MW6A-RDX-040814-EB		1245		2		2	2	2	6	X	X	X	X		
-5	MW6A-RDX-040814		1325		2		2	2	2	6	X	X	X	X		
-6	MW6A-RDX-040814-DUP		1325		2		2	2	2	6	X	X	X	X		
-7	MW12-RDX-040814		1510		2		2	2	2	6	X	X	X	X		18A, 4J2
-8	TB-RDX-040814-HCI		0000		2				2	2	X					
-9	TB-RDX-040814-ST		0000						2	2	X					1.1°, 1.5°

Received by (Signature): **[Signature]** Date: **4/8/14** Time: **1700**

Received by (Signature): **[Signature]** Date: **4/9/14** Time: **9:30**

Received by (Signature): _____ Date: _____ Time: _____

FED EX

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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC29594 Client: URS Immediate Client Services Action Required: No
 Date / Time Received: 4/9/2014 Delivery Method: Client Service Action Required at Login: No
 Project: 900 SOUTH AVE No. Coolers: 1 Airbill #'s:

Cooler Security

	Y or N			Y or N	
1. Custody Seals Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Cooler Temperature

	Y or N	
1. Temp criteria achieved:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Cooler temp verification:	Infrared gun	
3. Cooler media:	Ice (bag)	

Quality Control Preservation

	Y	N	N/A
1. Trip Blank present / cooler:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Trip Blank listed on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Samples preserved properly:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. VOCs headspace free:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sample Integrity - Documentation

	Y	N
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Sample Integrity - Condition

	Y	N
1. Sample recvd within HT:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Condition of sample:	Intact	

Sample Integrity - Instructions

	Y	N	N/A
1. Analysis requested is clear:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www.accutest.com

5.1
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Internal Sample Tracking Chronicle

Shell Oil

Job No: MC29594

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

5.2
5

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
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MC29594-1 Collected: 08-APR-14 10:00 By: DMMM Received: 09-APR-14 By: MW6D-ROX-040814

MC29594-1	SW846 8270D	BY SIM 10-APR-14 19:55	MR	09-APR-14	AJ	B8270SIMSL
MC29594-1	SW846 8270D	11-APR-14 01:16	KR	09-APR-14	AJ	AB8270SL+
MC29594-1	SW846 8260C	11-APR-14 16:02	AMY			V8260SL+
MC29594-1	SW846 8011	11-APR-14 22:06	SZ	10-APR-14	AW	V8011SL

MC29594-2 Collected: 08-APR-14 11:05 By: DMMM Received: 09-APR-14 By: MW6C-ROX-040814

MC29594-2	SW846 8270D	BY SIM 10-APR-14 20:18	MR	09-APR-14	AJ	B8270SIMSL
MC29594-2	SW846 8270D	11-APR-14 01:43	KR	09-APR-14	AJ	AB8270SL+
MC29594-2	SW846 8260C	11-APR-14 16:28	AMY			V8260SL+
MC29594-2	SW846 8011	11-APR-14 22:32	SZ	10-APR-14	AW	V8011SL

MC29594-3 Collected: 08-APR-14 12:20 By: DMMM Received: 09-APR-14 By: MW6B-ROX-040814

MC29594-3	SW846 8270D	BY SIM 10-APR-14 20:41	MR	09-APR-14	AJ	B8270SIMSL
MC29594-3	SW846 8270D	11-APR-14 02:10	KR	09-APR-14	AJ	AB8270SL+
MC29594-3	SW846 8260C	11-APR-14 16:54	AMY			V8260SL+
MC29594-3	SW846 8011	11-APR-14 22:57	SZ	10-APR-14	AW	V8011SL

MC29594-4 Collected: 08-APR-14 12:45 By: DMMM Received: 09-APR-14 By: MW6A-ROX-040814-EB

MC29594-4	SW846 8270D	BY SIM 10-APR-14 21:04	MR	09-APR-14	AJ	B8270SIMSL
MC29594-4	SW846 8270D	11-APR-14 02:37	KR	09-APR-14	AJ	AB8270SL+
MC29594-4	SW846 8260C	11-APR-14 13:52	AMY			V8260SL+
MC29594-4	SW846 8011	11-APR-14 23:24	SZ	10-APR-14	AW	V8011SL

MC29594-5 Collected: 08-APR-14 13:25 By: DMMM Received: 09-APR-14 By: MW6A-ROX-040814

MC29594-5	SW846 8270D	BY SIM 10-APR-14 21:28	MR	09-APR-14	AJ	B8270SIMSL
MC29594-5	SW846 8260C	11-APR-14 17:20	AMY			V8260SL+
MC29594-5	SW846 8011	11-APR-14 23:49	SZ	10-APR-14	AW	V8011SL
MC29594-5	SW846 8270D	15-APR-14 03:00	WK	11-APR-14	AJ	AB8270SL+

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC29594

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

5.2
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Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
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MC29594-6 Collected: 08-APR-14 13:25 By: DMMM Received: 09-APR-14 By: MW6A-ROX-040814-DUP

MC29594-6	SW846 8270D	BY SIM 10-APR-14 21:52	MR	09-APR-14	AJ	B8270SIMSL
MC29594-6	SW846 8260C	11-APR-14 17:46	AMY			V8260SL+
MC29594-6	SW846 8011	12-APR-14 00:14	SZ	10-APR-14	AW	V8011SL
MC29594-6	SW846 8270D	15-APR-14 03:26	WK	11-APR-14	AJ	AB8270SL+

MC29594-7 Collected: 08-APR-14 15:10 By: DMMM Received: 09-APR-14 By: MW12-ROX-040814

MC29594-7	SW846 8270D	BY SIM 10-APR-14 22:15	MR	09-APR-14	AJ	B8270SIMSL
MC29594-7	SW846 8260C	11-APR-14 18:11	AMY			V8260SL+
MC29594-7	SW846 8011	12-APR-14 00:40	SZ	10-APR-14	AW	V8011SL
MC29594-7	SW846 8270D	15-APR-14 03:52	WK	11-APR-14	AJ	AB8270SL+

MC29594-8 Collected: 08-APR-14 00:00 By: DMMM Received: 09-APR-14 By: TB-ROX-040814-HCL

MC29594-8	SW846 8260C	11-APR-14 12:33	AMY			V8260SL+
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MC29594-9 Collected: 08-APR-14 00:00 By: DMMM Received: 09-APR-14 By: TB-ROX-040814-ST

MC29594-9	SW846 8011	12-APR-14 01:07	SZ	10-APR-14	AW	V8011SL
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Accutest Internal Chain of Custody

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Received: 04/09/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29594-1.1	Walk In Ref #22	Thomas Abruzzise	04/09/14 14:51	Retrieve from Storage
MC29594-1.1	Thomas Abruzzise		04/30/14 21:28	Depleted
MC29594-1.3	VOC Ref #4	Amy Min Yang	04/11/14 11:26	Retrieve from Storage
MC29594-1.3	Amy Min Yang	GCMSV	04/11/14 11:26	Load on Instrument
MC29594-1.3	GCMSV	Amy Min Yang	04/14/14 12:55	Unload from Instrument
MC29594-1.3	Amy Min Yang	VOC Ref #4	04/14/14 12:55	Return to Storage
MC29594-1.5	VOC Ref #4	Marc Tahtamoni	04/10/14 14:38	Retrieve from Storage
MC29594-1.5	Marc Tahtamoni		04/10/14 20:16	Depleted
MC29594-2.2	Walk In Ref #22	Thomas Abruzzise	04/09/14 14:51	Retrieve from Storage
MC29594-2.2	Thomas Abruzzise		04/30/14 21:28	Depleted
MC29594-2.3	VOC Ref #4	Amy Min Yang	04/11/14 11:26	Retrieve from Storage
MC29594-2.3	Amy Min Yang	GCMSV	04/11/14 11:26	Load on Instrument
MC29594-2.3	GCMSV	Amy Min Yang	04/14/14 12:55	Unload from Instrument
MC29594-2.3	Amy Min Yang	VOC Ref #4	04/14/14 12:55	Return to Storage
MC29594-2.6	VOC Ref #4	Marc Tahtamoni	04/10/14 14:38	Retrieve from Storage
MC29594-2.6	Marc Tahtamoni		04/10/14 20:16	Depleted
MC29594-3.1	Walk In Ref #22	Thomas Abruzzise	04/09/14 14:51	Retrieve from Storage
MC29594-3.1	Thomas Abruzzise		04/30/14 21:28	Depleted
MC29594-3.4	VOC Ref #4	Amy Min Yang	04/11/14 11:26	Retrieve from Storage
MC29594-3.4	Amy Min Yang	GCMSV	04/11/14 11:26	Load on Instrument
MC29594-3.4	GCMSV	Amy Min Yang	04/14/14 12:55	Unload from Instrument
MC29594-3.4	Amy Min Yang	VOC Ref #4	04/14/14 12:55	Return to Storage
MC29594-3.6	VOC Ref #4	Marc Tahtamoni	04/10/14 14:38	Retrieve from Storage
MC29594-3.6	Marc Tahtamoni		04/10/14 20:16	Depleted
MC29594-4.1	Walk In Ref #22	Thomas Abruzzise	04/09/14 14:51	Retrieve from Storage
MC29594-4.1	Thomas Abruzzise		04/30/14 21:28	Depleted
MC29594-4.4	VOC Ref #4	Amy Min Yang	04/11/14 11:26	Retrieve from Storage
MC29594-4.4	Amy Min Yang	GCMSV	04/11/14 11:26	Load on Instrument
MC29594-4.4	GCMSV	Amy Min Yang	04/14/14 12:55	Unload from Instrument
MC29594-4.4	Amy Min Yang	VOC Ref #4	04/14/14 12:55	Return to Storage
MC29594-4.6	VOC Ref #4	Marc Tahtamoni	04/10/14 14:38	Retrieve from Storage
MC29594-4.6	Marc Tahtamoni		04/10/14 20:16	Depleted

5.3



Accutest Internal Chain of Custody

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Received: 04/09/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29594-5.1	Walk In Ref #22	Thomas Abruzzise	04/09/14 14:51	Retrieve from Storage
MC29594-5.1	Thomas Abruzzise		04/30/14 21:28	Depleted
MC29594-5.2	Walk In Ref #22	Michael DiBuono	04/11/14 13:55	Retrieve from Storage
MC29594-5.4	VOC Ref #4	Amy Min Yang	04/11/14 11:26	Retrieve from Storage
MC29594-5.4	Amy Min Yang	GCMSV	04/11/14 11:26	Load on Instrument
MC29594-5.4	GCMSV	Amy Min Yang	04/14/14 12:55	Unload from Instrument
MC29594-5.4	Amy Min Yang	VOC Ref #4	04/14/14 12:55	Return to Storage
MC29594-5.6	VOC Ref #4	Marc Tahtamoni	04/10/14 14:38	Retrieve from Storage
MC29594-5.6	Marc Tahtamoni		04/10/14 20:16	Depleted
MC29594-6.1	Walk In Ref #22	Michael DiBuono	04/11/14 13:55	Retrieve from Storage
MC29594-6.2	Walk In Ref #22	Thomas Abruzzise	04/09/14 14:51	Retrieve from Storage
MC29594-6.2	Thomas Abruzzise		04/30/14 21:28	Depleted
MC29594-6.3	VOC Ref #4	Amy Min Yang	04/11/14 11:26	Retrieve from Storage
MC29594-6.3	Amy Min Yang	GCMSV	04/11/14 11:26	Load on Instrument
MC29594-6.3	GCMSV	Amy Min Yang	04/14/14 12:55	Unload from Instrument
MC29594-6.3	Amy Min Yang	VOC Ref #4	04/14/14 12:55	Return to Storage
MC29594-6.5	VOC Ref #4	Marc Tahtamoni	04/10/14 14:38	Retrieve from Storage
MC29594-6.5	Marc Tahtamoni		04/10/14 20:16	Depleted
MC29594-7.1	Walk In Ref #22	Thomas Abruzzise	04/09/14 14:51	Retrieve from Storage
MC29594-7.1	Thomas Ahruzzise		04/30/14 21:28	Depleted
MC29594-7.2	Walk In Ref #22	Michael DiBuono	04/11/14 13:55	Retrieve from Storage
MC29594-7.3	VOC Ref #4	Amy Min Yang	04/11/14 11:26	Retrieve from Storage
MC29594-7.3	Amy Min Yang	GCMSV	04/11/14 11:26	Load on Instrument
MC29594-7.3	GCMSV	Amy Min Yang	04/14/14 12:55	Unload from Instrument
MC29594-7.3	Amy Min Yang	VOC Ref #4	04/14/14 12:55	Return to Storage
MC29594-7.6	VOC Ref #4	Marc Tahtamoni	04/10/14 14:38	Retrieve from Storage
MC29594-7.6	Marc Tahtamoni		04/10/14 20:16	Depleted
MC29594-8.1	VOC Ref #4	Amy Min Yang	04/11/14 11:26	Retrieve from Storage
MC29594-8.1	Amy Min Yang	GCMSV	04/11/14 11:26	Load on Instrument
MC29594-8.1	GCMSV	Amy Min Yang	04/14/14 12:55	Unload from Instrument
MC29594-8.1	Amy Min Yang	VOC Ref #4	04/14/14 12:55	Return to Storage

5.3
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Accutest Internal Chain of Custody

Job Number: MC29594

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Received: 04/09/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29594-9.2	VOC Ref #4	Marc Tahtamoni	04/10/14 14:38	Retrieve from Storage
MC29594-9.2	Marc Tahtamoni		04/10/14 20:16	Depleted

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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: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1111-MB	V29674.D	1	04/11/14	AMY	n/a	n/a	MSV1111

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29594-1, MC29594-2, MC29594-3, MC29594-4, MC29594-5, MC29594-6, MC29594-7, MC29594-8

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.4	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

6.1.1



Method Blank Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1111-MB	V29674.D	1	04/11/14	AMY	n/a	n/a	MSV1111

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29594-1, MC29594-2, MC29594-3, MC29594-4, MC29594-5, MC29594-6, MC29594-7, MC29594-8

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ng/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

6.1.1



Method Blank Summary

Job Number: MC29594

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1111-MB	V29674.D	1	04/11/14	AMY	u/a	n/a	MSV1111

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29594-1, MC29594-2, MC29594-3, MC29594-4, MC29594-5, MC29594-6, MC29594-7, MC29594-8

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	86% 70-130%
2037-26-5	Toluene-D8	87% 70-130%
460-00-4	4-Bromofluorobenzene	91% 70-130%

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

6.1.1



Blank Spike Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1111-BS	V29671.D	1	04/11/14	AMY	n/a	n/a	MSV1111

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29594-1, MC29594-2, MC29594-3, MC29594-4, MC29594-5, MC29594-6, MC29594-7, MC29594-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	39.2	78	70-130
107-02-8	Acrolein	250	371	148* a	70-130
107-13-1	Acrylonitrile	50	40.3	81	70-130
71-43-2	Benzene	50	48.3	97	70-130
108-86-1	Bromobenzene	50	54.7	109	70-130
74-97-5	Bromochloromethane	50	45.7	91	70-130
75-27-4	Bromodichloromethane	50	51.4	103	70-130
75-25-2	Bromoform	50	45.9	92	70-130
74-83-9	Bromomethane	50	48.4	97	70-130
78-93-3	2-Butanone (MEK)	50	42.9	86	70-130
104-51-8	n-Butylbenzene	50	55.0	110	70-130
135-98-8	sec-Butylbenzene	50	55.0	110	70-130
98-06-6	tert-Butylbenzene	50	55.5	111	70-130
75-15-0	Carbon disulfide	50	43.4	87	70-130
56-23-5	Carbon tetrachloride	50	58.3	117	70-130
108-90-7	Chlorobenzene	50	50.7	101	70-130
75-00-3	Chloroethane	50	50.1	100	70-130
110-75-8	2-Chloroethyl vinyl ether	50	93.1	186* a	70-130
67-66-3	Chloroform	50	46.8	94	70-130
74-87-3	Chlorometbane	50	48.0	96	70-130
95-49-8	o-Chlorotoluene	50	52.0	104	70-130
106-43-4	p-Chlorotoluene	50	54.1	108	70-130
124-48-1	Dibromochloromethane	50	48.2	96	70-130
95-50-1	1,2-Dichlorobenzene	50	49.6	99	70-130
541-73-1	1,3-Dichlorobenzene	50	52.1	104	70-130
106-46-7	1,4-Dichlorobenzene	50	52.3	105	70-130
75-71-8	Dichlorodifluoromethane	50	44.2	88	70-130
75-34-3	1,1-Dichloroethane	50	47.0	94	70-130
107-06-2	1,2-Dichloroethane	50	49.0	98	70-130
75-35-4	1,1-Dichloroethene	50	50.0	100	70-130
156-59-2	cis-1,2-Dichloroethene	50	47.0	94	70-130
156-60-5	trans-1,2-Dichloroethene	50	46.4	93	70-130
78-87-5	1,2-Dichloropropane	50	49.8	100	70-130
142-28-9	1,3-Dichloropropane	50	49.0	98	70-130
594-20-7	2,2-Dichloropropane	50	49.7	99	70-130
563-58-6	1,1-Dichloropropene	50	51.8	104	70-130

* = Outside of Control Limits.

6.2.1
6

Blank Spike Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1111-BS	V29671.D	1	04/11/14	AMY	n/a	n/a	MSV1111

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29594-1, MC29594-2, MC29594-3, MC29594-4, MC29594-5, MC29594-6, MC29594-7, MC29594-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	45.1	90	70-130
10061-02-6	trans-1,3-Dichloropropene	50	57.3	115	70-130
123-91-1	1,4-Dioxane	250	177	71	70-130
97-63-2	Ethyl methacrylate	50	44.0	88	77-137
100-41-4	Ethylbenzene	50	55.0	110	70-130
87-68-3	Hexachlorobutadiene	50	50.2	100	70-130
591-78-6	2-Hexanone	50	43.8	88	70-130
98-82-8	Isopropylbenzene	50	55.0	110	70-130
99-87-6	p-Isopropyltoluene	50	56.2	112	70-130
1634-04-4	Methyl Tert Butyl Ether	50	44.5	89	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	44.3	89	70-130
74-95-3	Methylene bromide	50	48.9	98	70-130
75-09-2	Methylene chloride	50	45.0	90	70-130
91-20-3	Naphthalene	50	51.9	104	70-130
103-65-1	n-Propylbenzene	50	53.1	106	70-130
100-42-5	Styrene	50	55.3	111	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	57.5	115	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	50.9	102	70-130
127-18-4	Tetrachloroethene	50	54.4	109	70-130
108-88-3	Toluene	50	52.5	105	70-130
87-61-6	1,2,3-Trichlorobenzene	50	55.6	111	70-130
120-82-1	1,2,4-Trichlorobenzene	50	47.8	96	70-130
71-55-6	1,1,1-Trichloroethane	50	51.9	104	70-130
79-00-5	1,1,2-Trichloroethane	50	49.3	99	70-130
79-01-6	Trichloroethene	50	50.4	101	70-130
75-69-4	Trichlorofluoromethane	50	53.3	107	70-130
96-18-4	1,2,3-Trichloropropane	50	50.3	101	70-130
95-63-6	1,2,4-Trimethylbenzene	50	54.6	109	70-130
108-67-8	1,3,5-Trimethylbenzene	50	55.7	111	70-130
108-05-4	Vinyl Acetate	50	42.8	86	70-130
75-01-4	Vinyl chloride	50	45.9	92	70-130
	m,p-Xylene	100	108	108	70-130
95-47-6	o-Xylene	50	53.4	107	70-130
1330-20-7	Xylene (total)	150	161	107	70-130

* = Outside of Control Limits.

6.2.1
6

Blank Spike Summary

Job Number: MC29594
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1111-BS	V29671.D	1	04/11/14	AMY	n/a	n/a	MSV1111

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

MC29594-1, MC29594-2, MC29594-3, MC29594-4, MC29594-5, MC29594-6, MC29594-7, MC29594-8

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	79%	70-130%
2037-26-5	Toluene-D8	88%	70-130%
460-00-4	4-Bromofluorobenzene	90%	70-130%

(a) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

6.2.1
6

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29574-1MS	V29694.D	1	04/11/14	AMY	n/a	n/a	MSV1111
MC29574-1MSD	V29695.D	1	04/11/14	AMY	n/a	n/a	MSV1111
MC29574-1	V29680.D	1	04/11/14	AMY	n/a	n/a	MSV1111

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29594-1, MC29594-2, MC29594-3, MC29594-4, MC29594-5, MC29594-6, MC29594-7, MC29594-8

CAS No.	Compound	MC29574-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	50	36.6	73	50	28.3	57* a	26	70-130/30
107-02-8	Acrolein	ND	250	342	137* b	250	338	135* b	1	70-130/30
107-13-1	Acrylonitrile	ND	50	40.4	81	50	41.8	84	3	70-130/30
71-43-2	Benzene	0.66	50	48.6	96	50	47.1	93	3	70-130/30
108-86-1	Bromobenzene	ND	50	53.4	107	50	53.3	107	0	70-130/30
74-97-5	Bromochloromethane	ND	50	43.9	88	50	44.1	88	0	70-130/30
75-27-4	Bromodichloromethane	ND	50	52.0	104	50	50.6	101	3	70-130/30
75-25-2	Bromoform	ND	50	45.7	91	50	44.8	90	2	70-130/30
74-83-9	Bromomethane	ND	50	50.4	101	50	46.4	93	8	70-130/30
78-93-3	2-Butanone (MEK)	ND	50	36.5	73	50	36.1	72	1	70-130/30
104-51-8	n-Butylbenzene	ND	50	54.3	109	50	51.9	104	5	70-130/30
135-98-8	sec-Butylbenzene	ND	50	54.2	108	50	51.9	104	4	70-130/30
98-06-6	tert-Butylbenzene	ND	50	55.5	111	50	52.2	104	6	70-130/30
75-15-0	Carbon disulfide	ND	50	43.8	88	50	41.7	83	5	70-130/30
56-23-5	Carbon tetrachloride	ND	50	63.1	126	50	59.3	119	6	70-130/30
108-90-7	Chlorobenzene	ND	50	50.3	101	50	49.7	99	1	70-130/30
75-00-3	Chloroethane	ND	50	51.4	103	50	49.8	100	3	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND	50	ND	0* a	50	ND	0* a	nc	70-130/30
67-66-3	Chloroform	ND	50	47.3	95	50	45.9	92	3	70-130/30
74-87-3	Chloromethane	ND	50	49.3	99	50	47.3	95	4	70-130/30
95-49-8	o-Chlorotoluene	ND	50	52.1	104	50	50.4	101	3	70-130/30
106-43-4	p-Chlorotoluene	ND	50	54.1	108	50	53.1	106	2	70-130/30
124-48-1	Dibromochloromethane	ND	50	49.9	100	50	47.9	96	4	70-130/30
95-50-1	1,2-Dichlorobenzene	ND	50	48.1	96	50	48.4	97	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND	50	51.1	102	50	50.1	100	2	70-130/30
106-46-7	1,4-Dichlorobenzene	ND	50	51.1	102	50	50.6	101	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND	50	44.4	89	50	41.7	83	6	70-130/30
75-34-3	1,1-Dichloroethane	ND	50	47.0	94	50	45.5	91	3	70-130/30
107-06-2	1,2-Dichloroethane	ND	50	52.5	105	50	49.9	100	5	70-130/30
75-35-4	1,1-Dichloroethene	ND	50	49.6	99	50	49.1	98	1	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND	50	45.3	91	50	45.3	91	0	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	50	46.2	92	50	45.2	90	2	70-130/30
78-87-5	1,2-Dichloropropane	ND	50	50.7	101	50	48.8	98	4	70-130/30
142-28-9	1,3-Dichloropropane	ND	50	49.6	99	50	48.4	97	2	70-130/30
594-20-7	2,2-Dichloropropane	ND	50	47.1	94	50	44.7	89	5	70-130/30
563-58-6	1,1-Dichloropropene	ND	50	53.3	107	50	51.3	103	4	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29574-1MS	V29694.D	1	04/11/14	AMY	n/a	n/a	MSV1111
MC29574-1MSD	V29695.D	1	04/11/14	AMY	n/a	n/a	MSV1111
MC29574-1	V29680.D	1	04/11/14	AMY	n/a	n/a	MSV1111

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29594-1, MC29594-2, MC29594-3, MC29594-4, MC29594-5, MC29594-6, MC29594-7, MC29594-8

CAS No.	Compound	MC29574-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND	50	43.0	86	50	42.5	85	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND	50	57.9	116	50	58.0	116	0	70-130/30
123-91-1	1,4-Dioxane	ND	250	196	78	250	156	62* a	23	70-130/30
97-63-2	Ethyl methacrylate	ND	50	44.9	90	50	46.1	92	3	72-139/30
100-41-4	Ethylbenzene	ND	50	55.6	111	50	53.6	107	4	70-130/30
87-68-3	Hexachlorobutadiene	ND	50	45.6	91	50	47.9	96	5	70-130/30
591-78-6	2-Hexanone	ND	50	38.2	76	50	38.9	78	2	70-130/30
98-82-8	Isopropylbenzene	ND	50	54.3	109	50	51.9	104	5	70-130/30
99-87-6	p-Isopropyltoluene	ND	50	55.4	111	50	53.4	107	4	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	50	46.1	92	50	45.7	91	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	50	44.5	89	50	43.2	86	3	70-130/30
74-95-3	Methylene bromide	ND	50	51.4	103	50	48.4	97	6	70-130/30
75-09-2	Methylene chloride	ND	50	43.6	87	50	43.1	86	1	70-130/30
91-20-3	Naphthalene	ND	50	31.6	63* a	50	47.3	95	40* c	70-130/30
103-65-1	n-Propylbenzene	ND	50	52.7	105	50	50.6	101	4	70-130/30
100-42-5	Styrene	ND	50	54.4	109	50	53.2	106	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND	50	58.1	116	50	54.6	109	6	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	50.7	101	50	50.0	100	1	70-130/30
127-18-4	Tetrachloroethene	ND	50	55.5	111	50	52.6	105	5	70-130/30
108-88-3	Toluene	ND	50	53.0	106	50	51.4	103	3	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND	50	34.6	69* a	50	48.3	97	33* c	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND	50	38.9	78	50	44.8	90	14	70-130/30
71-55-6	1,1,1-Trichloroethane	ND	50	54.7	109	50	51.7	103	6	70-130/30
79-00-5	1,1,2-Trichloroethane	ND	50	50.8	102	50	49.6	99	2	70-130/30
79-01-6	Trichloroethene	ND	50	50.9	102	50	48.2	96	5	70-130/30
75-69-4	Trichlorofluoromethane	ND	50	57.7	115	50	53.0	106	8	70-130/30
96-18-4	1,2,3-Trichloropropane	ND	50	48.4	97	50	48.9	98	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND	50	54.1	108	50	52.0	104	4	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND	50	54.8	110	50	52.3	105	5	70-130/30
108-05-4	Vinyl Acetate	ND	50	42.6	85	50	41.5	83	3	70-130/30
75-01-4	Vinyl chloride	ND	50	48.1	96	50	45.4	91	6	70-130/30
	m,p-Xylene	ND	100	108	108	100	105	105	3	70-130/30
95-47-6	o-Xylene	ND	50	53.4	107	50	51.1	102	4	70-130/30
1330-20-7	Xylene (total)	ND	150	161	107	150	156	104	3	70-130/30

* = Outside of Control Limits.



Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29594

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29574-1MS	V29694.D	1	04/11/14	AMY	n/a	n/a	MSV1111
MC29574-1MSD	V29695.D	1	04/11/14	AMY	n/a	n/a	MSV1111
MC29574-1	V29680.D	1	04/11/14	AMY	n/a	n/a	MSV1111

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29594-1, MC29594-2, MC29594-3, MC29594-4, MC29594-5, MC29594-6, MC29594-7, MC29594-8

6.3.1



CAS No.	Surrogate Recoveries	MS	MSD	MC29574-1	Limits
1868-53-7	Dibromofluoromethane	80%	80%	92%	70-130%
2037-26-5	Toluene-D8	88%	89%	86%	70-130%
460-00-4	4-Bromofluorobenzene	89%	91%	92%	70-130%

- (a) Outside control limits dne to possible matrix interference. Refer to Blank Spike.
- (b) Outside control limits. Associated samples are non-detect for this compound.
- (c) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSV1111-CC1058	Injection Date:	04/11/14
Lab File ID:	V29670.D	Injection Time:	09:56
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1	IS 2	IS 3	IS 4	IS 5
	AREA	RT	AREA	RT	AREA
Check Std	300021	6.55	399854	7.73	184124
Upper Limit ^a	600042	7.05	799708	8.23	368248
Lower Limit ^b	150011	6.05	199927	7.23	92062

Lab	IS 1	IS 2	IS 3	IS 4	IS 5
Sample ID	AREA	RT	AREA	RT	AREA
MSV1111-BS	309777	6.55	409864	7.74	193009
MSV1111-MB	259007	6.56	356819	7.74	175741
ZZZZZZ	228816	6.55	320141	7.73	155764
MC29594-8	246623	6.56	347160	7.74	171040
ZZZZZZ	235965	6.56	330943	7.74	165725
ZZZZZZ	232479	6.56	325158	7.74	153201
MC29594-4	237139	6.56	329327	7.74	159884
MC29574-1	222377	6.56	312757	7.74	159127
ZZZZZZ	225237	6.56	320484	7.74	160677
ZZZZZZ	250889	6.56	317151	7.74	162987
ZZZZZZ	220319	6.56	307295	7.74	155805
MC29594-1	205928	6.55	297866	7.74	152523
MC29594-2	207218	6.56	296503	7.74	153363
MC29594-3	189423	6.55	268435	7.74	136770
MC29594-5	213474	6.56	297714	7.74	154139
MC29594-6	202228	6.55	282495	7.74	144311
MC29594-7	196787	6.55	274854	7.74	142355
ZZZZZZ	234576	6.56	311674	7.74	158511
ZZZZZZ	248527	6.55	321977	7.73	169842
MC29574-1MS	266742	6.55	347382	7.73	166716
MC29574-1MSD	303138	6.55	396937	7.74	192339

- 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
6

Volatile Surrogate Recovery Summary

Job Number: MC29594

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29594-1	V29684.D	95	89	90
MC29594-2	V29685.D	94	89	94
MC29594-3	V29686.D	96	89	93
MC29594-4	V29679.D	89	84	91
MC29594-5	V29687.D	92	89	91
MC29594-6	V29688.D	91	88	92
MC29594-7	V29689.D	94	90	92
MC29594-8	V29676.D	91	86	92
MC29574-1MS	V29694.D	80	88	89
MC29574-1MSD	V29695.D	80	89	91
MSV1111-BS	V29671.D	79	88	90
MSV1111-MB	V29674.D	86	87	91

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

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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: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37530-MB	R38040.D	1	04/10/14	KR	04/09/14	OP37530	MSR1403

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29594-1, MC29594-2, MC29594-3, MC29594-4

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methaue	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	0.45	5.0	0.17	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

7.1.1
7

Method Blank Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37530-MB	R38040.D	1	04/10/14	KR	04/09/14	OP37530	MSR1403

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29594-1, MC29594-2, MC29594-3, MC29594-4

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries	Limits	
367-12-4	2-Fluorophenol	45%	15-110%
4165-62-2	Phenol-d5	31%	15-110%
118-79-6	2,4,6-Tribromophenol	70%	15-110%
4165-60-0	Nitrobenzene-d5	72%	30-130%
321-60-8	2-Fluorohiphenyl	70%	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	

7.1.1
7

Method Blank Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37571-MB	R38148.D	1	04/14/14	WK	04/11/14	OP37571	MSR1407

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29594-5, MC29594-6, MC29594-7

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	0.67	5.0	0.17	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	6.2	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

7.1.2
7

Method Blank Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37571-MB	R38148.D	1	04/14/14	WK	04/11/14	OP37571	MSR1407

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29594-5, MC29594-6, MC29594-7

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	42% 15-110%
4165-62-2	Phenol-d5	27% 15-110%
118-79-6	2,4,6-Tribromophenol	67% 15-110%
4165-60-0	Nitrobenzene-d5	69% 30-130%
321-60-8	2-Fluorobiphenyl	67% 30-130%
1718-51-0	Terphenyl-d14	96% 30-130%

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

7.1.2
7

Method Blank Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37531-MB	I88454.D	1	04/10/14	MR	04/09/14	OP37531	MSI3294

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29594-1, MC29594-2, MC29594-3, MC29594-4, MC29594-5, MC29594-6, MC29594-7

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	67% 30-130%
321-60-8	2-Fluorobiphenyl	63% 30-130%
1718-51-0	Terphenyl-d14	91% 30-130%

7.1.3
7

Blank Spike Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37530-BS	R38041.D	1	04/10/14	KR	04/09/14	OP37530	MSR1403

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29594-1, MC29594-2, MC29594-3, MC29594-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	21.0	42	30-130
95-57-8	2-Chlorophenol	50	38.9	78	30-130
59-50-7	4-Chloro-3-methyl phenol	50	37.1	74	30-130
120-83-2	2,4-Dichlorophenol	50	40.1	80	30-130
105-67-9	2,4-Dimethylphenol	50	33.8	68	30-130
51-28-5	2,4-Dinitrophenol	50	37.6	75	30-130
534-52-1	4,6-Dinitro-o-cresol	50	45.6	91	30-130
95-48-7	2-Methylphenol	50	39.0	78	30-130
	3&4-Methylphenol	100	66.4	66	30-130
88-75-5	2-Nitrophenol	50	39.2	78	30-130
100-02-7	4-Nitrophenol	50	18.3	37	30-130
87-86-5	Pentachlorophenol	50	38.9	78	30-130
108-95-2	Phenol	50	20.2	40	30-130
95-95-4	2,4,5-Trichlorophenol	50	52.9	106	30-130
88-06-2	2,4,6-Trichlorophenol	50	53.7	107	30-130
62-53-3	Aniline	50	30.0	60	40-140
101-55-3	4-Bromophenyl phenyl ether	50	42.6	85	40-140
85-68-7	Butyl benzyl phthalate	50	68.1	136	40-140
100-51-6	Benzyl Alcohol	50	36.1	72	40-140
91-58-7	2-Chloronaphthaleue	50	55.9	112	40-140
106-47-8	4-Chloroaniline	50	34.5	69	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	39.1	78	40-140
111-44-4	bis(2-Chloroethyl)ether	50	42.7	85	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	55.5	111	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	42.0	84	40-140
122-66-7	1,2-Diphenylhydrazine	50	41.0	82	40-140
121-14-2	2,4-Dinitrotoluene	50	45.9	92	40-140
606-20-2	2,6-Dinitrotoluene	50	54.7	109	40-140
91-94-1	3,3'-Dichlorobenzidine	50	40.8	82	40-140
132-64-9	Dibenzofuran	50	40.4	81	40-140
84-74-2	Di-n-butyl phthalate	50	44.4	89	40-140
117-84-0	Di-n-octyl phthalate	50	49.7	99	40-140
84-66-2	Diethyl phthalate	50	43.3	87	40-140
131-11-3	Dimethyl phthalate	50	47.4	95	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	49.7	99	40-140
118-74-1	Hexachlorobenzene	50	42.1	84	40-140

* = Outside of Control Limits.

7.2.1
7

Blank Spike Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37530-BS	R38041.D	1	04/10/14	KR	04/09/14	OP37530	MSR1403

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29594-1, MC29594-2, MC29594-3, MC29594-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	29.0	58	40-140
67-72-1	Hexachloroethane	50	26.0	52	40-140
78-59-1	Isophorone	50	38.7	77	40-140
88-74-4	2-Nitroaniline	50	58.5	117	40-140
99-09-2	3-Nitroaniline	50	40.3	81	40-140
100-01-6	4-Nitroaniline	50	43.1	86	40-140
98-95-3	Nitrobenzene	50	38.4	77	40-140
62-75-9	n-Nitrosodimethylamine	50	28.8	58	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	41.9	84	40-140
86-30-6	N-Nitrosodiphenylamine	50	41.3	83	40-140
110-86-1	Pyridine	50	22.8	46	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	55%	15-110%
4165-62-2	Phenol-d5	36%	15-110%
118-79-6	2,4,6-Trihromophenol	77%	15-110%
4165-60-0	Nitrobenzene-d5	75%	30-130%
321-60-8	2-Fluorobiphenyl	91%	30-130%
1718-51-0	Terphenyl-d14	119%	30-130%

* = Outside of Control Limits.

7.2.1
7

Blank Spike Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37571-BS	R38149.D	1	04/14/14	WK	04/11/14	OP37571	MSR1407

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29594-5, MC29594-6, MC29594-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	14.9	30	30-130
95-57-8	2-Chlorophenol	50	35.0	70	30-130
59-50-7	4-Chloro-3-methyl phenol	50	36.2	72	30-130
120-83-2	2,4-Dichlorophenol	50	38.4	77	30-130
105-67-9	2,4-Dimethylphenol	50	30.8	62	30-130
51-28-5	2,4-Dinitrophenol	50	33.8	68	30-130
534-52-1	4,6-Dinitro-o-cresol	50	47.5	95	30-130
95-48-7	2-Methylphenol	50	31.8	64	30-130
	3&4-Methylphenol	100	57.8	58	30-130
88-75-5	2-Nitrophenol	50	38.2	76	30-130
100-02-7	4-Nitrophenol	50	7.0	14* a	30-130
87-86-5	Pentachlorophenol	50	28.1	56	30-130
108-95-2	Phenol	50	17.3	35	30-130
95-95-4	2,4,5-Trichlorophenol	50	40.3	81	30-130
88-06-2	2,4,6-Trichlorophenol	50	34.7	69	30-130
62-53-3	Aniline	50	24.5	49	40-140
101-55-3	4-Bromophenyl phenyl ether	50	45.6	91	40-140
85-68-7	Butyl benzyl phthalate	50	53.3	107	40-140
100-51-6	Benzyl Alcohol	50	15.4	31* a	40-140
91-58-7	2-Chloronaphthalene	50	41.8	84	40-140
106-47-8	4-Chloroaniline	50	35.4	71	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	38.6	77	40-140
111-44-4	bis(2-Chloroethyl)ether	50	38.9	78	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	46.7	93	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	44.3	89	40-140
122-66-7	1,2-Diphenylhydrazine	50	44.6	89	40-140
121-14-2	2,4-Dinitrotoluene	50	46.7	93	40-140
606-20-2	2,6-Dinitrotoluene	50	45.6	91	40-140
91-94-1	3,3'-Dichlorobenzidine	50	41.7	83	40-140
132-64-9	Dibenzofuran	50	41.8	84	40-140
84-74-2	Di-n-butyl phthalate	50	47.3	95	40-140
117-84-0	Di-n-octyl phthalate	50	55.7	111	40-140
84-66-2	Diethyl phthalate	50	48.8	98	40-140
131-11-3	Dimethyl phthalate	50	46.8	94	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	53.7	107	40-140
118-74-1	Hexachlorobenzene	50	45.0	90	40-140

* = Outside of Control Limits.

7.2.2
7

Blank Spike Summary

Job Number: MC29594

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37571-BS	R38149.D	1	04/14/14	WK	04/11/14	OP37571	MSR1407

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29594-5, MC29594-6, MC29594-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	21.8	44	40-140
67-72-1	Hexachloroethane	50	23.0	46	40-140
78-59-1	Isophorone	50	38.1	76	40-140
88-74-4	2-Nitroaniline	50	43.6	87	40-140
99-09-2	3-Nitroaniline	50	41.7	83	40-140
100-01-6	4-Nitroaniline	50	41.8	84	40-140
98-95-3	Nitrobenzene	50	36.5	73	40-140
62-75-9	n-Nitrosodimethylamine	50	23.1	46	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	40.8	82	40-140
86-30-6	N-Nitrosodiphenylamine	50	43.0	86	40-140
110-86-1	Pyridine	50	18.2	36* a	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	40%	15-110%
4165-62-2	Phenol-d5	28%	15-110%
118-79-6	2,4,6-Tribromophenol	67%	15-110%
4165-60-0	Nitrobenzene-d5	70%	30-130%
321-60-8	2-Fluorobiphenyl	65%	30-130%
1718-51-0	Terphenyl-d14	94%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

7.2.2
7

Blank Spike Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37531-BS	I88455.D	1	04/10/14	MR	04/09/14	OP37531	MSI3294

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29594-1, MC29594-2, MC29594-3, MC29594-4, MC29594-5, MC29594-6, MC29594-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	36.2	72	40-140
208-96-8	Acenaphthylene	50	34.0	68	40-140
120-12-7	Anthracene	50	36.4	73	40-140
56-55-3	Benzo(a)anthracene	50	41.2	82	40-140
50-32-8	Benzo(a)pyrene	50	38.9	78	40-140
205-99-2	Benzo(b)fluoranthene	50	41.5	83	40-140
191-24-2	Benzo(g,h,i)perylene	50	44.0	88	40-140
207-08-9	Benzo(k)fluoranthene	50	41.3	83	40-140
218-01-9	Chrysene	50	39.7	79	40-140
53-70-3	Dibenzo(a,h)anthracene	50	46.4	93	40-140
206-44-0	Fluoranthene	50	41.6	83	40-140
86-73-7	Fluorene	50	38.5	77	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	44.8	90	40-140
90-12-0	1-Methylnaphthalene	50	33.2	66	40-140
91-57-6	2-Methylnaphthalene	50	32.3	65	40-140
85-01-8	Phenanthrene	50	36.9	74	40-140
129-00-0	Pyrene	50	41.3	83	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	69%	30-130%
321-60-8	2-Fluorobiphenyl	66%	30-130%
1718-51-0	Terphenyl-d14	90%	30-130%

* = Outside of Control Limits.

7.2.3
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37530-MS	R38042.D	1	04/10/14	KR	04/09/14	OP37530	MSR1403
OP37530-MSD	R38043.D	1	04/10/14	KR	04/09/14	OP37530	MSR1403
MC29300-14	R38044.D	1	04/11/14	KR	04/09/14	OP37530	MSR1403

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29594-1, MC29594-2, MC29594-3, MC29594-4

CAS No.	Compound	MC29300-14 Spike		MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
		ug/l	Q							
65-85-0	Benzoic Acid	ND	50	20.8	42	50	21.0	42	1	30-130/20
95-57-8	2-Chlorophenol	ND	50	33.9	68	50	38.7	77	13	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND	50	38.8	78	50	43.0	86	10	30-130/20
120-83-2	2,4-Dichlorophenol	ND	50	37.3	75	50	40.9	82	9	30-130/20
105-67-9	2,4-Dimethylphenol	ND	50	30.5	61	50	32.9	66	8	30-130/20
51-28-5	2,4-Dinitrophenol	ND	50	39.3	79	50	38.1	76	3	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND	50	45.8	92	50	64.7	129	34* a	30-130/20
95-48-7	2-Methylphenol	ND	50	31.0	62	50	34.7	69	11	30-130/20
	3&4-Methylphenol	ND	100	59.1	59	100	63.9	64	8	30-130/20
88-75-5	2-Nitrophenol	ND	50	36.5	73	50	40.3	81	10	30-130/20
100-02-7	4-Nitrophenol	ND	50	19.5	39	50	18.1	36	7	30-130/20
87-86-5	Pentachlorophenol	ND	50	39.9	80	50	40.4	81	1	30-130/20
108-95-2	Phenol	ND	50	16.3	33	50	18.7	37	14	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND	50	40.6	81	50	40.8	82	0	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND	50	39.9	80	50	40.0	80	0	30-130/20
62-53-3	Aniline	ND	50	25.1	50	50	28.6	57	13	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND	50	42.2	84	50	44.6	89	6	40-140/20
85-68-7	Butyl benzyl phthalate	ND	50	51.0	102	50	64.9	130	24* a	40-140/20
100-51-6	Benzyl Alcohol	ND	50	29.0	58	50	30.3	61	4	40-140/20
91-58-7	2-Chloronaphthalene	ND	50	39.8	80	50	31.9	64	22* a	40-140/20
106-47-8	4-Chloroaniline	ND	50	34.3	69	50	36.4	73	6	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND	50	37.9	76	50	41.3	83	9	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND	50	37.5	75	50	42.5	85	13	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND	50	45.5	91	50	49.9	100	9	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND	50	42.2	84	50	44.8	90	6	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND	50	42.3	85	50	58.2	116	32* a	40-140/20
121-14-2	2,4-Dinitrotoluene	ND	50	46.0	92	50	45.0	90	2	40-140/20
606-20-2	2,6-Dinitrotoluene	ND	50	43.7	87	50	41.8	84	4	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND	50	44.7	89	50	46.2	92	3	40-140/20
132-64-9	Dibenzofuran	ND	50	39.7	79	50	39.5	79	1	40-140/20
84-74-2	Di-n-butyl phthalate	0.40	JB	50	45.4	90	45.8	91	1	40-140/20
117-84-0	Di-n-octyl phthalate	ND	50	51.7	103	50	52.5	105	2	40-140/20
84-66-2	Diethyl phthalate	ND	50	43.6	87	50	39.0	78	11	40-140/20
131-11-3	Dimethyl phthalate	ND	50	32.6	65	50	36.9	74	12	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND	50	51.4	103	50	52.1	104	1	40-140/20
118-74-1	Hexachlorobenzene	ND	50	42.0	84	50	43.5	87	4	40-140/20

* = Outside of Control Limits.

7.3.1
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37530-MS	R38042.D	1	04/10/14	KR	04/09/14	OP37530	MSR1403
OP37530-MSD	R38043.D	1	04/10/14	KR	04/09/14	OP37530	MSR1403
MC29300-14	R38044.D	1	04/11/14	KR	04/09/14	OP37530	MSR1403

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29594-1, MC29594-2, MC29594-3, MC29594-4

7.3.1
7

CAS No.	Compound	MC29300-14 Spike		MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
		ug/l	Q ug/l							
77-47-4	Hexachlorocyclopentadiene	ND	50	20.5	41	50	21.4	43	4	40-140/20
67-72-1	Hexachloroethane	ND	50	24.7	49	50	26.5	53	7	40-140/20
78-59-1	Isophorone	ND	50	37.4	75	50	38.1	76	2	40-140/20
88-74-4	2-Nitroaniline	ND	50	43.5	87	50	34.0	68	25* a	40-140/20
99-09-2	3-Nitroaniline	ND	50	40.6	81	50	40.9	82	1	40-140/20
100-01-6	4-Nitroaniline	ND	50	44.4	89	50	46.3	93	4	40-140/20
98-95-3	Nitrobenzene	ND	50	36.0	72	50	40.9	82	13	40-140/20
62-75-9	n-Nitrosodimethylamine	ND	50	23.4	47	50	27.4	55	16	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND	50	41.2	82	50	42.6	85	3	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND	50	40.8	82	50	56.5	113	32* a	40-140/20
110-86-1	Pyridine	ND	50	18.7	37* b	50	22.0	44	16	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29300-14 Limits
367-12-4	2-Fluorophenol	43%	51%	54% 15-110%
4165-62-2	Phenol-d5	30%	34%	34% 15-110%
118-79-6	2,4,6-Tribromophenol	77%	105%	73% 15-110%
4165-60-0	Nitrobenzene-d5	68%	79%	92% 30-130%
321-60-8	2-Fluorobiphenyl	67%	55%	69% 30-130%
1718-51-0	Terphenyl-d14	85%	111%	124% 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.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37571-MS	R38150.D	1	04/14/14	WK	04/11/14	OP37571	MSR1407
OP37571-MSD	R38151.D	1	04/14/14	WK	04/11/14	OP37571	MSR1407
MC29300-23	R38152.D	1	04/14/14	WK	04/11/14	OP37571	MSR1407

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29594-5, MC29594-6, MC29594-7

CAS No.	Compound	MC29300-23 Spike		MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
		ug/l	Q								
65-85-0	Benzoic Acid	ND	50.5	15.5	31	50.5	15.9	31	3	30-130/20	
95-57-8	2-Chlorophenol	ND	50.5	33.3	66	50.5	33.1	66	1	30-130/20	
59-50-7	4-Chloro-3-methyl phenol	ND	50.5	36.2	72	50.5	35.9	71	1	30-130/20	
120-83-2	2,4-Dichlorophenol	ND	50.5	37.0	73	50.5	35.9	71	3	30-130/20	
105-67-9	2,4-Dimethylphenol	ND	50.5	29.0	57	50.5	33.1	66	13	30-130/20	
51-28-5	2,4-Dinitrophenol	ND	50.5	38.4	76	50.5	35.4	70	8	30-130/20	
534-52-1	4,6-Dinitro-o-cresol	ND	50.5	48.6	96	50.5	45.7	90	6	30-130/20	
95-48-7	2-Methylphenol	ND	50.5	29.6	59	50.5	30.0	59	1	30-130/20	
	3&4-Methylphenol	ND	101	53.0	52	101	52.7	52	1	30-130/20	
88-75-5	2-Nitrophenol	ND	50.5	36.4	72	50.5	35.7	71	2	30-130/20	
100-02-7	4-Nitrophenol	ND	50.5	7.0	14* a	50.5	7.9	16* a	12	30-130/20	
87-86-5	Pentachlorophenol	ND	50.5	35.9	71	50.5	30.4	60	17	30-130/20	
108-95-2	Phenol	ND	50.5	11.6	23* b	50.5	11.8	23* b	2	30-130/20	
95-95-4	2,4,5-Trichlorophenol	ND	50.5	40.8	81	50.5	40.4	80	1	30-130/20	
88-06-2	2,4,6-Trichlorophenol	ND	50.5	33.1	66	50.5	32.7	65	1	30-130/20	
62-53-3	Aniline	ND	50.5	23.7	47	50.5	24.0	48	1	40-140/20	
101-55-3	4-Bromophenyl phenyl ether	ND	50.5	43.7	87	50.5	43.0	85	2	40-140/20	
85-68-7	Butyl benzyl phthalate	ND	50.5	51.3	102	50.5	50.5	100	2	40-140/20	
100-51-6	Benzyl Alcohol	ND	50.5	15.1	30* a	50.5	12.6	25* a	18	40-140/20	
91-58-7	2-Chloronaphthalene	ND	50.5	40.0	79	50.5	39.2	78	2	40-140/20	
106-47-8	4-Chloroaniline	ND	50.5	33.9	67	50.5	33.5	66	1	40-140/20	
111-91-1	bis(2-Chloroethoxy)methane	ND	50.5	36.1	71	50.5	36.0	71	0	40-140/20	
111-44-4	bis(2-Chloroethyl)ether	ND	50.5	36.2	72	50.5	36.5	72	1	40-140/20	
108-60-1	bis(2-Chloroisopropyl)ether	ND	50.5	44.5	88	50.5	44.3	88	0	40-140/20	
7005-72-3	4-Chlorophenyl phenyl ether	ND	50.5	41.1	81	50.5	41.1	81	0	40-140/20	
122-66-7	1,2-Diphenylhydrazine	ND	50.5	42.3	84	50.5	41.3	82	2	40-140/20	
121-14-2	2,4-Dinitrotoluene	ND	50.5	43.8	87	50.5	43.5	86	1	40-140/20	
606-20-2	2,6-Dinitrotoluene	ND	50.5	42.0	83	50.5	41.5	82	1	40-140/20	
91-94-1	3,3'-Dichlorobenzidine	ND	50.5	34.3	68	50.5	33.9	67	1	40-140/20	
132-64-9	Dibenzofuran	ND	50.5	38.7	77	50.5	38.6	76	0	40-140/20	
84-74-2	Di-n-butyl phthalate	0.41	J	50.5	45.2	89	50.5	44.2	87	2	40-140/20
117-84-0	Di-n-octyl phthalate	ND	50.5	52.9	105	50.5	51.9	103	2	40-140/20	
84-66-2	Diethyl phthalate	ND	50.5	45.8	91	50.5	45.7	90	0	40-140/20	
131-11-3	Dimethyl phthalate	ND	50.5	43.7	87	50.5	43.5	86	0	40-140/20	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	50.5	51.8	103	50.5	50.4	100	3	40-140/20	
118-74-1	Hexachlorobenzene	ND	50.5	42.9	85	50.5	42.1	83	2	40-140/20	

* = Outside of Control Limits.

7.3.2
 7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37571-MS	R38150.D	1	04/14/14	WK	04/11/14	OP37571	MSR1407
OP37571-MSD	R38151.D	1	04/14/14	WK	04/11/14	OP37571	MSR1407
MC29300-23	R38152.D	1	04/14/14	WK	04/11/14	OP37571	MSR1407

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29594-5, MC29594-6, MC29594-7

7.3.2
7

CAS No.	Compound	MC29300-23 Spike		MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
		ug/l	Q							
77-47-4	Hexachlorocyclopentadiene	ND	50.5	23.4	46	50.5	22.3	44	5	40-140/20
67-72-1	Hexachloroethane	ND	50.5	26.2	52	50.5	24.9	49	5	40-140/20
78-59-1	Isophorone	ND	50.5	35.5	70	50.5	35.1	69	1	40-140/20
88-74-4	2-Nitroaniline	ND	50.5	40.9	81	50.5	40.2	80	2	40-140/20
99-09-2	3-Nitroaniline	ND	50.5	39.2	78	50.5	38.9	77	1	40-140/20
100-01-6	4-Nitroaniline	ND	50.5	38.8	77	50.5	38.7	77	0	40-140/20
98-95-3	Nitrobenzene	ND	50.5	35.1	69	50.5	34.9	69	1	40-140/20
62-75-9	n-Nitrosodimethylamine	ND	50.5	21.9	43	50.5	22.2	44	1	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND	50.5	37.7	75	50.5	37.5	74	1	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND	50.5	41.5	82	50.5	40.7	81	2	40-140/20
110-86-1	Pyridine	ND	50.5	18.6	37* ^a	50.5	18.4	36* ^a	1	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29300-23 Limits	
367-12-4	2-Fluorophenol	35%	37%	0%* ^c	15-110%
4165-62-2	Phenol-d5	24%	25%	0%* ^c	15-110%
118-79-6	2,4,6-Tribromophenol	59%	65%	0%* ^c	15-110%
4165-60-0	Nitrobenzene-d5	66%	65%	74%	30-130%
321-60-8	2-Fluorobiphenyl	67%	65%	66%	30-130%
1718-51-0	Terphenyl-d14	89%	87%	77%	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.
- (c) Surrogate standard not added.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37531-MS	I88456.D	1	04/10/14	MR	04/09/14	OP37531	MSI3294
OP37531-MSD	I88457.D	1	04/10/14	MR	04/09/14	OP37531	MSI3294
MC29300-15	I88458.D	1	04/10/14	MR	04/09/14	OP37531	MSI3294

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29594-1, MC29594-2, MC29594-3, MC29594-4, MC29594-5, MC29594-6, MC29594-7

CAS No.	Compound	MC29300-15 Spike		MS	MS	Spike	MSD	MSD	RPD	Limits
		ug/l	Q ug/l	ug/l	%	ug/l	ug/l	%		Rec/RPD
83-32-9	Acenaphthene	ND	50	36.2	72	50	37.3	75	3	40-140/20
208-96-8	Acenaphthylene	ND	50	33.6	67	50	35.1	70	4	40-140/20
120-12-7	Anthracene	ND	50	37.4	75	50	38.2	76	2	40-140/20
56-55-3	Benzo(a)anthracene	ND	50	42.0	84	50	43.0	86	2	40-140/20
50-32-8	Benzo(a)pyrene	ND	50	39.5	79	50	40.6	81	3	40-140/20
205-99-2	Benzo(b)fluoranthene	ND	50	41.8	84	50	42.4	85	1	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND	50	44.6	89	50	46.1	92	3	40-140/20
207-08-9	Benzo(k)fluoranthene	ND	50	42.7	85	50	44.7	89	5	40-140/20
218-01-9	Chrysene	ND	50	40.3	81	50	41.1	82	2	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND	50	47.6	95	50	49.0	98	3	40-140/20
206-44-0	Fluoranthene	ND	50	41.4	83	50	42.6	85	3	40-140/20
86-73-7	Fluorene	ND	50	38.1	76	50	40.1	80	5	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND	50	45.9	92	50	47.3	95	3	40-140/20
90-12-0	1-Methylnaphthalene	ND	50	32.0	64	50	34.9	70	9	40-140/20
91-57-6	2-Methylnaphthalene	ND	50	31.2	62	50	34.1	68	9	40-140/20
85-01-8	Phenanthrene	0.021	J 50	37.5	75	50	38.6	77	3	40-140/20
129-00-0	Pyrene	ND	50	41.5	83	50	42.1	84	1	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29300-15 Limits	
4165-60-0	Nitrobenzene-d5	64%	71%	68%	30-130%
321-60-8	2-Fluorobiphenyl	64%	68%	64%	30-130%
1718-51-0	Terphenyl-d14	89%	94%	96%	30-130%

* = Outside of Control Limits.

7.3.3
7

Semivolatile Internal Standard Area Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSI3294-CC3238	Injection Date:	04/10/14
Lab File ID:	I88453.D	Injection Time:	13:39
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	389888	4.03	902594	5.08	522602	6.61	877037	7.99	619107	10.76	1493935	12.24
Upper Limit ^a	779776	4.53	1805188	5.58	1045204	7.11	1754074	8.49	1238214	11.26	2987870	12.74
Lower Limit ^b	194944	3.53	451297	4.58	261301	6.11	438519	7.49	309554	10.26	746968	11.74

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37531-MB	355866	4.03	822861	5.08	466037	6.61	752147	7.98	528118	10.76	1265181	12.24
OP37531-BS	380319	4.04	871292	5.08	488207	6.61	780792	7.99	536366	10.77	1250546	12.24
OP37531-MS	370971	4.03	851262	5.08	480270	6.61	766284	7.99	541999	10.76	1278807	12.24
OP37531-MSD	352565	4.03	806541	5.08	460760	6.61	731676	7.99	524157	10.77	1234466	12.24
MC29300-15	323489	4.03	750991	5.08	424475	6.61	697162	7.98	476547	10.76	1146098	12.24
ZZZZZZ	378546	4.03	883365	5.08	494729	6.61	807251	7.98	559650	10.76	1318697	12.24
OP37434-MB	344271	4.03	806599	5.08	464044	6.61	758394	7.98	529548	10.76	1254539	12.24
OP37434-BS	350906	4.03	820709	5.08	459938	6.61	729790	7.99	522171	10.77	1204525	12.24
ZZZZZZ	351327	4.03	805248	5.08	466728	6.61	737270	7.98	526062	10.76	1257646	12.24
ZZZZZZ	367202	4.03	830144	5.08	471069	6.61	741121	7.98	525422	10.76	1224893	12.24
ZZZZZZ	334846	4.03	768698	5.08	438452	6.61	723545	7.99	503848	10.76	1206043	12.24
ZZZZZZ	353194	4.03	818812	5.08	463361	6.61	754332	7.98	521480	10.76	1244615	12.24
ZZZZZZ	340670	4.03	793766	5.08	451053	6.61	727258	7.98	511263	10.76	1223936	12.24
ZZZZZZ	349560	4.03	789206	5.08	457626	6.61	729911	7.99	511402	10.76	1230972	12.24
ZZZZZZ	338578	4.03	764410	5.08	433702	6.61	705273	7.98	492672	10.76	1198239	12.24
MC29594-1	375395	4.03	851741	5.08	486943	6.61	774765	7.98	542224	10.76	1297027	12.24
MC29594-2	342640	4.03	772876	5.08	439007	6.61	699158	7.99	492335	10.76	1186248	12.24
MC29594-3	333849	4.03	781991	5.08	444397	6.61	723853	7.99	503727	10.76	1198106	12.24
MC29594-4	357394	4.03	816366	5.08	470236	6.61	755881	7.99	530600	10.76	1251963	12.24
MC29594-5	355345	4.03	817367	5.08	462981	6.61	760325	7.99	541672	10.77	1251053	12.25
MC29594-6	346842	4.03	759347	5.08	441998	6.61	721161	7.99	518784	10.77	1198421	12.25
MC29594-7	351414	4.03	811856	5.08	457211	6.61	735849	7.99	517277	10.76	1229828	12.24
ZZZZZZ	343958	4.03	790963	5.08	448110	6.61	723945	7.99	511952	10.76	1214216	12.24

- 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
7

Semivolatiles Internal Standard Area Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSR1403-CC1399	Injection Date:	04/10/14
Lab File ID:	R38036.D	Injection Time:	20:48
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	181022	5.42	538184	6.52	314711	8.05	538332	9.36	584266	11.97	563706	13.68
Upper Limit ^a	362044	5.92	1076368	7.02	629422	8.55	1076664	9.86	1168532	12.47	1127412	14.18
Lower Limit ^b	90511	4.92	269092	6.02	157356	7.55	269166	8.86	292133	11.47	281853	13.18

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37522-MB	175785	5.41	669025	6.51	407493	8.05	696010	9.36	724201	11.96	518131	13.67
OP37522-BS	124430	5.42	461986	6.52	345899	8.05	475549	9.36	518221	11.97	510523	13.68
OP37530-MB	191692	5.41	709572	6.51	396296	8.05	540988	9.36	585449	11.96	575922	13.67
OP37530-BS	173531	5.42	579052	6.51	336251	8.05	589176	9.36	644727	11.97	631951	13.68
OP37530-MS	215939	5.42	821645	6.51	497389	8.05	879454	9.36	942735	11.97	914518	13.68
OP37530-MSD	205279	5.42	709932	6.52	449623	8.05	593734	9.36	634730	11.97	623020	13.68
MC29300-14	158727	5.41	492107	6.51	415432	8.05	526137	9.36	569139	11.96	710645	13.67
ZZZZZZ	223962	5.41	828558	6.51	508870	8.05	805587	9.36	694589	11.96	680795	13.67
MC29594-1	207876	5.42	789337	6.51	446652	8.05	720998	9.36	610704	11.96	634364	13.67
MC29594-2	208342	5.41	778176	6.51	471989	8.05	811102	9.36	870972	11.96	847924	13.67
MC29594-3	210411	5.41	788081	6.51	477968	8.05	846027	9.36	889691	11.96	871463	13.67
MC29594-4	213828	5.41	803958	6.51	482612	8.05	838364	9.36	762589	11.96	628799	13.67
OP37522-MS	195478	5.42	736654	6.51	449761	8.05	791329	9.36	806989	11.97	653126	13.68
OP37522-MSD	171889	5.42	651974	6.51	396450	8.05	569675	9.36	594434	11.97	722814	13.68
MC29574-1	212316	5.41	792918	6.51	480567	8.05	839326	9.36	866339	11.96	635069	13.67
ZZZZZZ	194096	5.41	722979	6.51	441362	8.05	764080	9.36	814864	11.96	802020	13.67
ZZZZZZ	210139	5.42	790035	6.51	380738	8.05	786037	9.36	740562	11.96	911104	13.67

- 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.

7.4.2
7

Semivolatiles Internal Standard Area Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSR1407-CC1399	Injection Date:	04/14/14
Lab File ID:	R38137.D	Injection Time:	16:43
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	161828	5.27	609042	6.37	368586	7.90	628020	9.21	652692	11.77	626035	13.46
Upper Limit ^a	323656	5.77	1218084	6.87	737172	8.40	1256040	9.71	1305384	12.27	1252070	13.96
Lower Limit ^b	80914	4.77	304521	5.87	184293	7.40	314010	8.71	326346	11.27	313018	12.96

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
ZZZZZZ	201983	5.27	763542	6.37	458775	7.90	767707	9.20	772056	11.77	760302	13.46
ZZZZZZ	212365	5.27	795752	6.37	469421	7.90	782950	9.20	790622	11.77	751394	13.46
ZZZZZZ	204574	5.27	769017	6.37	458326	7.90	770332	9.20	772021	11.77	750762	13.46
ZZZZZZ	218347	5.27	811613	6.37	485963	7.90	809198	9.20	810553	11.77	757911	13.46
ZZZZZZ	203720	5.27	761402	6.37	456269	7.90	765046	9.20	757961	11.77	726223	13.46
ZZZZZZ	203697	5.27	750754	6.37	441736	7.90	733953	9.20	746844	11.77	721953	13.46
ZZZZZZ	218224	5.27	813235	6.37	484831	7.90	799026	9.20	793885	11.77	743438	13.46
ZZZZZZ	214867	5.27	801486	6.37	478054	7.90	796157	9.20	786009	11.77	751393	13.46
ZZZZZZ	231676	5.27	857040	6.37	512503	7.90	847888	9.20	859384	11.77	814280	13.46
ZZZZZZ	205626	5.27	773510	6.37	463708	7.90	766380	9.20	770364	11.77	726695	13.46
OP37571-MB	158479	5.27	598384	6.37	351537	7.90	591475	9.20	590885	11.77	562616	13.46
OP37571-BS	158815	5.27	595261	6.37	348113	7.90	594331	9.20	602116	11.77	569022	13.46
OP37571-MS	179326	5.27	668072	6.37	392819	7.90	656299	9.21	676297	11.77	648382	13.46
OP37571-MSD	169313	5.27	628741	6.37	367863	7.90	621569	9.21	633539	11.77	612155	13.46
MC29300-23	167568	5.27	627660	6.37	378429	7.90	641807	9.20	654045	11.77	630028	13.46
ZZZZZZ	170073	5.27	639217	6.37	383268	7.90	635715	9.20	646310	11.76	625805	13.45
ZZZZZZ	167682	5.27	622298	6.37	369395	7.90	629945	9.20	651135	11.77	645804	13.47
ZZZZZZ	166133	5.27	619179	6.37	374228	7.90	639962	9.21	675287	11.78	666214	13.47
ZZZZZZ	165883	5.27	613450	6.37	373495	7.90	629592	9.20	679302	11.77	657594	13.46
ZZZZZZ	163552	5.27	602467	6.37	365223	7.90	608303	9.20	633415	11.77	617339	13.45
ZZZZZZ	158926	5.27	585581	6.37	349215	7.90	589635	9.20	607964	11.77	588776	13.46
MC29594-5	168375	5.27	615770	6.37	376427	7.90	639549	9.20	658881	11.77	641513	13.46
MC29594-6	166572	5.27	615384	6.37	376264	7.90	640238	9.20	654347	11.77	648643	13.47
MC29594-7	152043	5.27	559572	6.37	340727	7.90	582371	9.20	607038	11.77	598203	13.46

- 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.

7.4.3
7

Semivolatiles Surrogate Recovery Summary

Job Number: MC29594

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29594-1	R38046.D	29	20	66	71	72	84
MC29594-2	R38047.D	31	22	67	72	69	85
MC29594-3	R38048.D	26	18	59	60	58	75
MC29594-4	R38049.D	32	22	53	54	49	78
MC29594-5	R38161.D	42	28	81	74	76	94
MC29594-6	R38162.D	44	29	83	74	76	95
MC29594-7	R38163.D	45	29	80	79	77	98
OP37530-BS	R38041.D	55	36	77	75	91	119
OP37530-MB	R38040.D	45	31	70	72	70	87
OP37530-MS	R38042.D	43	30	77	68	67	85
OP37530-MSD	R38043.D	51	34	105	79	55	111
OP37571-BS	R38149.D	40	28	67	70	65	94
OP37571-MB	R38148.D	42	27	67	69	67	96
OP37571-MS	R38150.D	35	24	59	66	67	89
OP37571-MSD	R38151.D	37	25	65	65	65	87

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Trihromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

7.5.1
7

Semivolatiles Surrogate Recovery Summary

Job Number: MC29594

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Method: SW846 8270D BY SIM

Matrix: AQ

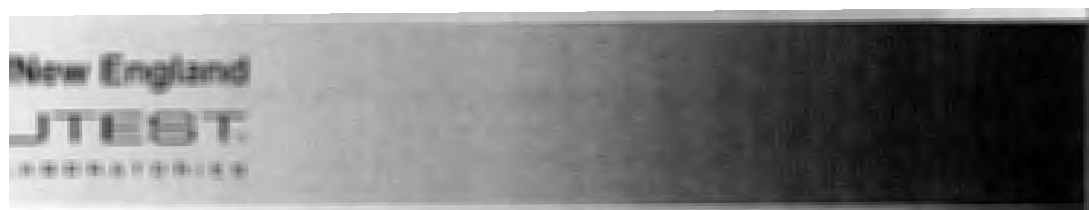
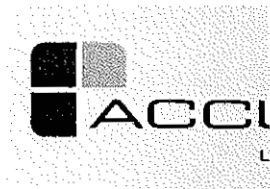
Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC29594-1	I88469.D	66	65	89
MC29594-2	I88470.D	68	67	90
MC29594-3	I88471.D	56	56	79
MC29594-4	I88472.D	50	45	72
MC29594-5	I88473.D	66	67	89
MC29594-6	I88474.D	69	67	87
MC29594-7	I88475.D	60	59	90
OP37531-BS	I88455.D	69	66	90
OP37531-MB	I88454.D	67	63	91
OP37531-MS	I88456.D	64	64	89
OP37531-MSD	I88457.D	71	68	94

Surrogate Compounds	Recovery Limits
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S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

7.5.2
7



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: MC29594
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37559-MB	YZ89183.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539

The QC reported here applies to the following samples: Method: SW846 8011

MC29594-1, MC29594-2, MC29594-3, MC29594-4, MC29594-5, MC29594-6, MC29594-7, MC29594-9

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)	74% 36-173%
460-00-4	Bromofluorobenzene (S)	75% 36-173%

8.1.1
8

Blank Spike Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37559-BS	YZ89184.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539

The QC reported here applies to the following samples: Method: SW846 8011

MC29594-1, MC29594-2, MC29594-3, MC29594-4, MC29594-5, MC29594-6, MC29594-7, MC29594-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.056	79*	60-140
106-93-4	1,2-Dibromoethane	0.071	0.057	80*	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	71%*	36-173%
460-00-4	Bromofluorobenzene (S)	83%*	36-173%

8.2.1
8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37559-MS	YZ89185.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539
OP37559-MSD	YZ89186.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539
MC29574-1	YZ89187.D	1	04/11/14	SZ	04/10/14	OP37559	GYZ7539

The QC reported here applies to the following samples: Method: SW846 8011

MC29594-1, MC29594-2, MC29594-3, MC29594-4, MC29594-5, MC29594-6, MC29594-7, MC29594-9

CAS No.	Compound	MC29574-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0685	0.052	76	0.0672	0.051	76	2	64-141/29
106-93-4	1,2-Dibromoethane	ND	0.0685	0.056	82	0.0672	0.048	71	15	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC29574-1	Limits
460-00-4	Bromofluorobenzene (S)	92%	89%	101%	36-173%
460-00-4	Bromofluorobenzene (S)	81%	73%	75%	36-173%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC29594

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29594-1	YZ89194.D	120	84
MC29594-2	YZ89195.D	105	83
MC29594-3	YZ89196.D	120	92
MC29594-4	YZ89197.D	104	98
MC29594-5	YZ89198.D	95	96
MC29594-6	YZ89199.D	105	115
MC29594-7	YZ89200.D	106	84
MC29594-9	YZ89201.D	102	80
OP37559-BS	YZ89184.D	71	83
OP37559-MB	YZ89183.D	74	75
OP37559-MS	YZ89185.D	92	81
OP37559-MSD	YZ89186.D	89	73

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: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7539-ICC7539	Injection Date:	04/11/14
Lab File ID:	YZ89179.D	Injection Time:	14:47
Instrument ID:	GCRYZ	Method:	SW846 8011

S1^a S1^b
 RT RT

Check Std	4.08	4.76
-----------	------	------

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
OP37559-MB	YZ89183.D	04/11/14	17:18	4.08	4.76
OP37560-MB	YZ89183A.D	04/11/14	17:18	4.08	4.76
OP37559-BS	YZ89184.D	04/11/14	17:44	4.08	4.76
OP37560-BS	YZ89184A.D	04/11/14	17:44	4.08	4.76
OP37559-MS	YZ89185.D	04/11/14	18:10	4.08	4.76
OP37560-MS	YZ89185A.D	04/11/14	18:10	4.08	4.76
OP37559-MSD	YZ89186.D	04/11/14	18:36	4.08	4.76
OP37560-MSD	YZ89186A.D	04/11/14	18:36	4.08	4.76
MC29300-20	YZ89187A.D	04/11/14	19:03	4.08	4.76
MC29574-1	YZ89187.D	04/11/14	19:03	4.08	4.76
ZZZZZZ	YZ89188.D	04/11/14	19:29	4.08	4.76
ZZZZZZ	YZ89189.D	04/11/14	19:55	4.08	4.76
ZZZZZZ	YZ89190.D	04/11/14	20:21	4.08	4.76
ZZZZZZ	YZ89191.D	04/11/14	20:47	4.08	4.76
ZZZZZZ	YZ89192.D	04/11/14	21:15	4.08	4.76

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: MC29594
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7539-CC7539	Injection Date:	04/11/14
Lab File ID:	YZ89193.D	Injection Time:	21:41
Instrument ID:	GCRYZ	Method:	SW846 8011

S1^a S1^b
 RT RT

Check Std	4.08	4.76
-----------	------	------

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
MC29594-1	YZ89194.D	04/11/14	22:06	4.08	4.76
MC29594-2	YZ89195.D	04/11/14	22:32	4.08	4.76
MC29594-3	YZ89196.D	04/11/14	22:57	4.08	4.76
MC29594-4	YZ89197.D	04/11/14	23:24	4.08	4.76
MC29594-5	YZ89198.D	04/11/14	23:49	4.08	4.76
MC29594-6	YZ89199.D	04/12/14	00:14	4.08	4.76
MC29594-7	YZ89200.D	04/12/14	00:40	4.08	4.76
MC29594-9	YZ89201.D	04/12/14	01:07	4.08	4.76
ZZZZZ	YZ89202.D	04/12/14	01:34	4.08	4.76
ZZZZZ	YZ89203.D	04/12/14	02:01	4.08	4.76

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 – 2nd Quarter 2014 Data Review

Laboratory SDG: MC29640

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 5/14/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2013

Sample Identification	Sample Identification
MW16-ROX-040914	MW24-ROX-040914
P54-ROX-040914	MW3-ROX-040914
TB-ROX-040914-HCL	TB-ROX-040914-ST

1.0 Data Package Completeness

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

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated di-n-butyl phthalate and phenanthrene were detected in the method blank. VOC LCS recoveries were outside evaluation criteria. VOC MS/MSD recoveries and VOC MS/MSD RPDs were outside evaluation criteria in sample MW16-ROX-040914. These issues are addressed further in the appropriate sections below. Additionally, continuing calibration verification for acrolein, 2-hexanone, and di-n-octyl phthalate exceeded 40 percent difference (%D).

The cooler receipt form indicated that one of one cooler was received by the laboratory at a temperature of 1.2°C, which is outside the 4°C ± 2°C 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
OP37547-MB	SVOCs	Di-n-butyl phthalate	0.50 µg/L
OP37547-MB	PAHs	Phenanthrene	0.019 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
MW16-ROX-040914	SVOCs	Di-n-butyl phthalate	-	U
MW24-ROX-040914	SVOCs	Di-n-butyl phthalate	-	U
P54-ROX-040914	SVOCs	Di-n-butyl phthalate	-	U
MW3-ROX-040914	SVOCs	Di-n-butyl phthalate	-	U
MW3-ROX-040914	SVOCs	Phenanthrene	-	U

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV1118-BS	VOCs	Acrolein	134	70-130
MSV1118-BS	VOCs	2-Chloroethyl vinyl ether	62	70-130
MSV1121-BS	VOCs	Acetone	132	70-130
MSV1121-BS	VOCs	Acrolein	167	70-130
MSV1121-BS	VOCs	2-Chloroethyl vinyl ether	69	70-130
MSV1121-BS	VOCs	2-Hexanone	133	70-130

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS MSV1118-BS was associated with the trip blank; trip blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
MW16-ROX-040914	VOCs	2-Chloroethyl vinyl ether	UJ
MW24-ROX-040914	VOCs	2-Chloroethyl vinyl ether	UJ
P54-ROX-040914	VOCs	2-Chloroethyl vinyl ether	UJ
MW3-ROX-040914	SVOCs	2-Chloroethyl vinyl ether	UJ

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

Yes, although not requested, sample MW16-ROX-040914 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
MW16-ROX-040914	VOCs	Acrolein	149/151	2	70-130/30
MW16-ROX-040914	VOCs	2-Chloroethyl vinyl ether	0/0	NA	70-130/30
MW16-ROX-040914	VOCs	Dichlorodifluoromethane	64/64	0	70-130/30
MW16-ROX-040914	VOCs	1,4-Dioxane	64/77	18	70-130/30
MW16-ROX-040914	VOCs	Naphthalene	62/100	47	70-130/30
MW16-ROX-040914	VOCs	1,2,3-Trichlorobenzene	64/100	44	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 analytes listed and qualified as appropriate in Section 5.0 of this data review. No further qualification of data was required.

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; samples analyzed did not require dilution.

12.0 Additional Qualifications

Were additional qualifications applied?

No



Technical Report for

Shell Oil

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana,

Accutest Job Number: MC29640

Sampling Date: 04/09/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: 92



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
5/14/2014
Reza Fard
Lab Director*

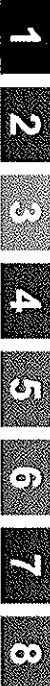
Client Service contact: Matthew Morrell 508-481-6200

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 (I1546AA) 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: MC29640

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
MC29640-1	04/09/14	10:35	DMM	04/10/14 AQ Ground Water	MW16-ROX-040914 ✓
MC29640-2	04/09/14	11:30	DMM	04/10/14 AQ Ground Water	MW24-ROX-040914 ✓
MC29640-3	04/09/14	13:45	DMM	04/10/14 AQ Ground Water	P54-ROX-040914 ✓
MC29640-4	04/09/14	14:50	DMM	04/10/14 AQ Ground Water	MW3-ROX-040914 ✓
MC29640-5	04/09/14	00:00	DMM	04/10/14 AQ Trip Blank Water	TB-ROX-040914-HCL ✓
MC29640-6	04/09/14	00:00	DMM	04/10/14 AQ Trip Blank Water	TB-ROX-040914-ST ✓



SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Shell Oil Job No MC29640
 Site: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Report Date 4/24/2014 3:55:28 PM

4 Sample(s), 2 Trip Blank(s) were collected on 04/09/2014 and were received at Accutest on 04/10/2014 properly preserved, at 1.2 Deg. C and intact. These Samples received an Accutest job number of MC29640. 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:	MSV1118
--------	----	-----------	---------

- ☛ All samples were analyzed within the recommended method holding time.
- ☛ Sample(s) MC29634-4MS, MC29634-4MSD 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.
- ☛ Matrix Spike Recovery(s) for 1,2,3-Trichlorobenzene, 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 2-Chloroethyl vinyl ether, Acetone are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- ☛ RPD(s) for MSD for 1,2,3-Trichlorobenzene, Naphthalene are outside control limits for sample MC29634-4MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- ☛ MC29634-4MS/MSD for Acrolein: Outside control limits. Blank Spike meets program technical requirements.

Matrix	AQ	Batch ID:	MSV1121
--------	----	-----------	---------

- ☛ All samples were analyzed within the recommended method holding time.
- ☛ Sample(s) MC29640-1MS, MC29640-1MSD were used as the QC samples indicated.
- ☛ All method blanks for this batch meet method specific criteria.
- ☛ Continuing calibration check standard MSV1121-CC1058 for acrolein, 2-hexanone exceed 40% difference (response bias high). Associated samples are non-detect for these compounds.
- ☛ Blank Spike Recovery(s) for 2-Chloroethyl vinyl ether, 2-Hexanone, Acetone, Acrolein are outside control limits. Blank Spike meets program technical requirements.
- ☛ Matrix Spike Recovery(s) for 1,2,3-Trichlorobenzene, 1,4-Dioxane, 2-Chloroethyl vinyl ether, Dichlorodifluoromethane, Naphthalene, 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, Dichlorodifluoromethane, Acrolein are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- ☛ RPD(s) for MSD for 1,2,3-Trichlorobenzene, Naphthalene are outside control limits for sample MC29640-1MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.

Extractables by GCMS By Method SW846 8270D

Matrix	AQ	Batch ID:	OP37547
--------	----	-----------	---------

- ☞ All samples were extracted within the recommended method holding time.
- ☞ All samples were analyzed within the recommended method holding time.
- ☞ Sample(s) MC29300-18MS, MC29300-18MSD were used as the QC samples indicated.
- ☞ Sample(s) MC29640-1, MC29640-2, MC29640-3, MC29640-4 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- ☞ RPD(s) for MSD for 2,4,6-Trichlorophenol are outside control limits for sample OP37547-MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- ☞ OP37547-MS/MSD for Pyridine: Outside control limits due to possible matrix interference. Refer to Blank Spike.
- ☞ Continuing calibration check standard MSR1405-CC1399 for Di-n-octylphthalate exceed 40% difference (response bias high). Associated samples are non-detect for this compound.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix	AQ	Batch ID:	OP37548
--------	----	-----------	---------

- ☞ All samples were extracted within the recommended method holding time.
- ☞ All samples were analyzed within the recommended method holding time.
- ☞ Sample(s) MC29300-21MS, MC29300-21MSD were used as the QC samples indicated.
- ☞ Sample(s) MC29640-4 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:	OP37606
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- ☞ All samples were extracted within the recommended method holding time.
- ☞ All samples were analyzed within the recommended method holding time.
- ☞ Sample(s) MC29713-2MS, MC29713-2MSD 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 (MC29640).

Summary of Hits

Job Number: MC29640
 Account: Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Collected: 04/09/14



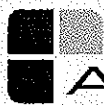
Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC29640-1	MW16-ROX-040914					
		0.34 J	0.50	0.32	ug/l	SW846 8260C
		0.62 JB	5.9	0.20	ug/l	SW846 8270D
MC29640-2	MW24-ROX-040914					
		0.92 JB	5.6	0.19	ug/l	SW846 8270D
MC29640-3	P54-ROX-040914					
		0.81	0.50	0.32	ug/l	SW846 8260C
		0.62 JB	6.0	0.21	ug/l	SW846 8270D
MC29640-4	MW3-ROX-040914					
		1.5	0.50	0.32	ug/l	SW846 8260C
		0.56 JB	5.6	0.19	ug/l	SW846 8270D
		0.38 J	2.2	0.37	ug/l	SW846 8270D
		0.019 JB	0.056	0.014	ug/l	SW846 8270D BY SIM

MC29640-5 TB-ROX-040914-HCL

No hits reported in this sample.

MC29640-6 TB-ROX-040914-ST

No hits reported in this sample.



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW16-ROX-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-1	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29988.D	1	04/19/14	AMY	n/a	n/a	MSV1121
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	0.34	0.50	0.32	ug/l	J
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	WJ
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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

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Report of Analysis

Client Sample ID:	MW16-ROX-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-1	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW16-ROX-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-1	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		70-130%
2037-26-5	Toluene-D8	87%		70-130%
460-00-4	4-Bromofluorobenzene	89%		70-130%
CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units Q
	Total TIC, Volatile		0	ug/l

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

Report of Analysis

Client Sample ID:	MW16-ROX-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-1	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38092.D	1	04/12/14	KR	04/10/14	OP37547	MSR1405
Run #2							

Run #	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	12	2.9	ug/l	
95-57-8	2-Chlorophenol	ND	5.9	0.36	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	12	0.97	ug/l	
120-83-2	2,4-Dichlorophenol	ND	12	0.47	ug/l	
105-67-9	2,4-Dimethylphenol	ND	12	0.66	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	2.9	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	12	2.3	ug/l	
95-48-7	2-Methylphenol	ND	12	0.27	ug/l	
	3&4-Methylphenol	ND	12	0.55	ug/l	
88-75-5	2-Nitrophenol	ND	12	3.4	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	12	1.3	ug/l	
108-95-2	Phenol	ND	5.9	0.36	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	12	0.44	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	12	0.21	ug/l	
62-53-3	Aniline	ND	12	0.75	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.9	0.55	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.9	0.62	ug/l	
100-51-6	Benzyl Alcohol	ND	12	2.7	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.9	0.37	ug/l	
106-47-8	4-Chloroaniline	ND	12	0.66	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.9	0.34	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.9	0.41	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.9	0.39	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.9	0.30	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.9	0.28	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	12	0.54	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	12	0.35	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.9	0.31	ug/l	
132-64-9	Dibenzofuran	ND	2.4	0.30	ug/l	
84-74-2	Di-n-butyl phthalate	0.07 u	5.9	0.20	ug/l	JB u
117-84-0	Di-n-octyl phthalate	ND	5.9	0.33	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:	MW16-ROX-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-1	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.9	0.24	ug/l	
131-11-3	Dimethyl phthalate	ND	5.9	0.40	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.4	0.39	ug/l	
118-74-1	Hexachlorobenzene	ND	5.9	0.34	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	1.5	ug/l	
67-72-1	Hexachloroethane	ND	5.9	0.36	ug/l	
78-59-1	Isophorone	ND	5.9	0.53	ug/l	
88-74-4	2-Nitroaniline	ND	12	0.47	ug/l	
99-09-2	3-Nitroaniline	ND	12	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	12	2.5	ug/l	
98-95-3	Nitrobenzene	ND	5.9	0.46	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.9	1.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.9	0.47	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.9	0.23	ug/l	
110-86-1	Pyridine	ND	12	0.61	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	42%		15-110%
4165-62-2	Phenol-d5	29%		15-110%
118-79-6	2,4,6-Tribromophenol	66%		15-110%
4165-60-0	Nitrobenzene-d5	63%		30-130%
321-60-8	2-Fluorobiphenyl	62%		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: MW16-ROX-040914	Date Sampled: 04/09/14
Lab Sample ID: MC29640-1	Date Received: 04/10/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D BY SIM SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88744.D	1	04/23/14	MR	04/10/14	OP37548	MSI3305
Run #2							

Run #	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.12	0.081	ug/l	
208-96-8	Acenaphthylene	ND	0.12	0.058	ug/l	
120-12-7	Anthracene	ND	0.12	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.059	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.12	0.034	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.059	0.037	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.12	0.032	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.12	0.045	ug/l	
218-01-9	Chrysene	ND	0.12	0.028	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.12	0.038	ug/l	
206-44-0	Fluoranthene	ND	0.12	0.048	ug/l	
86-73-7	Fluorene	ND	0.12	0.12	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.12	0.036	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.24	0.059	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.24	0.087	ug/l	
85-01-8	Phenanthrene	ND	0.059	0.015	ug/l	
129-00-0	Pyrene	ND	0.12	0.045	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	62%		30-130%
321-60-8	2-Fluorobiphenyl	59%		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

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Report of Analysis

Client Sample ID:	MW16-ROX-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-1	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89233.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
Run #2							

Run #	Initial Volume	Final Volume
Run #1	36.9 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0051	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)	107%		36-173%
460-00-4	Bromofluorobenzene (S)	75%		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

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Report of Analysis

Client Sample ID:	MW24-ROX-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-2	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29989.D	1	04/19/14	AMY	n/a	n/a	MSV1121
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	WJ
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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J = Indicates 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-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-2	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW24-ROX-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-2	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		70-130%
2037-26-5	Toluene-D8	89%		70-130%
460-00-4	4-Bromofluorobenzene	92%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW24-ROX-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-2	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38093.D	1	04/12/14	KR	04/10/14	OP37547	MSR1405
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.71	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.59	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.62	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	0.92 ✓	5.6	0.19	ug/l	JB ✓
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

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

J = Indicates 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-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-2	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

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ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	26%		15-110%
4165-62-2	Phenol-d5	17%		15-110%
118-79-6	2,4,6-Tribromophenol	72%		15-110%
4165-60-0	Nitrobenzene-d5	77%		30-130%
321-60-8	2-Fluorobiphenyl	85%		30-130%
1718-51-0	Terphenyl-d14	73%		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 presnmpptive evidence of a compound

Report of Analysis

Client Sample ID:	MW24-ROX-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-2	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88745.D	1	04/23/14	MR	04/10/14	OP37548	MSI3305
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.055	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.22	0.055	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.082	ug/l	
85-01-8	Phenanthrene	ND	0.056	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	67%		30-130%
321-60-8	2-Fluorobiphenyl	65%		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

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Report of Analysis

Client Sample ID: MW24-ROX-040914	Date Sampled: 04/09/14
Lab Sample ID: MC29640-2	Date Received: 04/10/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89234.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
Run #2							

Run #	Initial Volume	Final Volume
Run #1	37.2 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0051	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)	112%		36-173%
460-00-4	Bromofluorobenzene (S)	86%		36-173%

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

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

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Report of Analysis

Client Sample ID:	P54-ROX-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-3	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29990.D	1	04/19/14	AMY	n/a	n/a	MSV1121
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	0.81	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	کد
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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

Report of Analysis

Client Sample ID:	P54-ROX-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-3	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID:	P54-ROX-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-3	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		70-130%
2037-26-5	Toluene-D8	88%		70-130%
460-00-4	4-Bromofluorobenzene	93%		70-130%

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

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

Report of Analysis

Client Sample ID:	P54-ROX-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-3	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38094.D	1	04/12/14	KR	04/10/14	OP37547	MSR1405
Run #2							

Run #	Initial Volume	Final Volume
Run #1	830 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	12	3.0	ug/l	
95-57-8	2-Chlorophenol	ND	6.0	0.37	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	12	0.99	ug/l	
120-83-2	2,4-Dichlorophenol	ND	12	0.48	ug/l	
105-67-9	2,4-Dimethylphenol	ND	12	0.68	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	3.0	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	12	2.3	ug/l	
95-48-7	2-Methylphenol	ND	12	0.27	ug/l	
	3&4-Methylphenol	ND	12	0.56	ug/l	
88-75-5	2-Nitrophenol	ND	12	3.5	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.64	ug/l	
87-86-5	Pentachlorophenol	ND	12	1.3	ug/l	
108-95-2	Phenol	ND	6.0	0.36	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	12	0.45	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	12	0.21	ug/l	
62-53-3	Aniline	ND	12	0.77	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	6.0	0.57	ug/l	
85-68-7	Butyl benzyl phthalate	ND	6.0	0.64	ug/l	
100-51-6	Benzyl Alcohol	ND	12	2.7	ug/l	
91-58-7	2-Chloronaphthalene	ND	6.0	0.38	ug/l	
106-47-8	4-Chloroaniline	ND	12	0.67	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	6.0	0.35	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	6.0	0.42	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	6.0	0.40	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	6.0	0.30	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	6.0	0.29	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	12	0.55	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	12	0.36	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	6.0	0.32	ug/l	
132-64-9	Dibenzofuran	ND	2.4	0.31	ug/l	
84-74-2	Di-n-butyl phthalate	0.62 u	6.0	0.21	ug/l	JB u
117-84-0	Di-n-octyl phthalate	ND	6.0	0.34	ug/l	

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

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

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 4

Report of Analysis

Client Sample ID:	P54-ROX-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-3	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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	6.0	0.24	ug/l	
131-11-3	Dimethyl phthalate	ND	6.0	0.41	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.4	0.40	ug/l	
118-74-1	Hexachlorobenzene	ND	6.0	0.35	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	1.5	ug/l	
67-72-1	Hexachloroethane	ND	6.0	0.36	ug/l	
78-59-1	Isophorone	ND	6.0	0.54	ug/l	
88-74-4	2-Nitroaniline	ND	12	0.48	ug/l	
99-09-2	3-Nitroaniline	ND	12	1.7	ug/l	
100-01-6	4-Nitroaniline	ND	12	2.6	ug/l	
98-95-3	Nitrobenzene	ND	6.0	0.47	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	6.0	1.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	6.0	0.49	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	6.0	0.23	ug/l	
110-86-1	Pyridine	ND	12	0.62	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	34%		15-110%
4165-62-2	Phenol-d5	23%		15-110%
118-79-6	2,4,6-Tribromophenol	56%		15-110%
4165-60-0	Nitrobenzene-d5	63%		30-130%
321-60-8	2-Fluorobiphenyl	61%		30-130%
1718-51-0	Terphenyl-d14	117%		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-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-3	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88746.D	1	04/23/14	MR	04/10/14	OP37548	MSI3305
Run #2							

Run #	Initial Volume	Final Volume
Run #1	830 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.12	0.083	ug/l	
208-96-8	Acenaphthylene	ND	0.12	0.060	ug/l	
120-12-7	Anthracene	ND	0.12	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.060	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.12	0.035	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.060	0.038	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.12	0.032	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.12	0.047	ug/l	
218-01-9	Chrysene	ND	0.12	0.029	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.12	0.038	ug/l	
206-44-0	Fluoranthene	ND	0.12	0.049	ug/l	
86-73-7	Fluorene	ND	0.12	0.12	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.12	0.037	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.24	0.060	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.24	0.089	ug/l	
85-01-8	Phenanthrene	ND	0.060	0.015	ug/l	
129-00-0	Pyrene	ND	0.12	0.046	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	60%		30-130%
321-60-8	2-Fluorobiphenyl	58%		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: P54-ROX-040914	Date Sampled: 04/09/14
Lab Sample ID: MC29640-3	Date Received: 04/10/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89236.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
Run #2							

Run #	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)	101%		36-173%
460-00-4	Bromofluorobenzene (S)	75%		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

4.3
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Report of Analysis

Client Sample ID:	MW3-ROX-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-4	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29991.D	I	04/19/14	AMY	n/a	n/a	MSV1121
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	1.5	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	WJ
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW3-ROX-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-4	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW3-ROX-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-4	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	81%		70-130%
2037-26-5	Toluene-D8	89%		70-130%
460-00-4	4-Bromofluorobenzene	92%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW3-ROX-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-4	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38095.D	1	04/12/14	KR	04/10/14	OP37547	MSR1405
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chloropheuol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.71	ug/l	
101-55-3	4-Bromopheuyl phenyl ether	ND	5.6	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.59	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.62	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorohenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	0.56 u	5.6	0.19	ug/l	JB u
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW3-ROX-040914	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-4	Date Received:	04/10/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.38	2.2	0.37	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.6	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	25%		15-110%
4165-62-2	Phenol-d5	18%		15-110%
118-79-6	2,4,6-Tribromophenol	60%		15-110%
4165-60-0	Nitrobenzene-d5	68%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	108%		30-130%

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

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

Report of Analysis

Client Sample ID: MW3-ROX-040914	Date Sampled: 04/09/14
Lab Sample ID: MC29640-4	Date Received: 04/10/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D BY SIM SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	188747.D	1	04/23/14	MR	04/10/14	OP37548	MSI3305
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.055	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.22	0.055	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.082	ug/l	
85-01-8	Phenanthrene	0.019 u	0.056	0.014	ug/l	JB u
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	66%		30-130%
321-60-8	2-Fluorobiphenyl	63%		30-130%
1718-51-0	Terphenyl-d14	94%		30-130%

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

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Report of Analysis

Client Sample ID: MW3-ROX-040914	Date Sampled: 04/09/14
Lab Sample ID: MC29640-4	Date Received: 04/10/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89237.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
Run #2							

Run #	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)	123%		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

4.4
4

Report of Analysis

Client Sample ID:	TB-ROX-040914-HCL	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-5	Date Received:	04/10/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29897.D	1	04/17/14	AMY	n/a	n/a	MSV1118
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB-ROX-040914-HCL	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-5	Date Received:	04/10/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorohutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID: TB-ROX-040914-HCL	Date Sampled: 04/09/14
Lab Sample ID: MC29640-5	Date Received: 04/10/14
Matrix: AQ - Trip Blank Water	Percent Solids: n/a
Method: SW846 8260C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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4

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%		70-130%
2037-26-5	Toluene-D8	89%		70-130%
460-00-4	4-Bromofluorobenzene	93%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Cone.	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-040914-ST	Date Sampled:	04/09/14
Lab Sample ID:	MC29640-6	Date Received:	04/10/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89238.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
Run #2							

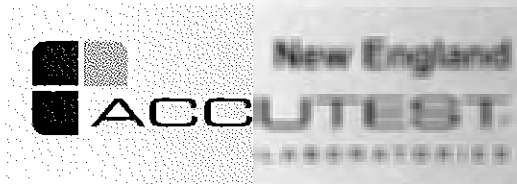
Run #	Initial Volume	Final Volume
Run #1	36.8 ml	2.0 ml
Run #2		

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)	91%		36-173%		
460-00-4	Bromofluorobenzene (S)	66%		36-173%		

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

4.6
4



Misc. Forms



Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

LAB (LOCATION)

Shell Oil Products Chain Of Custody Record

URS

MEMO
 CALCULATED
 OTHER
 SPL

ENV. SERVICES
 MOTIVA RETAIL
 SHELL RETAIL
 MOTIVA SOACH
 CONSULTANT
 LURES
 SHELL PRELINE
 OTHER

Print Bill To Contact Name: Bob Bfman
 INCIDENT # (ENV SERVICES): 8 7 2 1 8 6 4 0
 DATE: 4/9/14
 PAGE: 1 of 1

URS CORPORATION
 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110
 Elizabeth Kunkel, Wendy Pennington, Bob Bfman
 314-422-0100
 314-429-0462
 900 South Central Ave. ROXANA, IL 60070
 Roxana Quarterly GW / 21562973.03002

Lab Vendor #
 Lab Use Only: MC29640
 Requested Analysis: DWAilingly, M Nanker

DELIVERABLES: LEVEL 1 LEVEL 2 LEVEL 3 LEVEL 4 OTHER (SPECIFY) EDD
 SPECIAL INSTRUCTIONS OR NOTES:
 *Please contact Accutest PM regarding SVOC extractions.

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT.	PID (ppm)	FIELD NOTES:			
		DATE	TIME		HCl	HNO3	HClO4	NONE	OTHER						
-1	MUD1A-ROX-040914 ✓	4/9/14	1035	water	2			2	2	6	X	X	X		
-2	MUD24-ROX-040914 ✓		1130		2			2	2	6	X	X	X		
-3	P54-ROX-040914 ✓		1345		2			2	2	6	X	X	X		
-4	MUD3-ROX-040914 ✓		1450		2			2	2	6	X	X	X		
-5	TB-ROX-040914-HCL ✓		0000		2			2	2	6	X				
-6	TB-ROX-040914-ST ✓		0000					2	2	6	X				18C, 4M1,

RECEIVED BY (SIGNATURE): [Signature]
 RECEIVED BY (SIGNATURE): [Signature]
 RECEIVED BY (SIGNATURE): [Signature]

Date: 4/9/14 Time: 1700
 Date: 4-10-14 Time: 930

1.2°C

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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC29640 Client: URS Immediate Client Services Action Required: No
 Date / Time Received: 4/10/2014 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. SmpI Dates/Time OK

Cooler Temperature Y or N
 1. Temp criteria achieved:
 2. Cooler temp verification: Infrared 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

5.1

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC29640

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

5.2



Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC29640-1 Collected: 09-APR-14 10:35 By: DMMM Received: 10-APR-14 By: MW16-ROX-040914						
MC29640-1	SW846 8270D	12-APR-14 01:27	KR	10-APR-14	AJ	AB8270SL+
MC29640-1	SW846 8011	15-APR-14 16:56	SZ	14-APR-14	MT	V8011SL
MC29640-1	SW846 8260C	19-APR-14 11:22	AMY			V8260SL+
MC29640-1	SW846 8270D BY SIM	23-APR-14 17:40	MR	10-APR-14	AJ	B8270SIMSL
MC29640-2 Collected: 09-APR-14 11:30 By: DMMM Received: 10-APR-14 By: MW24-ROX-040914						
MC29640-2	SW846 8270D	12-APR-14 01:53	KR	10-APR-14	AJ	AB8270SL+
MC29640-2	SW846 8011	15-APR-14 17:25	SZ	14-APR-14	MT	V8011SL
MC29640-2	SW846 8260C	19-APR-14 11:48	AMY			V8260SL+
MC29640-2	SW846 8270D BY SIM	23-APR-14 18:02	MR	10-APR-14	AJ	B8270SIMSL
MC29640-3 Collected: 09-APR-14 13:45 By: DMMM Received: 10-APR-14 By: P54-ROX-040914						
MC29640-3	SW846 8270D	12-APR-14 02:20	KR	10-APR-14	AJ	AB8270SL+
MC29640-3	SW846 8011	15-APR-14 18:21	SZ	14-APR-14	MT	V8011SL
MC29640-3	SW846 8260C	19-APR-14 12:14	AMY			V8260SL+
MC29640-3	SW846 8270D BY SIM	23-APR-14 18:25	MR	10-APR-14	AJ	B8270SIMSL
MC29640-4 Collected: 09-APR-14 14:50 By: DMMM Received: 10-APR-14 By: MW3-ROX-040914						
MC29640-4	SW846 8270D	12-APR-14 02:47	KR	10-APR-14	AJ	AB8270SL+
MC29640-4	SW846 8011	15-APR-14 18:49	SZ	14-APR-14	MT	V8011SL
MC29640-4	SW846 8260C	19-APR-14 12:40	AMY			V8260SL+
MC29640-4	SW846 8270D BY SIM	23-APR-14 18:48	MR	10-APR-14	AJ	B8270SIMSL
MC29640-5 Collected: 09-APR-14 00:00 By: DMMM Received: 10-APR-14 By: TB-ROX-040914-HCL						
MC29640-5	SW846 8260C	17-APR-14 15:53	AMY			V8260SL+
MC29640-6 Collected: 09-APR-14 00:00 By: DMMM Received: 10-APR-14 By: TB-ROX-040914-ST						

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC29640

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

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Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC29640-6	SW846 8011	15-APR-14 19:16	SZ	14-APR-14	MT	V8011SL

Accutest Internal Chain of Custody

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Received: 04/10/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29640-1.1	Walk In Ref #22	Marc Tahtamoni	04/10/14 20:26	Retrieve from Storage
MC29640-1.3	VOC Ref #4	Amy Min Yang	04/17/14 15:31	Retrieve from Storage
MC29640-1.3	Amy Min Yang	GCMSV	04/17/14 15:32	Load on Instrument
MC29640-1.3	GCMSV	Amy Min Yang	04/18/14 15:04	Unload from Instrument
MC29640-1.3	Amy Min Yang	VOC Ref #4	04/18/14 15:04	Return to Storage
MC29640-1.4	VOC Ref #4	Amy Min Yang	04/19/14 09:17	Retrieve from Storage
MC29640-1.4	Amy Min Yang	GCMSV	04/19/14 09:18	Load on Instrument
MC29640-1.4	GCMSV	Amy Min Yang	04/21/14 16:48	Unload from Instrument
MC29640-1.4	Amy Min Yang	VOC Ref #4	04/21/14 16:48	Return to Storage
MC29640-1.6	VOC Ref #4	Marc Tahtamoni	04/14/14 19:13	Retrieve from Storage
MC29640-2.1	Walk In Ref #22	Marc Tahtamoni	04/10/14 20:26	Retrieve from Storage
MC29640-2.3	VOC Ref #4	Amy Min Yang	04/19/14 09:17	Retrieve from Storage
MC29640-2.3	Amy Min Yang	GCMSV	04/19/14 09:18	Load on Instrument
MC29640-2.3	GCMSV	Amy Min Yang	04/21/14 16:48	Unload from Instrument
MC29640-2.3	Amy Min Yang	VOC Ref #4	04/21/14 16:48	Return to Storage
MC29640-2.4	VOC Ref #4	Amy Min Yang	04/17/14 15:31	Retrieve from Storage
MC29640-2.4	Amy Min Yang	GCMSV	04/17/14 15:32	Load on Instrument
MC29640-2.4	GCMSV	Amy Min Yang	04/18/14 15:04	Unload from Instrument
MC29640-2.4	Amy Min Yang	VOC Ref #4	04/18/14 15:04	Return to Storage
MC29640-2.6	VOC Ref #4	Marc Tahtamoni	04/14/14 19:13	Retrieve from Storage
MC29640-3.1	Walk In Ref #22	Marc Tahtamoni	04/10/14 20:26	Retrieve from Storage
MC29640-3.3	VOC Ref #4	Amy Min Yang	04/19/14 09:17	Retrieve from Storage
MC29640-3.3	Amy Min Yang	GCMSV	04/19/14 09:18	Load on Instrument
MC29640-3.3	GCMSV	Amy Min Yang	04/21/14 16:48	Unload from Instrument
MC29640-3.3	Amy Min Yang	VOC Ref #4	04/21/14 16:48	Return to Storage
MC29640-3.4	VOC Ref #4	Amy Min Yang	04/17/14 15:31	Retrieve from Storage
MC29640-3.4	Amy Min Yang	GCMSV	04/17/14 15:32	Load on Instrument
MC29640-3.4	GCMSV	Amy Min Yang	04/18/14 15:04	Unload from Instrument
MC29640-3.4	Amy Min Yang	VOC Ref #4	04/18/14 15:04	Return to Storage
MC29640-3.6	VOC Ref #4	Marc Tahtamoni	04/14/14 19:13	Retrieve from Storage
MC29640-4.1	Walk In Ref #22	Marc Tahtamoni	04/10/14 20:26	Retrieve from Storage

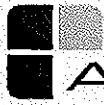


Accutest Internal Chain of Custody

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Received: 04/10/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29640-4.3	VOC Ref #4	Amy Min Yang	04/17/14 15:31	Retrieve from Storage
MC29640-4.3	Amy Min Yang	GCMSV	04/17/14 15:32	Load on Instrument
MC29640-4.3	GCMSV	Amy Min Yang	04/18/14 15:04	Unload from Instrument
MC29640-4.3	Amy Min Yang	VOC Ref #4	04/18/14 15:04	Return to Storage
MC29640-4.4	VOC Ref #4	Amy Min Yang	04/19/14 09:17	Retrieve from Storage
MC29640-4.4	Amy Min Yang	GCMSV	04/19/14 09:18	Load on Instrument
MC29640-4.4	GCMSV	Amy Min Yang	04/21/14 16:48	Unload from Instrument
MC29640-4.4	Amy Min Yang	VOC Ref #4	04/21/14 16:48	Return to Storage
MC29640-4.6	VOC Ref #4	Marc Tahtamoni	04/14/14 19:13	Retrieve from Storage
MC29640-5.1	VOC Ref #4	Amy Min Yang	04/17/14 15:31	Retrieve from Storage
MC29640-5.1	Amy Min Yang	GCMSV	04/17/14 15:32	Load on Instrument
MC29640-5.1	GCMSV	Amy Min Yang	04/18/14 15:04	Unload from Instrument
MC29640-5.1	Amy Min Yang	VOC Ref #4	04/18/14 15:04	Return to Storage
MC29640-6.2	VOC Ref #4	Marc Tahtamoni	04/14/14 19:13	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: MC29640
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1118-MB	V29896.D	I	04/17/14	AMY	n/a	n/a	MSV1118

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29640-5

6.1.1



CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ng/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1118-MB	V29896.D	1	04/17/14	AMY	n/a	n/a	MSV1118

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29640-5

6.1.1



CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ng/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ng/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

Method Blank Summary

Job Number: MC29640

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1118-MB	V29896.D	1	04/17/14	AMY	n/a	n/a	MSV1118

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29640-5

6.1.1



CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	90% 70-130%
2037-26-5	Toluene-D8	85% 70-130%
460-00-4	4-Bromofluorobenzene	92% 70-130%

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

Method Blank Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1121-MB	V29985.D	1	04/19/14	AMY	n/a	n/a	MSV1121

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29640-1, MC29640-2, MC29640-3, MC29640-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ng/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

6.1.2



Method Blank Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1121-MB	V29985.D	1	04/19/14	AMY	n/a	n/a	MSV1121

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29640-1, MC29640-2, MC29640-3, MC29640-4

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

6.1.2



Method Blank Summary

Job Number: MC29640

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1121-MB	V29985.D	1	04/19/14	AMY	n/a	n/a	MSV1121

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29640-1, MC29640-2, MC29640-3, MC29640-4

6.1.2
6

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	93% 70-130%
2037-26-5	Toluene-D8	88% 70-130%
460-00-4	4-Bromofluorobenzene	92% 70-130%

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

Blank Spike Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1118-BS	V29893.D	1	04/17/14	AMY	n/a	n/a	MSV1118

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29640-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	52.6	105	70-130
107-02-8	Acrolein	250	334	134* a	70-130
107-13-1	Acrylonitrile	50	37.1	74	70-130
71-43-2	Benzene	50	46.5	93	70-130
108-86-1	Bromobenzene	50	53.3	107	70-130
74-97-5	Bromochloromethane	50	44.0	88	70-130
75-27-4	Bromodichloromethane	50	50.8	102	70-130
75-25-2	Bromoform	50	42.1	84	70-130
74-83-9	Bromomethane	50	57.5	115	70-130
78-93-3	2-Butanone (MEK)	50	51.0	102	70-130
104-51-8	n-Butylbenzene	50	55.2	110	70-130
135-98-8	sec-Butylbenzene	50	56.0	112	70-130
98-06-6	tert-Butylbenzene	50	59.1	118	70-130
75-15-0	Carbon disulfide	50	39.9	80	70-130
56-23-5	Carbon tetrachloride	50	57.7	115	70-130
108-90-7	Chlorobenzene	50	48.8	98	70-130
75-00-3	Chloroethane	50	65.0	130	70-130
110-75-8	2-Chloroethyl vinyl ether	50	31.1	62* a	70-130
67-66-3	Chloroform	50	47.2	94	70-130
74-87-3	Chloromethane	50	56.4	113	70-130
95-49-8	o-Chlorotoluene	50	54.4	109	70-130
106-43-4	p-Chlorotoluene	50	55.6	111	70-130
124-48-1	Dibromochloromethane	50	46.8	94	70-130
95-50-1	1,2-Dichlorobenzene	50	49.4	99	70-130
541-73-1	1,3-Dichlorobenzene	50	51.8	104	70-130
106-46-7	1,4-Dichlorobenzene	50	50.8	102	70-130
75-71-8	Dichlorodifluoromethane	50	41.9	84	70-130
75-34-3	1,1-Dichloroethane	50	45.9	92	70-130
107-06-2	1,2-Dichloroethane	50	51.5	103	70-130
75-35-4	1,1-Dichloroethene	50	46.9	94	70-130
156-59-2	cis-1,2-Dichloroethene	50	45.7	91	70-130
156-60-5	trans-1,2-Dichloroethene	50	44.3	89	70-130
78-87-5	1,2-Dichloropropane	50	48.1	96	70-130
142-28-9	1,3-Dichloropropane	50	47.1	94	70-130
594-20-7	2,2-Dichloropropane	50	51.4	103	70-130
563-58-6	1,1-Dichloropropene	50	50.6	101	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1118-BS	V29893.D	1	04/17/14	AMY	n/a	n/a	MSV1118

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29640-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	44.0	88	70-130
10061-02-6	trans-1,3-Dichloropropene	50	56.8	114	70-130
123-91-1	1,4-Dioxane	250	181	72	70-130
97-63-2	Ethyl methacrylate	50	41.4	83	77-137
100-41-4	Ethylbenzene	50	53.7	107	70-130
87-68-3	Hexachlorobutadiene	50	51.3	103	70-130
591-78-6	2-Hexanone	50	61.2	122	70-130
98-82-8	Isopropylbenzene	50	57.1	114	70-130
99-87-6	p-Isopropyltoluene	50	56.7	113	70-130
1634-04-4	Methyl Tert Butyl Ether	50	43.9	88	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	43.6	87	70-130
74-95-3	Methylene bromide	50	47.9	96	70-130
75-09-2	Methylene chloride	50	43.7	87	70-130
91-20-3	Naphthalene	50	49.5	99	70-130
103-65-1	n-Propylbenzene	50	54.4	109	70-130
100-42-5	Styrene	50	52.3	105	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	56.7	113	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	49.7	99	70-130
127-18-4	Tetrachloroethene	50	53.1	106	70-130
108-88-3	Toluene	50	50.8	102	70-130
87-61-6	1,2,3-Trichlorobenzene	50	53.2	106	70-130
120-82-1	1,2,4-Trichlorobenzene	50	45.8	92	70-130
71-55-6	1,1,1-Trichloroethane	50	53.5	107	70-130
79-00-5	1,1,2-Trichloroethane	50	46.5	93	70-130
79-01-6	Trichloroethene	50	48.6	97	70-130
75-69-4	Trichlorofluoromethane	50	60.6	121	70-130
96-18-4	1,2,3-Trichloropropane	50	50.8	102	70-130
95-63-6	1,2,4-Trimethylbenzene	50	56.6	113	70-130
108-67-8	1,3,5-Trimethylbenzene	50	57.9	116	70-130
108-05-4	Vinyl Acetate	50	42.4	85	70-130
75-01-4	Vinyl chloride	50	59.2	118	70-130
	m,p-Xylene	100	105	105	70-130
95-47-6	o-Xylene	50	52.9	106	70-130
1330-20-7	Xylene (total)	150	158	105	70-130

* = Outside of Control Limits.



Blank Spike Summary

Job Number: MC29640
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1118-BS	V29893.D	1	04/17/14	AMY	n/a	n/a	MSV1118

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29640-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	82%	70-130%
2037-26-5	Toluene-D8	88%	70-130%
460-00-4	4-Bromofluorobenzene	94%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1121-BS	V29982.D	1	04/19/14	AMY	n/a	n/a	MSV1121

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29640-1, MC29640-2, MC29640-3, MC29640-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	66.1	132* a	70-130
107-02-8	Acrolein	250	418	167* a	70-130
107-13-1	Acrylonitrile	50	44.9	90	70-130
71-43-2	Benzene	50	49.7	99	70-130
108-86-1	Bromobenzene	50	54.0	108	70-130
74-97-5	Bromochloromethane	50	47.6	95	70-130
75-27-4	Bromodichloromethane	50	51.3	103	70-130
75-25-2	Bromoform	50	44.8	90	70-130
74-83-9	Bromomethane	50	56.1	112	70-130
78-93-3	2-Butanone (MEK)	50	57.4	115	70-130
104-51-8	n-Butylbenzene	50	55.5	111	70-130
135-98-8	sec-Bntylbenzene	50	56.1	112	70-130
98-06-6	tert-Butylbenzene	50	55.9	112	70-130
75-15-0	Carbon disulfide	50	46.6	93	70-130
56-23-5	Carbon tetrachloride	50	59.9	120	70-130
108-90-7	Chlorobenzene	50	51.1	102	70-130
75-00-3	Chloroethane	50	65.0	130	70-130
110-75-8	2-Chloroethyl vinyl ether	50	34.5	69* a	70-130
67-66-3	Chloroform	50	48.5	97	70-130
74-87-3	Chloromethane	50	59.9	120	70-130
95-49-8	o-Chlorotoluene	50	52.2	104	70-130
106-43-4	p-Chlorotoluene	50	54.9	110	70-130
124-48-1	Dibromochloromethane	50	48.5	97	70-130
95-50-1	1,2-Dichlorobenzene	50	50.4	101	70-130
541-73-1	1,3-Dichlorobenzene	50	51.8	104	70-130
106-46-7	1,4-Dichlorobenzene	50	52.0	104	70-130
75-71-8	Dichlorodifluoromethane	50	42.4	85	70-130
75-34-3	1,1-Dichloroethane	50	49.3	99	70-130
107-06-2	1,2-Dichloroethane	50	51.4	103	70-130
75-35-4	1,1-Dichloroethene	50	53.0	106	70-130
156-59-2	cis-1,2-Dichloroethene	50	48.7	97	70-130
156-60-5	trans-1,2-Dichloroethene	50	49.0	98	70-130
78-87-5	1,2-Dichloropropane	50	51.7	103	70-130
142-28-9	1,3-Dichloropropane	50	50.9	102	70-130
594-20-7	2,2-Dichloropropane	50	52.2	104	70-130
563-58-6	1,1-Dichloropropene	50	53.9	108	70-130

* = Outside of Control Limits.

6.2.2

Blank Spike Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1121-BS	V29982.D	1	04/19/14	AMY	n/a	n/a	MSV1121

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29640-1, MC29640-2, MC29640-3, MC29640-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	46.2	92	70-130
10061-02-6	trans-1,3-Dichloropropene	50	59.4	119	70-130
123-91-1	1,4-Dioxane	250	209	84	70-130
97-63-2	Ethyl methacrylate	50	45.7	91	77-137
100-41-4	Ethylbenzene	50	54.8	110	70-130
87-68-3	Hexachlorobutadiene	50	49.2	98	70-130
591-78-6	2-Hexanone	50	66.7	133* a	70-130
98-82-8	Isopropylbenzene	50	55.1	110	70-130
99-87-6	p-Isopropyltoluene	50	56.5	113	70-130
1634-04-4	Methyl Tert Butyl Ether	50	48.2	96	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	49.0	98	70-130
74-95-3	Methylene bromide	50	50.1	100	70-130
75-09-2	Methylene chloride	50	48.1	96	70-130
91-20-3	Naphthalene	50	53.8	108	70-130
103-65-1	n-Propylbenzene	50	54.0	108	70-130
100-42-5	Styrene	50	55.3	111	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	57.0	114	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	53.9	108	70-130
127-18-4	Tetrachloroethene	50	54.2	108	70-130
108-88-3	Toluene	50	53.2	106	70-130
87-61-6	1,2,3-Trichlorobenzene	50	57.3	115	70-130
120-82-1	1,2,4-Trichlorobenzene	50	47.0	94	70-130
71-55-6	1,1,1-Trichloroethane	50	53.8	108	70-130
79-00-5	1,1,2-Trichloroethane	50	51.7	103	70-130
79-01-6	Trichloroethene	50	49.8	100	70-130
75-69-4	Trichlorofluoromethane	50	60.5	121	70-130
96-18-4	1,2,3-Trichloropropane	50	52.3	105	70-130
95-63-6	1,2,4-Trimethylbenzene	50	55.0	110	70-130
108-67-8	1,3,5-Trimethylbenzene	50	55.7	111	70-130
108-05-4	Vinyl Acetate	50	45.9	92	70-130
75-01-4	Vinyl chloride	50	60.1	120	70-130
	m,p-Xylene	100	107	107	70-130
95-47-6	o-Xylene	50	53.3	107	70-130
1330-20-7	Xylene (total)	150	160	107	70-130

* = Outside of Control Limits.



Blank Spike Summary

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Job Number: MC29640

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1121-BS	V29982.D	1	04/19/14	AMY	n/a	n/a	MSV1121

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29640-1, MC29640-2, MC29640-3, MC29640-4

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	82%	70-130%
2037-26-5	Toluene-D8	88%	70-130%
460-00-4	4-Bromofluorobenzene	91%	70-130%

(a) Outside control limits. Blauk Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29634-4MS	V29916.D	5	04/18/14	AMY	n/a	n/a	MSV1118
MC29634-4MSD	V29917.D	5	04/18/14	AMY	n/a	n/a	MSV1118
MC29634-4	V29899.D	1	04/17/14	AMY	n/a	n/a	MSV1118

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29640-5

CAS No.	Compound	MC29634-4 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	250	137	55* a	250	133	53* a	3	70-130/30
107-02-8	Acrolein	ND	1250	1700	136* b	1250	1670	134* b	2	70-130/30
107-13-1	Acrylonitrile	ND	250	210	84	250	211	84	0	70-130/30
71-43-2	Benzene	ND	250	265	106	250	262	105	1	70-130/30
108-86-1	Bromobenzene	ND	250	284	114	250	289	116	2	70-130/30
74-97-5	Bromochloromethane	ND	250	238	95	250	241	96	1	70-130/30
75-27-4	Bromodichloromethane	ND	250	243	97	250	243	97	0	70-130/30
75-25-2	Bromoform	ND	250	210	84	250	216	86	3	70-130/30
74-83-9	Bromomethane	ND	250	257	103	250	246	98	4	70-130/30
78-93-3	2-Butanone (MEK)	ND	250	200	80	250	188	75	6	70-130/30
104-51-8	n-Butylbenzene	ND	250	297	119	250	297	119	0	70-130/30
135-98-8	sec-Butylbenzene	ND	250	312	125	250	309	124	1	70-130/30
98-06-6	tert-Butylbenzene	ND	250	301	120	250	297	119	1	70-130/30
75-15-0	Carbon disulfide	ND	250	236	94	250	231	92	2	70-130/30
56-23-5	Carbon tetrachloride	ND	250	287	115	250	282	113	2	70-130/30
108-90-7	Chlorobenzene	ND	250	270	108	250	270	108	0	70-130/30
75-00-3	Chloroethane	ND	250	297	119	250	285	114	4	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND	250	ND	0* a	250	ND	0* a	nc	70-130/30
67-66-3	Chloroform	ND	250	238	95	250	232	93	3	70-130/30
74-87-3	Chloromethane	ND	250	276	110	250	265	106	4	70-130/30
95-49-8	o-Chlorotoluene	ND	250	285	114	250	286	114	0	70-130/30
106-43-4	p-Chlorotoluene	ND	250	285	114	250	287	115	1	70-130/30
124-48-1	Dibromochloromethane	ND	250	236	94	250	237	95	0	70-130/30
95-50-1	1,2-Dichlorobenzene	ND	250	249	100	250	263	105	5	70-130/30
541-73-1	1,3-Dichlorobenzene	ND	250	267	107	250	275	110	3	70-130/30
106-46-7	1,4-Dichlorobenzene	ND	250	263	105	250	273	109	4	70-130/30
75-71-8	Dichlorodifluoromethane	ND	250	200	80	250	185	74	8	70-130/30
75-34-3	1,1-Dichloroethane	ND	250	248	99	250	243	97	2	70-130/30
107-06-2	1,2-Dichloroethane	ND	250	236	94	250	236	94	0	70-130/30
75-35-4	1,1-Dichloroethene	1.4	250	276	110	250	269	107	3	70-130/30
156-59-2	cis-1,2-Dichloroethene	6.0	250	257	100	250	253	99	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	250	252	101	250	244	98	3	70-130/30
78-87-5	1,2-Dichloropropane	ND	250	272	109	250	270	108	1	70-130/30
142-28-9	1,3-Dichloropropane	ND	250	259	104	250	262	105	1	70-130/30
594-20-7	2,2-Dichloropropane	ND	250	233	93	250	225	90	3	70-130/30
563-58-6	1,1-Dichloropropene	ND	250	279	112	250	275	110	1	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29634-4MS	V29916.D	5	04/18/14	AMY	n/a	n/a	MSV1118
MC29634-4MSD	V29917.D	5	04/18/14	AMY	n/a	n/a	MSV1118
MC29634-4	V29899.D	1	04/17/14	AMY	n/a	n/a	MSV1118

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29640-5

CAS No.	Compound	MC29634-4 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND	250	216	86	250	218	87	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND	250	278	111	250	278	111	0	70-130/30
123-91-1	1,4-Dioxane	ND	1250	1040	83	1250	1040	83	0	70-130/30
97-63-2	Ethyl methacrylate	ND	250	229	92	250	232	93	1	72-139/30
100-41-4	Ethylbenzene	ND	250	298	119	250	295	118	1	70-130/30
87-68-3	Hexachlorobutadiene	ND	250	249	100	250	272	109	9	70-130/30
591-78-6	2-Hexanone	ND	250	190	76	250	194	78	2	70-130/30
98-82-8	Isopropylbenzene	ND	250	315	126	250	309	124	2	70-130/30
99-87-6	p-Isopropyltoluene	ND	250	310	124	250	308	123	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	250	228	91	250	228	91	0	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	250	219	88	250	223	89	2	70-130/30
74-95-3	Methylene bromide	ND	250	241	96	250	244	98	1	70-130/30
75-09-2	Methylene chloride	ND	250	240	96	250	239	96	0	70-130/30
91-20-3	Naphthalene	ND	250	160	64* a	250	259	104	47* c	70-130/30
103-65-1	n-Propylbenzene	ND	250	298	119	250	294	118	1	70-130/30
100-42-5	Styrene	ND	250	288	115	250	289	116	0	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND	250	295	118	250	295	118	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	265	106	250	277	111	4	70-130/30
127-18-4	Tetrachloroethene	ND	250	301	120	250	297	119	1	70-130/30
108-88-3	Toluene	ND	250	284	114	250	281	112	1	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND	250	159	64* a	250	257	103	47* c	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND	250	189	76	250	243	97	25	70-130/30
71-55-6	1,1,1-Trichloroethane	9.0	250	275	106	250	266	103	3	70-130/30
79-00-5	1,1,2-Trichloroethane	ND	250	257	103	250	254	102	1	70-130/30
79-01-6	Trichloroethene	18.8	250	273	102	250	272	101	0	70-130/30
75-69-4	Trichlorofluoromethane	ND	250	265	106	250	251	100	5	70-130/30
96-18-4	1,2,3-Trichloropropane	ND	250	252	101	250	257	103	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND	250	300	120	250	299	120	0	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND	250	308	123	250	306	122	1	70-130/30
108-05-4	Vinyl Acetate	ND	250	220	88	250	219	88	0	70-130/30
75-01-4	Vinyl chloride	ND	250	285	114	250	273	109	4	70-130/30
	m,p-Xylene	ND	500	595	119	500	589	118	1	70-130/30
95-47-6	o-Xylene	ND	250	295	118	250	294	118	0	70-130/30
1330-20-7	Xylene (total)	ND	750	891	119	750	883	118	1	70-130/30

* = Outside of Control Limits.

6.3.1



Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29640

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29634-4MS	V29916.D	5	04/18/14	AMY	n/a	n/a	MSV1118
MC29634-4MSD	V29917.D	5	04/18/14	AMY	n/a	n/a	MSV1118
MC29634-4	V29899.D	1	04/17/14	AMY	n/a	n/a	MSV1118

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29640-5

6.3.1

CAS No.	Surrogate Recoveries	MS	MSD	MC29634-4	Limits
1868-53-7	Dibromofluoromethane	77%	76%	92%	70-130%
2037-26-5	Toluene-D8	87%	89%	88%	70-130%
460-00-4	4-Bromofluorobenzene	90%	91%	92%	70-130%

- (a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
- (b) Outside control limits. Blank Spike meets program technical requirements.
- (c) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29640-1MS	V30006.D	5	04/19/14	AMY	n/a	n/a	MSV1121
MC29640-1MSD	V30007.D	5	04/19/14	AMY	n/a	n/a	MSV1121
MC29640-1	V29988.D	1	04/19/14	AMY	n/a	n/a	MSV1121

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29640-1, MC29640-2, MC29640-3, MC29640-4

CAS No.	Compound	MC29640-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
67-64-1	Acetone	ND		250	185	74	250	207	83	11	70-130/30
107-02-8	Acrolein	ND		1250	1860	149* a	1250	1890	151* a	2	70-130/30
107-13-1	Acrylonitrile	ND		250	222	89	250	220	88	1	70-130/30
71-43-2	Benzene	0.34	J	250	241	96	250	244	97	1	70-130/30
108-86-1	Bromobenzene	ND		250	255	102	250	262	105	3	70-130/30
74-97-5	Bromochloromethane	ND		250	231	92	250	233	93	1	70-130/30
75-27-4	Bromodichloromethane	ND		250	225	90	250	226	90	0	70-130/30
75-25-2	Bromoform	ND		250	205	82	250	200	80	2	70-130/30
74-83-9	Bromomethane	ND		250	234	94	250	236	94	1	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	182	73	250	183	73	1	70-130/30
104-51-8	n-Butylbenzene	ND		250	249	100	250	255	102	2	70-130/30
135-98-8	sec-Butylbenzene	ND		250	256	102	250	267	107	4	70-130/30
98-06-6	tert-Butylbenzene	ND		250	245	98	250	254	102	4	70-130/30
75-15-0	Carbon disulfide	ND		250	218	87	250	219	88	0	70-130/30
56-23-5	Carbon tetrachloride	ND		250	238	95	250	240	96	1	70-130/30
108-90-7	Chlorobenzene	ND		250	248	99	250	248	99	0	70-130/30
75-00-3	Chloroethane	ND		250	282	113	250	281	112	0	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	ND	0* a	250	ND	0* a	nc	70-130/30
67-66-3	Chloroform	ND		250	218	87	250	221	88	1	70-130/30
74-87-3	Chloromethane	ND		250	242	97	250	242	97	0	70-130/30
95-49-8	o-Chlorotoluene	ND		250	244	98	250	250	100	2	70-130/30
106-43-4	p-Chlorotoluene	ND		250	248	99	250	253	101	2	70-130/30
124-48-1	Dibromochloromethane	ND		250	227	91	250	222	89	2	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	226	90	250	239	96	6	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	239	96	250	245	98	2	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	239	96	250	247	99	3	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	160	64* a	250	160	64* a	0	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	230	92	250	234	94	2	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	219	88	250	218	87	0	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	245	98	250	249	100	2	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	236	94	250	238	95	1	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	233	93	250	235	94	1	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	253	101	250	256	102	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	250	100	250	246	98	2	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	188	75	250	188	75	0	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	243	97	250	244	98	0	70-130/30

* = Outside of Control Limits.

6.3.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29640-1MS	V30006.D	5	04/19/14	AMY	n/a	n/a	MSV1121
MC29640-1MSD	V30007.D	5	04/19/14	AMY	n/a	u/a	MSV1121
MC29640-1	V29988.D	1	04/19/14	AMY	n/a	n/a	MSV1121

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29640-1, MC29640-2, MC29640-3, MC29640-4

CAS No.	Compound	MC29640-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND	250	205	82	250	205	82	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND	250	268	107	250	267	107	0	70-130/30
123-91-1	1,4-Dioxane	ND	1250	802	64* a	1250	958	77	18	70-130/30
97-63-2	Ethyl methacrylate	ND	250	232	93	250	225	90	3	72-139/30
100-41-4	Ethylbenzene	ND	250	265	106	250	264	106	0	70-130/30
87-68-3	Hexachlorobutadiene	ND	250	207	83	250	236	94	13	70-130/30
591-78-6	2-Hexanone	ND	250	197	79	250	191	76	3	70-130/30
98-82-8	Isopropylbenzene	ND	250	260	104	250	268	107	3	70-130/30
99-87-6	p-Isopropyltoluene	ND	250	258	103	250	267	107	3	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	250	229	92	250	227	91	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	250	223	89	250	218	87	2	70-130/30
74-95-3	Methylene bromide	ND	250	232	93	250	233	93	0	70-130/30
75-09-2	Methylene chloride	ND	250	233	93	250	233	93	0	70-130/30
91-20-3	Naphthalene	ND	250	156	62* a	250	251	100	47* b	70-130/30
103-65-1	n-Propylbenzene	ND	250	251	100	250	256	102	2	70-130/30
100-42-5	Styrene	ND	250	267	107	250	267	107	0	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND	250	266	106	250	266	106	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	256	102	250	266	106	4	70-130/30
127-18-4	Tetrachloroethene	ND	250	256	102	250	256	102	0	70-130/30
108-88-3	Toluene	ND	250	259	104	250	260	104	0	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND	250	161	64* a	250	251	100	44* b	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND	250	177	71	250	222	89	23	70-130/30
71-55-6	1,1,1-Trichloroethane	ND	250	230	92	250	231	92	0	70-130/30
79-00-5	1,1,2-Trichloroethane	ND	250	249	100	250	249	100	0	70-130/30
79-01-6	Trichloroethene	ND	250	232	93	250	234	94	1	70-130/30
75-69-4	Trichlorofluoromethane	ND	250	225	90	250	225	90	0	70-130/30
96-18-4	1,2,3-Trichloropropane	ND	250	228	91	250	230	92	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND	250	255	102	250	263	105	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND	250	257	103	250	266	106	3	70-130/30
108-05-4	Vinyl Acetate	ND	250	214	86	250	214	86	0	70-130/30
75-01-4	Vinyl chloride	ND	250	259	104	250	260	104	0	70-130/30
	m,p-Xylene	ND	500	531	106	500	531	106	0	70-130/30
95-47-6	o-Xylene	ND	250	261	104	250	263	105	1	70-130/30
1330-20-7	Xylene (total)	ND	750	793	106	750	794	106	0	70-130/30

* = Outside of Control Limits.

6.3.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29640

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29640-1MS	V30006.D	5	04/19/14	AMY	n/a	n/a	MSV1121
MC29640-1MSD	V30007.D	5	04/19/14	AMY	n/a	n/a	MSV1121
MC29640-1	V29988.D	1	04/19/14	AMY	n/a	n/a	MSV1121

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29640-1, MC29640-2, MC29640-3, MC29640-4

CAS No.	Surrogate Recoveries	MS	MSD	MC29640-1	Limits
1868-53-7	Dibromofluoromethane	79%	79%	98%	70-130%
2037-26-5	Toluene-D8	88%	88%	87%	70-130%
460-00-4	4-Bromofluorohenzene	91%	90%	89%	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.

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Volatile Internal Standard Area Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSV1118-CC1058	Injection Date:	04/17/14
Lab File ID:	V29893.D	Injection Time:	14:06
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	342728	6.50	457521	7.69	213386	11.04	213403	13.26	43303	3.45
Upper Limit ^a	685456	7.00	915042	8.19	426772	11.54	426806	13.76	86606	3.95
Lower Limit ^b	171364	6.00	228761	7.19	106693	10.54	106702	12.76	21652	2.95

Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
MSV1118-BS	342728	6.50	457521	7.69	213386	11.04	213403	13.26	43303	3.45
MSV1118-MB	262591	6.50	360986	7.69	175492	11.04	161331	13.26	33543	3.45
MC29640-5	311005	6.49	443783	7.68	217448	11.04	195823	13.26	37787	3.45
ZZZZZZ	342267	6.50	432940	7.69	163790	11.04	153378	13.26	39019	3.45
MC29634-4	238900	6.50	320025	7.69	159681	11.05	155661	13.26	33881	3.46
ZZZZZZ	211870	6.49	297187	7.69	145549	11.04	135736	13.26	26343	3.45
ZZZZZZ	202910	6.49	276001	7.69	139502	11.04	128288	13.26	24418	3.44
ZZZZZZ	192401	6.49	270078	7.69	137705	11.04	126710	13.26	25164	3.45
ZZZZZZ	237806	6.50	292266	7.69	151004	11.05	141450	13.26	30278	3.46
ZZZZZZ	201710	6.49	283556	7.69	143626	11.04	134381	13.26	29404	3.45
ZZZZZZ	199874	6.50	273405	7.69	138910	11.04	126444	13.26	28228	3.45
ZZZZZZ	204485	6.50	281432	7.69	145035	11.05	135697	13.26	30464	3.46
ZZZZZZ	189906	6.50	266488	7.69	137132	11.04	129077	13.26	28818	3.45
ZZZZZZ	188998	6.49	256077	7.69	132363	11.04	122185	13.26	28155	3.45
ZZZZZZ	181983	6.50	253904	7.69	130367	11.04	122959	13.26	27973	3.46
ZZZZZZ	257985	6.49	361530	7.69	198023	11.04	221431	13.26	31303	3.45
ZZZZZZ	515715	6.50	742966	7.70	343498	11.05	513872 ^c	13.26	322608 ^c	3.50
MC29634-4MS	443891	6.50	600401	7.69	273773	11.05	276912	13.26	55439	3.46
MC29634-4MSD	456381	6.50	608671	7.69	278258	11.05	280544	13.26	59262	3.46
ZZZZZZ	401644	6.51	546696	7.70	252972	11.05	258563	13.27	53979	3.46

- 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 due to possible matrix interference. Confirmed by reanalysis.

6.4.1

Volatile Internal Standard Area Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSV1121-CC1058	Injection Date:	04/19/14
Lab File ID:	V29981.D	Injection Time:	08:18
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	303408	6.54	403111	7.72	192622	11.07	204497	13.28	45385	3.49
Upper Limit ^a	606816	7.04	806222	8.22	385244	11.57	408994	13.78	90770	3.99
Lower Limit ^b	151704	6.04	201556	7.22	96311	10.57	102249	12.78	22693	2.99

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
MSV1121-BS	297302	6.53	397730	7.72	189553	11.07	199177	13.28	44281	3.48
MSV1121-MB	234115	6.54	333256	7.72	169551	11.07	162070	13.28	34600	3.49
ZZZZZZ	207308	6.54	295276	7.72	150238	11.07	143416	13.28	30387	3.48
ZZZZZZ	192458	6.53	274580	7.72	139981	11.07	133045	13.28	32995	3.48
MC29640-1	198583	6.53	283208	7.72	144102	11.07	140364	13.28	33711	3.48
MC29640-2	181600	6.53	260775	7.72	136614	11.07	132852	13.28	30345	3.48
MC29640-3	180258	6.53	258841	7.72	134167	11.07	126262	13.28	30040	3.48
MC29640-4	235988	6.53	290904	7.72	148625	11.07	142075	13.28	40896	3.49
ZZZZZZ	217533	6.53	281991	7.72	144893	11.07	140975	13.28	40988	3.48
ZZZZZZ	240601	6.53	299561	7.72	145307	11.07	147815	13.28	67573	3.48
ZZZZZZ	257322	6.54	315566	7.72	168172	11.07	166111	13.28	49190	3.49
ZZZZZZ	325444	6.54	437917	7.72	214625	11.07	209094	13.28	117146 ^c	3.51
ZZZZZZ	377310	6.54	577770	7.73	274416	11.07	325618	13.28	136812 ^c	3.51
ZZZZZZ	450636	6.54	693943	7.73	326250	11.07	379848	13.28	161653 ^c	3.51
ZZZZZZ	314296	6.53	447566	7.72	206872	11.07	207372	13.28	52756	3.48
ZZZZZZ	357126	6.53	488523	7.72	237912	11.06	237896	13.28	65954	3.49
ZZZZZZ	405848	6.53	555886	7.72	248663	11.06	243739	13.28	90315	3.50
ZZZZZZ	336958	6.53	464213	7.71	216490	11.06	226853	13.28	47274	3.48
MC29640-1MS	386838	6.53	527120	7.72	243278	11.06	256191	13.28	55439	3.48
MC29640-1MSD	381357	6.53	518387	7.72	239500	11.06	245390	13.28	51334	3.48

- 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.

6.4.2
6

Volatile Surrogate Recovery Summary

Job Number: MC29640

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Method: SW846 8260C	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC29640-1	V29988.D	98	87	89
MC29640-2	V29989.D	101	89	92
MC29640-3	V29990.D	100	88	93
MC29640-4	V29991.D	81	89	92
MC29640-5	V29897.D	90	89	93
MC29634-4MS	V29916.D	77	87	90
MC29634-4MSD	V29917.D	76	89	91
MC29640-1MS	V30006.D	79	88	91
MC29640-1MSD	V30007.D	79	88	90
MSV1118-BS	V29893.D	82	88	94
MSV1118-MB	V29896.D	90	85	92
MSV1121-BS	V29982.D	82	88	91
MSV1121-MB	V29985.D	93	88	92

Surrogate Compounds Recovery Limits

S1 = Dibromofluoromethane 70-130%
 S2 = Toluene-D8 70-130%
 S3 = 4-Bromofluorobenzene 70-130%

6.5.1
6

GC/MS Semi-volatiles

QC Data Summaries

7

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: MC29640
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37547-MB	R38067.D	1	04/11/14	KR	04/10/14	OP37547	MSR1404

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29640-1, MC29640-2, MC29640-3, MC29640-4

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-hntyl phthalate	0.50	5.0	0.17	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	his(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

7.1.1
7

Method Blank Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37547-MB	R38067.D	1	04/11/14	KR	04/10/14	OP37547	MSR1404

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29640-1, MC29640-2, MC29640-3, MC29640-4

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries	Limits	
367-12-4	2-Fluorophenol	48%	15-110%
4165-62-2	Phenol-d5	31%	15-110%
118-79-6	2,4,6-Tribromophenol	73%	15-110%
4165-60-0	Nitrobenzene-d5	84%	30-130%
321-60-8	2-Fluorobiphenyl	70%	30-130%
1718-51-0	Terphenyl-d14	66%	30-130%

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

7.1.1
7

Method Blank Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37548-MB	I88483.D	1	04/11/14	MR	04/10/14	OP37548	MSI3295

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29640-1, MC29640-2, MC29640-3, MC29640-4

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(h)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	0.019	0.050	0.013	ug/l	J
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	41%	15-110%
4165-62-2	Phenol-d5	28%	15-110%
118-79-6	2,4,6-Tribromophenol	77%	15-110%
4165-60-0	Nitrobenzene-d5	71%	30-130%
321-60-8	2-Fluorobiphenyl	69%	30-130%
1718-51-0	Terphenyl-d14	89%	30-130%

7.1.2



Blank Spike Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37547-BS	R38068.D	1	04/11/14	KR	04/10/14	OP37547	MSR1404

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29640-1, MC29640-2, MC29640-3, MC29640-4

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	36.7	73	30-130
59-50-7	4-Chloro-3-methyl phenol	50	37.0	74	30-130
120-83-2	2,4-Dichlorophenol	50	38.9	78	30-130
105-67-9	2,4-Dimethylphenol	50	33.1	66	30-130
51-28-5	2,4-Dinitrophenol	50	33.7	67	30-130
534-52-1	4,6-Dinitro-o-cresol	50	44.9	90	30-130
95-48-7	2-Methylphenol	50	32.6	65	30-130
	3&4-Methylphenol	100	59.7	60	30-130
88-75-5	2-Nitrophenol	50	38.5	77	30-130
100-02-7	4-Nitrophenol	50	15.6	31	30-130
87-86-5	Pentachlorophenol	50	36.1	72	30-130
108-95-2	Phenol	50	16.2	32	30-130
95-95-4	2,4,5-Trichlorophenol	50	40.4	81	30-130
88-06-2	2,4,6-Trichlorophenol	50	40.3	81	30-130
62-53-3	Aniline	50	25.8	52	40-140
101-55-3	4-Bromophenyl phenyl ether	50	41.5	83	40-140
85-68-7	Butyl benzyl phthalate	50	48.0	96	40-140
100-51-6	Benzyl Alcohol	50	30.7	61	40-140
91-58-7	2-Chloronaphthalene	50	40.0	80	40-140
106-47-8	4-Chloroaniline	50	34.2	68	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	39.0	78	40-140
111-44-4	bis(2-Chloroethyl)ether	50	39.7	79	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	48.3	97	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	39.9	80	40-140
122-66-7	1,2-Diphenylhydrazine	50	41.7	83	40-140
121-14-2	2,4-Dinitrotoluene	50	41.5	83	40-140
606-20-2	2,6-Dinitrotoluene	50	39.6	79	40-140
91-94-1	3,3'-Dichlorobenzidine	50	41.3	83	40-140
132-64-9	Dibenzofuran	50	37.8	76	40-140
84-74-2	Di-n-butyl phthalate	50	41.2	82	40-140
117-84-0	Di-n-octyl phthalate	50	67.8	136	40-140
84-66-2	Diethyl phthalate	50	39.0	78	40-140
131-11-3	Dimethyl phthalate	50	30.2	60	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	48.0	96	40-140
118-74-1	Hexachlorobenzene	50	41.0	82	40-140

* = Outside of Control Limits.

7.2.1
7

Blank Spike Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37547-BS	R38068.D	1	04/11/14	KR	04/10/14	OP37547	MSR1404

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29640-1, MC29640-2, MC29640-3, MC29640-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	23.0	46	40-140
67-72-1	Hexachloroethane	50	27.1	54	40-140
78-59-1	Isophorone	50	36.6	73	40-140
88-74-4	2-Nitroaniline	50	40.3	81	40-140
99-09-2	3-Nitroaniline	50	35.8	72	40-140
100-01-6	4-Nitroaniline	50	37.1	74	40-140
98-95-3	Nitrobenzene	50	38.0	76	40-140
62-75-9	n-Nitrosodimethylamine	50	24.5	49	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	40.1	80	40-140
86-30-6	N-Nitrosodiphenylamine	50	39.8	80	40-140
110-86-1	Pyridine	50	19.9	40	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	46%	15-110%
4165-62-2	Phenol-d5	30%	15-110%
118-79-6	2,4,6-Tribromophenol	75%	15-110%
4165-60-0	Nitrobenzene-d5	72%	30-130%
321-60-8	2-Fluorobiphenyl	72%	30-130%
1718-51-0	Terphenyl-d14	86%	30-130%

* = Outside of Control Limits.

7.2.1


Blank Spike Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37548-BS	I88484.D	1	04/11/14	MR	04/10/14	OP37548	MSI3295

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29640-1, MC29640-2, MC29640-3, MC29640-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	35.1	70	40-140
208-96-8	Acenaphthylene	50	32.6	65	40-140
120-12-7	Anthracene	50	35.1	70	40-140
56-55-3	Benzo(a)anthracene	50	39.3	79	40-140
50-32-8	Benzo(a)pyrene	50	38.0	76	40-140
205-99-2	Benzo(h)fluoranthene	50	39.8	80	40-140
191-24-2	Benzo(g,h,i)perylene	50	43.0	86	40-140
207-08-9	Benzo(k)fluoranthene	50	40.4	81	40-140
218-01-9	Chrysene	50	37.5	75	40-140
53-70-3	Dibenzo(a,h)anthracene	50	45.8	92	40-140
206-44-0	Fluoranthene	50	38.6	77	40-140
86-73-7	Fluorene	50	36.4	73	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	44.2	88	40-140
90-12-0	1-Methylnaphthalene	50	32.0	64	40-140
91-57-6	2-Methylnaphthalene	50	31.5	63	40-140
85-01-8	Phenanthrene	50	35.4	71	40-140
129-00-0	Pyrene	50	38.5	77	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	38%	15-110%
4165-62-2	Phenol-d5	25%	15-110%
118-79-6	2,4,6-Tribromophenol	78%	15-110%
4165-60-0	Nitrobenzene-d5	68%	30-130%
321-60-8	2-Fluorobiphenyl	66%	30-130%
1718-51-0	Terphenyl-d14	86%	30-130%

* = Outside of Control Limits.

7.2.2


Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37547-MS	R38070.D	1	04/11/14	KR	04/10/14	OP37547	MSR1404
OP37547-MSD	R38071.D	1	04/11/14	KR	04/10/14	OP37547	MSR1404
MC29300-18	R38072.D	1	04/11/14	KR	04/10/14	OP37547	MSR1404

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29640-1, MC29640-2, MC29640-3, MC29640-4

CAS No.	Compound	MC29300-18 Spike		MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
		ug/l	Q								
65-85-0	Benzoic Acid	ND	50	16.3	33	50	15.9	32	2	30-130/20	
95-57-8	2-Chlorophenol	ND	50	36.6	73	50	33.5	67	9	30-130/20	
59-50-7	4-Chloro-3-methyl phenol	ND	50	36.6	73	50	33.7	67	8	30-130/20	
120-83-2	2,4-Dichlorophenol	ND	50	38.4	77	50	43.3	87	12	30-130/20	
105-67-9	2,4-Dimethylphenol	ND	50	33.5	67	50	33.6	67	0	30-130/20	
51-28-5	2,4-Dinitrophenol	ND	50	34.6	69	50	33.8	68	2	30-130/20	
534-52-1	4,6-Dinitro-o-cresol	ND	50	46.2	92	50	42.5	85	8	30-130/20	
95-48-7	2-Methylphenol	ND	50	32.2	64	50	32.8	66	2	30-130/20	
	3&4-Methylphenol	ND	100	60.2	60	100	57.4	57	5	30-130/20	
88-75-5	2-Nitrophenol	ND	50	37.8	76	50	39.1	78	3	30-130/20	
100-02-7	4-Nitrophenol	ND	50	16.0	32	50	14.9	30	7	30-130/20	
87-86-5	Pentachlorophenol	ND	50	37.7	75	50	35.3	71	7	30-130/20	
108-95-2	Phenol	ND	50	16.4	33	50	15.1	30	8	30-130/20	
95-95-4	2,4,5-Trichlorophenol	ND	50	40.2	80	50	49.0	98	20	30-130/20	
88-06-2	2,4,6-Trichlorophenol	ND	50	39.7	79	50	48.9	98	21* a	30-130/20	
62-53-3	Aniline	ND	50	25.6	51	50	24.6	49	4	40-140/20	
101-55-3	4-Bromophenyl phenyl ether	ND	50	41.4	83	50	48.6	97	16	40-140/20	
85-68-7	Butyl benzyl phthalate	ND	50	47.7	95	50	41.2	82	15	40-140/20	
100-51-6	Benzyl Alcohol	ND	50	30.4	61	50	29.5	59	3	40-140/20	
91-58-7	2-Chloronaphthalene	ND	50	40.2	80	50	46.0	92	13	40-140/20	
106-47-8	4-Chloroaniline	ND	50	33.5	67	50	38.3	77	13	40-140/20	
111-91-1	bis(2-Chloroethoxy)methane	ND	50	37.9	76	50	35.0	70	8	40-140/20	
111-44-4	bis(2-Chloroethyl)ether	ND	50	39.2	78	50	36.3	73	8	40-140/20	
108-60-1	bis(2-Chloroisopropyl)ether	ND	50	47.7	95	50	44.8	90	6	40-140/20	
7005-72-3	4-Chlorophenyl phenyl ether	ND	50	39.4	79	50	47.4	95	18	40-140/20	
122-66-7	1,2-Diphenylhydrazine	ND	50	40.5	81	50	48.6	97	18	40-140/20	
121-14-2	2,4-Dinitrotoluene	ND	50	41.8	84	50	39.9	80	5	40-140/20	
606-20-2	2,6-Dinitrotoluene	ND	50	39.9	80	50	37.9	76	5	40-140/20	
91-94-1	3,3'-Dichlorobenzidine	ND	50	40.2	80	50	45.4	91	12	40-140/20	
132-64-9	Dibenzofuran	ND	50	37.6	75	50	35.8	72	5	40-140/20	
84-74-2	Di-n-butyl phthalate	0.34	J	50	42.0	83	50	41.8	83	0	40-140/20
117-84-0	Di-n-octyl phthalate	ND	50	51.6	103	50	42.6	85	19	40-140/20	
84-66-2	Diethyl phthalate	ND	50	41.5	83	50	39.4	79	5	40-140/20	
131-11-3	Dimethyl phthalate	ND	50	35.9	72	50	33.3	67	8	40-140/20	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	50	47.5	95	50	48.6	97	2	40-140/20	
118-74-1	Hexachlorobenzene	ND	50	40.9	82	50	46.0	92	12	40-140/20	

* = Outside of Control Limits.

7.3.1
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37547-MS	R38070.D	1	04/11/14	KR	04/10/14	OP37547	MSR1404
OP37547-MSD	R38071.D	1	04/11/14	KR	04/10/14	OP37547	MSR1404
MC29300-18	R38072.D	1	04/11/14	KR	04/10/14	OP37547	MSR1404

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29640-1, MC29640-2, MC29640-3, MC29640-4

CAS No.	Compound	MC29300-18 Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
77-47-4	Hexachlorocyclopentadiene	ND	50	24.5	49	50	23.8	48	3	40-140/20
67-72-1	Hexachloroethane	ND	50	29.7	59	50	27.3	55	8	40-140/20
78-59-1	Isophorone	ND	50	35.8	72	50	39.2	78	9	40-140/20
88-74-4	2-Nitroaniline	ND	50	39.8	80	50	40.9	82	3	40-140/20
99-09-2	3-Nitroaniline	ND	50	35.9	72	50	34.8	70	3	40-140/20
100-01-6	4-Nitroaniline	ND	50	37.5	75	50	42.0	84	11	40-140/20
98-95-3	Nitrobenzene	ND	50	36.8	74	50	42.5	85	14	40-140/20
62-75-9	n-Nitrosodimethylamine	ND	50	23.7	47	50	24.0	48	1	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND	50	39.0	78	50	36.4	73	7	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND	50	39.8	80	50	48.0	96	19	40-140/20
110-86-1	Pyridine	ND	50	19.6	39* b	50	19.7	39* b	1	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29300-18 Limits
367-12-4	2-Fluorophenol	46%	44%	15-110%
4165-62-2	Phenol-d5	30%	28%	15-110%
118-79-6	2,4,6-Tribromophenol	74%	89%	15-110%
4165-60-0	Nitrobenzene-d5	70%	81%	63% 30-130%
321-60-8	2-Fluorobiphenyl	72%	85%	66% 30-130%
1718-51-0	Terphenyl-d14	83%	76%	65% 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.

* = Outside of Control Limits.

7.3.1
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37548-MS	I88485.D	1	04/11/14	MR	04/10/14	OP37548	MSI3295
OP37548-MSD	I88486.D	1	04/11/14	MR	04/10/14	OP37548	MSI3295
MC29300-21	I88487.D	1	04/11/14	MR	04/10/14	OP37548	MSI3295

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29640-1, MC29640-2, MC29640-3, MC29640-4

7.3.2
7

CAS No.	Compound	MC29300-21 Spike ug/l	Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
83-32-9	Acenaphthene	ND		50	35.0	70	50	32.8	66	6	40-140/20
208-96-8	Acenaphthylene	ND		50	32.3	65	50	30.3	61	6	40-140/20
120-12-7	Anthracene	ND		50	33.6	67	50	33.4	67	1	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	39.2	78	50	38.3	77	2	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	38.3	77	50	36.8	74	4	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	40.8	82	50	39.8	80	2	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	42.6	85	50	41.6	83	2	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	40.4	81	50	37.9	76	6	40-140/20
218-01-9	Chrysene	ND		50	37.6	75	50	36.4	73	3	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	45.0	90	50	44.3	89	2	40-140/20
206-44-0	Fluoranthene	ND		50	38.8	78	50	37.4	75	4	40-140/20
86-73-7	Fluorene	ND		50	36.6	73	50	33.7	67	8	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	43.7	87	50	42.6	85	3	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	32.5	65	50	29.8	60	9	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	32.5	65	50	29.6	59	9	40-140/20
85-01-8	Phenanthrene	0.020	JB	50	35.8	72	50	33.7	67	6	40-140/20
129-00-0	Pyrene	ND		50	38.3	77	50	37.4	75	2	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29300-21 Limits
367-12-4	2-Fluorophenol	38%	36%	15-110%
4165-62-2	Phenol-d5	25%	24%	15-110%
118-79-6	2,4,6-Tribromophenol	79%	75%	15-110%
4165-60-0	Nitrobenzene-d5	67%	63%	60% 30-130%
321-60-8	2-Fluorobiphenyl	66%	63%	56% 30-130%
1718-51-0	Terphenyl-d14	86%	83%	83% 30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSI3295-CC3238	Injection Date:	04/11/14
Lab File ID:	I88482.D	Injection Time:	07:52
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	360098	4.02	855565	5.07	514885	6.60	882349	7.98	653410	10.75	1614767	12.23
Upper Limit ^a	720196	4.52	1711130	5.57	1029770	7.10	1764698	8.48	1306820	11.25	3229534	12.73
Lower Limit ^b	180049	3.52	427783	4.57	257443	6.10	441175	7.48	326705	10.25	807384	11.73

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37548-MB	336361	4.02	796242	5.07	470758	6.60	783295	7.98	584338	10.75	1403175	12.23
OP37548-BS	425181	4.02	975666	5.07	550836	6.60	890653	7.98	641710	10.76	1481002	12.23
OP37548-MS	404560	4.02	932650	5.07	526602	6.60	853609	7.98	620054	10.76	1423708	12.23
OP37548-MSD	375677	4.02	868712	5.07	488763	6.60	785462	7.98	561339	10.76	1287237	12.23
MC29300-2I	350054	4.02	825075	5.07	495490	6.60	834564	7.98	624900	10.75	1467229	12.23
ZZZZZZ	329178	4.02	775180	5.07	466223	6.60	797765	7.98	587347	10.75	1429458	12.23
OP37458-MB	316877	4.02	725977	5.07	443582	6.60	739370	7.98	537291	10.75	1313478	12.23
OP37458-BS	333125	4.02	799895	5.07	474221	6.60	796718	7.98	603258	10.76	1423647	12.23
ZZZZZZ	327766	4.02	761986	5.07	455088	6.60	769094	7.98	570180	10.75	1370666	12.23
ZZZZZZ	340542	4.02	774817	5.07	461059	6.60	768973	7.98	553555	10.75	1319749	12.23
ZZZZZZ	331196	4.02	775424	5.07	466961	6.60	781660	7.98	567569	10.75	1391463	12.23
ZZZZZZ	333095	4.02	767738	5.07	457101	6.60	763960	7.98	559872	10.75	1367022	12.23
ZZZZZZ	310367	4.01	716796	5.07	429468	6.60	723446	7.98	530569	10.75	1283269	12.23

- 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: MC29640
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSI3305-CC3238	Injection Date:	04/23/14
Lab File ID:	I88719.D	Injection Time:	08:07
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	262938	3.96	613173	5.01	359756	6.53	607103	7.89	448501	10.67	1119205	12.15
Upper Limit ^a	525876	4.46	1226346	5.51	719512	7.03	1214206	8.39	897002	11.17	2238410	12.65
Lower Limit ^b	131469	3.46	306587	4.51	179878	6.03	303552	7.39	224251	10.17	559603	11.65

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37700-MB	257731	3.96	605476	5.01	349264	6.53	596558	7.89	451473	10.67	1128041	12.15
OP37700-BS	256773	3.96	596664	5.01	347066	6.53	582130	7.90	433621	10.68	1066923	12.15
ZZZZZZ	258252	3.96	602202	5.01	348655	6.53	588111	7.89	424525	10.67	1063752	12.15
OP37682-MB	300843	3.96	704924	5.01	406807	6.53	681203	7.89	503355	10.67	1242458	12.15
OP37682-BS	307280	3.96	714948	5.01	415168	6.53	692613	7.90	512497	10.68	1222162	12.15
OP37682-MS	304678	3.96	719865	5.01	420074	6.53	706452	7.90	525139	10.68	1284348	12.15
OP37682-MSD	290498	3.96	676185	5.01	393513	6.53	654689	7.90	478907	10.68	1145694	12.15
MC29400-27	281268	3.96	664178	5.01	382473	6.53	649279	7.89	477387	10.67	1174262	12.15
ZZZZZZ	283527	3.96	659026	5.01	384677	6.53	643701	7.89	476195	10.67	1147012	12.15
ZZZZZZ	288114	3.96	669603	5.01	392926	6.53	667911	7.89	489913	10.67	1192540	12.15
ZZZZZZ	301066	3.96	696948	5.01	409886	6.53	684078	7.90	501727	10.68	1227610	12.15
OP37694-MB	270059	3.96	639088	5.01	369932	6.53	624408	7.89	461213	10.67	1145258	12.15
OP37694-BS	254238	3.96	607523	5.01	342511	6.53	562779	7.90	421966	10.68	1023268	12.15
OP37694-BSD	271771	3.96	632173	5.01	367386	6.53	597559	7.90	439640	10.68	1055335	12.15
OP37694-MS	254460	3.96	600660	5.01	346959	6.53	577449	7.90	433503	10.68	1050852	12.15
OP37694-MSD	265536	3.96	615382	5.01	355481	6.53	584611	7.90	427406	10.68	1037223	12.15
MC29800-4	252860	3.96	586926	5.00	340433	6.53	577722	7.89	429508	10.67	1082117	12.14
ZZZZZZ	258336	3.96	599121	5.01	346548	6.53	580667	7.89	411359	10.67	1018408	12.14
ZZZZZZ	249714	3.96	587004	5.01	335983	6.53	563142	7.89	413163	10.67	1013800	12.14
ZZZZZZ	265945	3.96	627280	5.01	356718	6.53	589041	7.89	427988	10.67	1050830	12.14
ZZZZZZ	252247	3.95	580605	5.01	336068	6.53	554739	7.89	406046	10.67	1004184	12.14
OP37713-MB	234641	3.96	549832	5.00	318124	6.53	536456	7.89	395995	10.67	993000	12.14
OP37713-BS	276435	3.96	634903	5.01	357737	6.53	579544	7.90	413062	10.68	998519	12.15
ZZZZZZ	258019	3.95	597353	5.01	338696	6.53	556026	7.89	395918	10.67	975836	12.15
MC29640-1	263063	3.96	621973	5.00	362958	6.53	620835	7.89	454635	10.67	1095914	12.14
MC29640-2	293982	3.96	700850	5.00	402149	6.53	682235	7.89	502001	10.67	1227566	12.14
MC29640-3	259709	3.96	618024	5.00	353452	6.53	603412	7.89	435420	10.67	1061611	12.14
MC29640-4	272872	3.96	648710	5.01	374794	6.53	638282	7.89	456763	10.67	1088785	12.14

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Accnaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

7.4.2
7

Semivolatile Internal Standard Area Summary

Job Number: MC29640

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std: MSI3305-CC3238

Injection Date: 04/23/14

Lab File ID: I88719.D

Injection Time: 08:07

Instrument ID: GCMSI

Method: SW846 8270D BY SIM

Lab	IS 1	IS 2	IS 3	IS 4	IS 5	IS 6						
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

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

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

7.4.2



Semivolatile Internal Standard Area Summary

Job Number: MC29640
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSR1404-CC1399	Injection Date:	04/11/14
Lab File ID:	R38066.D	Injection Time:	13:50
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	152425	5.32	563206	6.42	330168	7.95	497203	9.26	440501	11.84	376368	13.54
Upper Limit ^a	304850	5.82	1126412	6.92	660336	8.45	994406	9.76	881002	12.34	752736	14.04
Lower Limit ^b	76213	4.82	281603	5.92	165084	7.45	248602	8.76	220251	11.34	188184	13.04

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37547-MB	151150	5.32	497976	6.42	314587	7.95	430534	9.26	524307	11.84	397073	13.54
OP37547-BS	189289	5.32	702187	6.42	410799	7.95	672117	9.26	645362	11.84	434435	13.54
ZZZZZZ	162233	5.32	576016	6.42	323934	7.95	471998	9.26	447864	11.84	418692	13.54
OP37547-MS	176933	5.32	658155	6.42	382254	7.95	634582	9.26	643078	11.84	578533	13.54
OP37547-MSD	142422	5.32	467863	6.42	245959	7.96	445829	9.26	485876	11.84	440499	13.54
MC29300-18	180448	5.32	657630	6.42	352428	7.95	487618	9.26	580247	11.84	420761	13.54
ZZZZZZ	157985	5.32	583334	6.42	340634	7.95	562610	9.26	398727	11.84	400219	13.53
OP37509-MB	134115	5.32	491846	6.42	248816	7.95	504899	9.26	383859	11.83	456324	13.53
OP37509-BS	169303	5.32	617925	6.42	355004	7.95	576719	9.26	509897	11.84	467237	13.54
OP37509-MS	163062	5.32	597468	6.42	349403	7.95	568871	9.26	559985	11.84	513389	13.54
OP37509-MSD	142030	5.32	492665	6.42	316499	7.95	402204	9.26	498267	11.84	371445	13.54
MC29449-1	158909	5.32	584424	6.42	345424	7.95	566551	9.26	546910	11.83	502185	13.53
MSR1404-ECC1399	148705	5.32	555737	6.42	330395	7.95	566000	9.26	575682	11.84	537675	13.54

- 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; 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: MC29640
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSR1405-CC1399	Injection Date:	04/11/14
Lab File ID:	R38087.D	Injection Time:	23:16
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	137813	5.32	553274	6.42	296593	7.95	413468	9.26	410221	11.84	388685	13.54
Upper Limit ^a	275626	5.82	1106548	6.92	593186	8.45	826936	9.76	820442	12.34	777370	14.04
Lower Limit ^b	68907	4.82	276637	5.92	148297	7.45	206734	8.76	205111	11.34	194343	13.04

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37557-MB	176911	5.32	674490	6.42	368380	7.95	526155	9.25	571703	11.84	490676	13.53
OP37557-BS	200637	5.32	733627	6.42	418031	7.95	677524	9.26	636123	11.84	540046	13.54
ZZZZZZ	172426	5.32	584784	6.42	289653	7.95	599335	9.26	465670	11.83	441690	13.53
ZZZZZZ	143446	5.32	538204	6.42	251644	7.95	428348	9.26	443129	11.83	566825	13.53
MC29640-1	153328	5.32	563348	6.42	333063	7.95	550554	9.26	544003	11.83	384687	13.53
MC29640-2	150843	5.32	457783	6.42	245320	7.95	403425	9.25	522093	11.83	410209	13.53
MC29640-3	153309	5.32	564182	6.42	330446	7.95	548076	9.25	383536	11.83	367495	13.53
MC29640-4	148829	5.32	546612	6.42	321873	7.95	524334	9.26	403155	11.84	484511	13.53
ZZZZZZ	157404	5.32	581412	6.42	348014	7.95	575087	9.25	487456	11.83	394394	13.53
ZZZZZZ	193061	5.32	712733	6.42	415515	7.95	662681	9.25	450790	11.83	418762	13.53
ZZZZZZ	175872	5.32	593553	6.42	295085	7.95	610823	9.25	449870	11.84	424922	13.53
ZZZZZZ	200658	5.32	712263	6.42	407162	7.95	646961	9.26	576749	11.84	428986	13.56
ZZZZZZ	191211	5.32	613937	6.42	274635	7.95	442241	9.26	573791	11.84	446118	13.56
ZZZZZZ	190104	5.32	694359	6.42	398145	7.95	630295	9.26	408935	11.84	392519	13.54
ZZZZZZ	123113	5.32	447177	6.42	336839	7.95	411473	9.26	392315	11.84	369175	13.54
ZZZZZZ	196523	5.32	665235	6.42	278610	7.95	446024	9.25	452097	11.84	523733	13.53
ZZZZZZ	165393	5.32	504128	6.42	323424	7.95	446320	9.26	419072	11.83	401759	13.53
ZZZZZZ	205741	5.32	739248	6.42	420608	7.95	639724	9.26	447841	11.84	416119	13.54
ZZZZZZ	192229	5.32	509599	6.41	296753	7.95	472265	9.26	448780	11.84	437811	13.54
ZZZZZZ	206348	5.32	737677	6.42	387118	7.95	458021	9.26	438574	11.84	524563	13.54
ZZZZZZ	210541	5.32	675321	6.42	345863	7.95	545248	9.26	445280	11.84	438908	13.54
ZZZZZZ	194656	5.32	636036	6.41	301307	7.95	513654	9.26	485165	11.84	413729	13.53
ZZZZZZ	193174	5.32	700480	6.41	401290	7.95	636409	9.26	582823	11.84	558475	13.54
ZZZZZZ	159976	5.32	627926	6.42	343236	7.95	568422	9.26	522845	11.84	515412	13.53
ZZZZZZ	212053	5.32	761487	6.42	435057	7.95	679562	9.26	634458	11.84	596235	13.54

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

7.4.4
7

Semivolatile Surrogate Recovery Summary

Job Number: MC29640

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29640-1	R38092.D	42	29	66	63	62	87
MC29640-2	R38093.D	26	17	72	77	85	73
MC29640-3	R38094.D	34	23	56	63	61	117
MC29640-4	R38095.D	25	18	60	68	68	108
OP37547-BS	R38068.D	46	30	75	72	72	86
OP37547-MB	R38067.D	48	31	73	84	70	66
OP37547-MS	R38070.D	46	30	74	70	72	83
OP37547-MSD	R38071.D	44	28	89	81	85	76

Surrogate Compounds **Recovery Limits**

S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

7.5.1



Semivolatile Surrogate Recovery Summary

Job Number: MC29640

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29640-1	I88744.D	62	59	85
MC29640-2	I88745.D	67	65	91
MC29640-3	I88746.D	60	58	85
MC29640-4	I88747.D	66	63	94
OP37548-BS	I88484.D	68	66	86
OP37548-MB	I88483.D	71	69	89
OP37548-MS	I88485.D	67	66	86
OP37548-MSD	I88486.D	63	63	83

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

7.5.2

7

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: MC29640
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37606-MB	YZ89225.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541

The QC reported here applies to the following samples:

Method: SW846 8011

MC29640-1, MC29640-2, MC29640-3, MC29640-4, MC29640-6

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)	74% 36-173%
460-00-4	Bromofluorobenzene (S)	59% 36-173%

8.1.1
8

Blank Spike Summary

Job Number: MC29640

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37606-BS	YZ89226.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541

The QC reported here applies to the following samples:

Method: SW846 8011

MC29640-1, MC29640-2, MC29640-3, MC29640-4, MC29640-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.049	69	60-140
106-93-4	1,2-Dibromoethane	0.071	0.046	65	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	52%	36-173%
460-00-4	Bromofluorobenzene (S)	50%	36-173%

8.2.1
8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29640

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37606-MS	YZ89227.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
OP37606-MSD	YZ89228.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
MC29713-2	YZ89229.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541

The QC reported here applies to the following samples:

Method: SW846 8011

MC29640-1, MC29640-2, MC29640-3, MC29640-4, MC29640-6

CAS No.	Compound	MC29713-2 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0685	0.061	89	0.0675	0.063	93	3	64-141/29
106-93-4	1,2-Dibromoethane	ND	0.0685	0.045	66	0.0675	0.054	80	18	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC29713-2	Limits
460-00-4	Bromofluorobenzene (S)	67%	88%	62%	36-173%
460-00-4	Bromofluorobenzene (S)	63%	73%	54%	36-173%

8.3.1

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC29640

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29640-1	YZ89233.D	107	75
MC29640-2	YZ89234.D	112	86
MC29640-3	YZ89236.D	101	75
MC29640-4	YZ89237.D	123	92
MC29640-6	YZ89238.D	91	66
OP37606-BS	YZ89226.D	52	50
OP37606-MB	YZ89225.D	74	59
OP37606-MS	YZ89227.D	67	63
OP37606-MSD	YZ89228.D	88	73

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: MC29640
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7541-ICC7541	Injection Date:	04/15/14
Lab File ID:	YZ89221.D	Injection Time:	10:38
Instrument ID:	GCYZ	Method:	SW846 8011

S1^a S1^b
 RT RT

Check Std	4.08	4.76
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Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
OP37606-MB	YZ89225.D	04/15/14	13:15	4.08	4.76
OP37606-BS	YZ89226.D	04/15/14	13:42	4.08	4.76
OP37606-MS	YZ89227.D	04/15/14	14:10	4.08	4.76
OP37606-MSD	YZ89228.D	04/15/14	14:38	4.08	4.76
MC29713-2	YZ89229.D	04/15/14	15:05	4.08	4.76
ZZZZZZ	YZ89230.D	04/15/14	15:33	4.08	4.76
ZZZZZZ	YZ89231.D	04/15/14	16:00	4.08	4.76
ZZZZZZ	YZ89232.D	04/15/14	16:28	4.08	4.76
MC29640-1	YZ89233.D	04/15/14	16:56	4.08	4.76
MC29640-2	YZ89234.D	04/15/14	17:25	4.08	4.76

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: MC29640
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7541-CC7541	Injection Date:	04/15/14
Lab File ID:	YZ89235.D	Injection Time:	17:53
Instrument ID:	GCYZ	Method:	SW846 8011

S1^a S1^b
 RT RT

Check Std	4.08	4.76
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Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
MC29640-3	YZ89236.D	04/15/14	18:21	4.08	4.76
MC29640-4	YZ89237.D	04/15/14	18:49	4.08	4.76
MC29640-6	YZ89238.D	04/15/14	19:16	4.08	4.76
ZZZZZZ	YZ89239.D	04/15/14	19:44	4.08	4.76
ZZZZZZ	YZ89240.D	04/15/14	20:11	4.08	4.76
ZZZZZZ	YZ89241.D	04/15/14	20:37	4.08	4.76
ZZZZZZ	YZ89242.D	04/15/14	21:05	4.08	4.76
ZZZZZZ	YZ89243.D	04/15/14	21:33	4.08	4.76
ZZZZZZ	YZ89244.D	04/15/14	21:59	4.07	4.76
ZZZZZZ	YZ89245.D	04/15/14	22:26	4.07	4.76

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 – 2nd Quarter 2014 Data Review

Laboratory SDG: MC29684

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 5/15/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2013

Sample Identification	Sample Identification
ROST4PZC-ROX-041014	ROST3MW-ROX-041014
MW5-ROX-041014-EB	MW5-ROX-041014
MW2-ROX-041014	MW22-ROX-041014
MW22-ROX-041014-Dup	TB-ROX-041014-HCL
TB-ROX-041014-ST	

1.0 Data Package Completeness

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

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated SVOCs were detected in the method blank; di-n-butyl phthalate was also detected in the equipment blank. VOC and SVOC LCS recoveries were outside evaluation criteria. The internal standard area recovery for tert butyl alcohol-d₉ was outside criteria in field duplicate pair MW22-ROX-041014/MW22-ROX-041014-Dup, and in sample MW2-ROX-041014. Acetone was qualified due to field duplicate RPD outside evaluation criteria in field duplicate pair MW22-ROX-041014/MW22-ROX-041014-Dup. Field duplicate pair MW22-ROX-041014/MW22-ROX-041014-Dup and sample MW2-ROX-041014 were diluted due to high levels of VOC target analytes. These issues are addressed further in the appropriate sections below. Additionally, continuing calibration verification for acrolein and 2-hexanone exceeded 40 percent difference (%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
MW5-ROX-041014-EB	SVOCs	Di-n-butyl phthalate	0.40 µg/L

Blank ID	Parameter	Analyte	Concentration/ Amount
OP37586-MB	SVOCs	Di-n-butyl phthalate	0.54 µg/L
OP37586-MB	SVOCs	bis(2-Ethylhexyl)phthalate	2.8 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. MW5-ROX-041014-EB is a quality control sample and is not qualified.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
ROST4PZC-ROX-041014	SVOCs	Di-n-butyl phthalate	-	U
ROST3MW-ROX-041014	SVOCs	Di-n-butyl phthalate	-	U
MW5-ROX-041014	SVOCs	Di-n-butyl phthalate	-	U
MW2-ROX-041014	SVOCs	Di-n-butyl phthalate	-	U
MW22-ROX-041014	SVOCs	Di-n-butyl phthalate	-	U
MW22-ROX-041014-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
MSV1121-BS	VOCs	Acetone	132	70-130
MSV1121-BS	VOCs	Acrolein	167	70-130
MSV1121-BS	VOCs	2-Chloroethyl vinyl ether	69	70-130
MSV1121-BS	VOCs	2-Hexanone	133	70-130
OP37586-BS	SVOCs	Benzoic acid	22	30-130

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS MSV1121-BS and LCS OP37586-BS were associated with the equipment and trip blank; MW5-ROX-041014-EB and TB-ROX-041014-HCL are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
ROST4PZC-ROX-041014	VOCs	2-Chloroethyl vinyl ether	UJ
ROST3MW-ROX-041014	VOCs	2-Chloroethyl vinyl ether	UJ
MW5-ROX-041014	VOCs	Acetone	J
MW5-ROX-041014	VOCs	2-Chloroethyl vinyl ether	UJ
MW2-ROX-041014	VOCs	2-Chloroethyl vinyl ether	UJ
MW22-ROX-041014	VOCs	Acetone	J
MW22-ROX-041014	VOCs	2-Chloroethyl vinyl ether	UJ
MW22-ROX-041014-Dup	VOCs	2-Chloroethyl vinyl ether	UJ

Sample ID	Parameter	Analyte	Qualification
ROST4PZC-ROX-041014	SVOCs	Pyridine	UJ
ROST3MW-ROX-041014	SVOCs	Benzoic acid	UJ
MW5-ROX-041014	SVOCs	Benzoic acid	UJ
MW2-ROX-041014	SVOCs	Benzoic acid	UJ
MW22-ROX-041014	SVOCs	Benzoic acid	UJ
MW22-ROX-041014-Dup	SVOCs	Benzoic acid	UJ

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

No

Sample ID	Parameter	Analyte	IS Area Recovery	IS Criteria
MW2-ROX-041014	VOCs	Tert butyl alcohol-d ₉	117146	22693-90770
MW22-ROX-041014	VOCs	Tert butyl alcohol-d ₉	136812	22693-90770
MW22-ROX-041014-Dup	VOCs	Tert butyl alcohol-d ₉	161653	22693-90770

There were no target analytes associated with tert butyl alcohol-d₉; 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
MW22-ROX-041014	MW22-ROX-041014-Dup

Were field duplicates within evaluation criteria?

No

Field ID	Field Duplicate ID	Parameter	Analyte	RPD	Qualification
MW22-ROX-041014	MW22-ROX-041014-Dup	VOCs	Acetone	200	J/UJ

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 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana,

Accutest Job Number: MC29684

Sampling Date: 04/10/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: 110



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
5/15/2014
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: MC29684

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
MC29684-1	04/10/14	09:20	DMMN04/11/14	AQ	Ground Water	ROST4PZC-ROX-041014 ✓
MC29684-2	04/10/14	10:55	DMMN04/11/14	AQ	Ground Water	ROST3MW-ROX-041014 ✓
MC29684-3	04/10/14	12:40	DMMN04/11/14	AQ	Equipment Blank	MW5-ROX-041014-EB ✓
MC29684-4	04/10/14	13:40	DMMN04/11/14	AQ	Ground Water	MW5-ROX-041014 ✓
MC29684-5	04/10/14	14:45	DMMN04/11/14	AQ	Ground Water	MW2-ROX-041014 ✓
MC29684-6	04/10/14	15:55	DMMN04/11/14	AQ	Ground Water	MW22-ROX-041014 ✓
MC29684-7	04/10/14	15:55	DMMN04/11/14	AQ	Ground Water	MW22-ROX-041014-DUP ✓
MC29684-8	04/10/14	00:00	DMMN04/11/14	AQ	Trip Blank Water	TB-ROX-041014-HCL ✓
MC29684-9	04/10/14	00:00	DMMN04/11/14	AQ	Trip Blank Water	TB-ROX-041014-ST ✓



SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Shell Oil Job No MC29684
 Site: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Centra Report Date 4/24/2014 2:56:26 PM

7 Sample(s) and 2 Trip Blank(s) were collected on 04/10/2014 and were received at Accutest on 04/11/2014 properly preserved, at 2.1 Deg. C and intact. These Samples received an Accutest job number of MC29684. 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: MSV1121
------------	-------------------

- ☒ All samples were analyzed within the recommended method holding time.
- ☒ Sample(s) MC29640-IMS, MC29640-1MSD were used as the QC samples indicated.
- ☒ All method blanks for this batch meet method specific criteria.
- ☒ Continuing calibration check standard MSV1121-CC1058 for acrolein, 2-hexanone exceed 40% difference (response bias high). Associated samples are non-detect for these compounds.
- ☒ Blank Spike Recovery(s) for 2-Chloroethyl vinyl ether, 2-Hexanone, Acetone, Acrolein are outside control limits. Blank Spike meets program technical requirements.
- ☒ Matrix Spike Recovery(s) for 1,2,3-Trichlorobenzene, 1,4-Dioxane, 2-Chloroethyl vinyl ether, Acrolein, Dichlorodifluoromethane, Naphthalene 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, Acrolein, Dichlorodifluoromethane are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- ☒ RPD(s) for MSD for 1,2,3-Trichlorobenzene, Naphthalene are outside control limits for sample MC29640-1MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.

Matrix: AQ	Batch ID: MSV1123
------------	-------------------

- ☒ All samples were analyzed within the recommended method holding time.
- ☒ Sample(s) MC29893-IMS, MC29893-1MSD were used as the QC samples indicated.
- ☒ All method blanks for this batch meet method specific criteria.
- ☒ Matrix Spike Recovery(s) for Naphthalene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- ☒ RPD(s) for MSD for Naphthalene are outside control limits for sample MC29893-1MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ

Batch ID: OP37586

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29400-1MS, MC29400-1MSD were used as the QC samples indicated.
- Sample(s) MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- OP37586-BS/MS/MSD Recovery(s) for Benzoic Acid are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 4-Nitrophenol, Phenol are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 4-Nitrophenol are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2,4-Dimethylphenol are outside control limits for sample OP37586-MSD. 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: OP37587

- 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) MC29400-2MS, MC29400-2MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8011

Matrix: AQ

Batch ID: OP37606

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29713-2MS, MC29713-2MSD 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(MC29684).

Summary of Hits

Job Number: MC29684
 Account: Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Collected: 04/10/14



Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
MC29684-1	ROST4PZC-ROX-041014					
		Benzene	1.9	0.50	0.32	ug/l SW846 8260C
		Ethylbenzene	0.59 J	1.0	0.38	ug/l SW846 8260C
		Toluene	0.57 J	1.0	0.33	ug/l SW846 8260C
		m,p-Xylene	1.5	1.0	0.93	ug/l SW846 8260C
		o-Xylene	1.5	1.0	0.36	ug/l SW846 8260C
		Xylene (total)	3.0	1.0	0.36	ug/l SW846 8260C
		Di-n-butyl phthalate	0.38 JB W	5.6	0.19	ug/l SW846 8270D
		1-Methylnaphthalene	0.065 J	0.22	0.056	ug/l SW846 8270D BY SIM
		Phenanthrene	0.051 J	0.056	0.014	ug/l SW846 8270D BY SIM
MC29684-2	ROST3MW-ROX-041014					
		Benzene	7.5	0.50	0.32	ug/l SW846 8260C
		Ethylbenzene	5.5	1.0	0.38	ug/l SW846 8260C
		Isopropylbenzene	0.43 J	5.0	0.35	ug/l SW846 8260C
		Naphthalene	0.84 J	5.0	0.69	ug/l SW846 8260C
		n-Propylbenzene	0.82 J	5.0	0.49	ug/l SW846 8260C
		Toluene	1.5	1.0	0.33	ug/l SW846 8260C
		1,2,4-Trimethylbenzene	12.1	5.0	0.32	ug/l SW846 8260C
		1,3,5-Trimethylbenzene	3.0 J	5.0	0.38	ug/l SW846 8260C
		m,p-Xylene	28.7	1.0	0.93	ug/l SW846 8260C
		o-Xylene	2.8	1.0	0.36	ug/l SW846 8260C
		Xylene (total)	31.5	1.0	0.36	ug/l SW846 8260C
		Di-n-butyl phthalate	0.76 JB W	6.0	0.21	ug/l SW846 8270D
		1-Methylnaphthalene	0.75	0.24	0.059	ug/l SW846 8270D BY SIM
		2-Methylnaphthalene	0.80	0.24	0.088	ug/l SW846 8270D BY SIM
		Phenanthrene	0.10	0.060	0.015	ug/l SW846 8270D BY SIM
MC29684-3	MW5-ROX-041014-EB					
		Di-n-butyl phthalate	0.40 JB	5.6	0.19	ug/l SW846 8270D
MC29684-4	MW5-ROX-041014					
		Acetone	21.0 J	10	2.5	ug/l SW846 8260C
		Benzene	3.7	0.50	0.32	ug/l SW846 8260C
		sec-Butylbenzene	1.7 J	5.0	0.42	ug/l SW846 8260C
		tert-Butylbenzene	6.2	5.0	0.39	ug/l SW846 8260C
		Methyl Tert Butyl Ether	34.4	1.0	0.51	ug/l SW846 8260C
		Naphthalene	1.0 J	5.0	0.69	ug/l SW846 8260C
		Toluene	1.3	1.0	0.33	ug/l SW846 8260C
		1,2,4-Trimethylbenzene	0.52 J	5.0	0.32	ug/l SW846 8260C
		m,p-Xylene	1.3	1.0	0.93	ug/l SW846 8260C

Summary of Hits

Job Number: MC29684
 Account: Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Collected: 04/10/14



Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
---------------	------------------	--------------------	----	-----	-------	--------

		0.95 J	1.0	0.36	ug/l	SW846 8260C
		2.3	1.0	0.36	ug/l	SW846 8260C
		0.87 JB 4	5.6	0.19	ug/l	SW846 8270D
		3.8	0.22	0.056	ug/l	SW846 8270D BY SIM

MC29684-5 MW2-ROX-041014

Benzene	21.4	0.50	0.32	ug/l	SW846 8260C
2-Butanone (MEK)	13.6	5.0	2.3	ug/l	SW846 8260C
n-Butylbenzene	20.8	5.0	1.1	ug/l	SW846 8260C
sec-Bntylbenzene	7.7	5.0	0.42	ug/l	SW846 8260C
Ethylbenzene	478	10	3.8	ug/l	SW846 8260C
Isopropylbenzene	81.6	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene	9.0	5.0	0.37	ng/l	SW846 8260C
Naphthalene	47.4	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene	106	5.0	0.49	ug/l	SW846 8260C
Toluene	7.2	1.0	0.33	ug/l	SW846 8260C
1,2,4-Trimethylbenzene	181	5.0	0.32	ug/l	SW846 8260C
1,3,5-Trimethylbenzene	121	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene	444	1.0	0.93	ug/l	SW846 8260C
o-Xylene	27.5	1.0	0.36	ug/l	SW846 8260C
Xylene (total)	472	1.0	0.36	ug/l	SW846 8260C
Di-n-butyl phthalate	0.46 JB 4	6.0	0.21	ug/l	SW846 8270D
1-Methylnaphthalene	8.3	0.24	0.059	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene	19.3	0.24	0.088	ug/l	SW846 8270D BY SIM

MC29684-6 MW22-ROX-041014

Acetone	91.1 J	10	2.5	ug/l	SW846 8260C
Benzene	1700	25	16	ug/l	SW846 8260C
2-Butanone (MEK)	33.4	5.0	2.3	ug/l	SW846 8260C
n-Butylbenzene	33.1	5.0	1.1	ug/l	SW846 8260C
sec-Butylbenzene	12.8	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene	15.2	5.0	0.39	ug/l	SW846 8260C
Ethylbenzene	3320	50	19	ug/l	SW846 8260C
Isopropylbenzene	157	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene	9.4	5.0	0.37	ug/l	SW846 8260C
Naphthalene	334	5.0	0.69	ng/l	SW846 8260C
n-Propylbenzene	254	5.0	0.49	ug/l	SW846 8260C
Toluene	5950	50	17	ug/l	SW846 8260C
1,2,4-Trimethylbenzene	1100	250	16	ug/l	SW846 8260C
1,3,5-Trimethylbenzene	384	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene	6850	50	47	ug/l	SW846 8260C
o-Xylene	3380	50	18	ug/l	SW846 8260C
Xylene (total)	10200	50	18	ug/l	SW846 8260C

Summary of Hits

Job Number: MC29684
 Account: Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Collected: 04/10/14



Lab Sample ID	Client Sample ID	Result/ Analyte	Qual	RL	MDL	Units	Method
		2,4-Dimethylphenol	31.6 J	56	3.2	ug/l	SW846 8270D
		2-Methylphenol	15.6 J	56	1.3	ug/l	SW846 8270D
		3&4-Methylphenol	35.0 J	56	2.6	ug/l	SW846 8270D
		Di-n-butyl phthalate	1.6 JB M	28	0.97	ug/l	SW846 8270D
		Acenaphthene	0.10 J	0.11	0.077	ug/l	SW846 8270D BY SIM
		1-Methylnaphthalene	17.4	0.22	0.056	ug/l	SW846 8270D BY SIM
		2-Methylnaphthalene	28.7	0.22	0.083	ug/l	SW846 8270D BY SIM
		Phenanthrene	0.10	0.056	0.014	ug/l	SW846 8270D BY SIM

MC29684-7 MW22-ROX-041014-DUP

Benzene	1560	25	16	ug/l	SW846 8260C
2-Butanone (MEK)	28.7	5.0	2.3	ug/l	SW846 8260C
n-Butylbenzene	31.9	5.0	1.1	ug/l	SW846 8260C
sec-Bntylbenzene	12.3	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene	14.4	5.0	0.39	ug/l	SW846 8260C
Chlorobenzene	0.46 J	1.0	0.43	ug/l	SW846 8260C
Ethylbenzene	3020	50	19	ug/l	SW846 8260C
Isopropylbenzene	138	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene	8.9	5.0	0.37	ug/l	SW846 8260C
4-Methyl-2-pentanone (MIBK)	8.2	5.0	0.99	ug/l	SW846 8260C
Naphthalene	280	250	34	ug/l	SW846 8260C
n-Propylbenzene	235	5.0	0.49	ug/l	SW846 8260C
Toluene	5520	50	17	ug/l	SW846 8260C
1,2,4-Trimethylbenzene	1000	250	16	ug/l	SW846 8260C
1,3,5-Trimethylbenzene	350	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene	6230	50	47	ug/l	SW846 8260C
o-Xylene	3120	50	18	ug/l	SW846 8260C
Xylene (total)	9350	50	18	ug/l	SW846 8260C
2,4-Dimethylphenol	32.0 J	56	3.2	ug/l	SW846 8270D
2-Methylphenol	15.9 J	56	1.3	ug/l	SW846 8270D
3&4-Methylphenol	38.0 J	56	2.6	ug/l	SW846 8270D
Di-n-butyl phthalate	1.8 JB M	28	0.97	ug/l	SW846 8270D
Acenaphthene	0.12	0.11	0.077	ug/l	SW846 8270D BY SIM
Fluorene	0.12	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene	19.9	0.22	0.056	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene	32.2	0.22	0.083	ug/l	SW846 8270D BY SIM
Phenanthrene	0.10	0.056	0.014	ug/l	SW846 8270D BY SIM

MC29684-8 TB-ROX-041014-HCL

No hits reported in this sample.

Summary of Hits

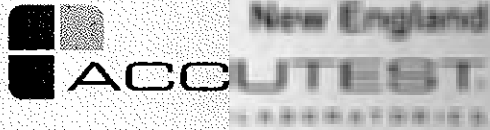
Job Number: MC29684
Account: Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
Collected: 04/10/14



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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MC29684-9 TB-ROX-041014-ST

No hits reported in this sample.



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	ROST4PZC-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-1	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29992.D	1	04/19/14	AMY	n/a	n/a	MSV1121
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	1.9	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	W
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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

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Report of Analysis

Client Sample ID:	ROST4PZC-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-1	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ng/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	0.59	1.0	0.38	ug/l	J
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	0.57	1.0	0.33	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	1.5	1.0	0.93	ug/l	
95-47-6	o-Xylene	1.5	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	3.0	1.0	0.36	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:	ROST4PZC-ROX-041014	
Lab Sample ID:	MC29684-1	Date Sampled: 04/10/14
Matrix:	AQ - Ground Water	Date Received: 04/11/14
Method:	SW846 8260C	Percent Solids: n/a
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	87%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	92%		70-130%

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

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Report of Analysis

Client Sample ID:	ROST4PZC-ROX-041014	
Lab Sample ID:	MC29684-1	Date Sampled: 04/10/14
Matrix:	AQ - Ground Water	Date Received: 04/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids: n/a
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F72367.D	1	04/18/14	WK	04/12/14	OP37586	MSF3219
Run #2							

Run #	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	WJ
95-57-8	2-Chlorophenol	ND	5.6	0.35	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.93	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.45	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.63	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.2	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.60	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.42	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.20	ug/l	
62-53-3	Aniline	ND	11	0.72	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.53	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.60	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.63	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.34	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	0.38 W	5.6	0.19	ug/l	JB W
117-84-0	Di-n-octyl phthalate	ND	5.6	0.32	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:	ROST4PZC-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-1	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

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ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.23	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.45	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.44	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.22	ug/l	
110-86-1	Pyridine	ND	11	0.58	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	45%		15-110%
4165-62-2	Phenol-d5	30%		15-110%
118-79-6	2,4,6-Tribromophenol	75%		15-110%
4165-60-0	Nitrobenzene-d5	70%		30-130%
321-60-8	2-Fluorobiphenyl	70%		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 J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	ROST4PZC-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-1	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88591.D	1	04/16/14	MR	04/12/14	OP37587	MSI3299
Run #2							

Run #	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.056	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ug/l	
53-70-3	Dibeuzo(a,h)anthracene	ND	0.11	0.036	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.046	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	0.065	0.22	0.056	ug/l	J
91-57-6	2-Methylnaphthalene	ND	0.22	0.083	ug/l	
85-01-8	Phenanthrene	0.051	0.056	0.014	ug/l	J
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	67%		30-130%
321-60-8	2-Fluorobiphenyl	61%		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

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Report of Analysis

Client Sample ID: ROST4PZC-ROX-041014	Date Sampled: 04/10/14
Lab Sample ID: MC29684-1	Date Received: 04/11/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89239.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
Run #2							

Run #	Initial Volume	Final Volume
Run #1	37.5 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	0.0051	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)	77%		36-173%
460-00-4	Bromofluorobenzene (S)	60%		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

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Report of Analysis

Client Sample ID:	ROST3MW-ROX-041014		
Lab Sample ID:	MC29684-2	Date Sampled:	04/10/14
Matrix:	AQ - Ground Water	Date Received:	04/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29993.D	1	04/19/14	AMY	n/a	n/a	MSV1121
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	7.5	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	WJ
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	ROST3MW-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-2	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	5.5	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	0.43	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	0.84	5.0	0.69	ug/l	J
103-65-1	n-Propylbenzene	0.82	5.0	0.49	ug/l	J
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	1.5	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	12.1	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	3.0	5.0	0.38	ug/l	J
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	28.7	1.0	0.93	ug/l	
95-47-6	o-Xylene	2.8	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	31.5	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID:	ROST3MW-ROX-041014	
Lab Sample ID:	MC29684-2	Date Sampled: 04/10/14
Matrix:	AQ - Ground Water	Date Received: 04/11/14
Method:	SW846 8260C	Percent Solids: n/a
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	77%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	89%		70-130%

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

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

Report of Analysis

Client Sample ID:	ROST3MW-ROX-041014	
Lab Sample ID:	MC29684-2	Date Sampled: 04/10/14
Matrix:	AQ - Ground Water	Date Received: 04/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids: n/a
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F72368.D	1	04/18/14	WK	04/12/14	OP37586	MSF3219
Run #2							

Run #	Initial Volume	Final Volume
Run #1	840 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	12	3.0	ug/l	uJ
95-57-8	2-Chlorophenol	ND	6.0	0.37	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	12	0.98	ug/l	
120-83-2	2,4-Dichlorophenol	ND	12	0.47	ug/l	
105-67-9	2,4-Dimethylphenol	ND	12	0.67	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	3.0	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	12	2.3	ug/l	
95-48-7	2-Methylphenol	ND	12	0.27	ug/l	
	3&4-Methylphenol	ND	12	0.56	ug/l	
88-75-5	2-Nitrophenol	ND	12	3.4	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.64	ug/l	
87-86-5	Pentachlorophenol	ND	12	1.3	ug/l	
108-95-2	Phenol	ND	6.0	0.36	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	12	0.44	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	12	0.21	ug/l	
62-53-3	Aniline	ND	12	0.76	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	6.0	0.56	ug/l	
85-68-7	Butyl benzyl phthalate	ND	6.0	0.63	ug/l	
100-51-6	Benzyl Alcohol	ND	12	2.7	ug/l	
91-58-7	2-Chloronaphthalene	ND	6.0	0.37	ug/l	
106-47-8	4-Chloroaniline	ND	12	0.66	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	6.0	0.34	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	6.0	0.42	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	6.0	0.40	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	6.0	0.30	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	6.0	0.29	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	12	0.54	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	12	0.36	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	6.0	0.32	ug/l	
132-64-9	Dibenzofuran	ND	2.4	0.31	ug/l	
84-74-2	Di-n-butyl phthalate	0.76 u	6.0	0.21	ug/l	JB u
117-84-0	Di-n-octyl phthalate	ND	6.0	0.33	ug/l	

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

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

Report of Analysis

Client Sample ID:	ROST3MW-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-2	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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	6.0	0.24	ug/l	
131-11-3	Dimethyl phthalate	ND	6.0	0.40	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.4	0.40	ug/l	
118-74-1	Hexachlorobenzene	ND	6.0	0.34	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	1.5	ug/l	
67-72-1	Hexachloroethane	ND	6.0	0.36	ug/l	
78-59-1	Isophorone	ND	6.0	0.53	ug/l	
88-74-4	2-Nitroaniline	ND	12	0.47	ug/l	
99-09-2	3-Nitroaniline	ND	12	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	12	2.6	ug/l	
98-95-3	Nitrobenzene	ND	6.0	0.47	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	6.0	1.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	6.0	0.48	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	6.0	0.23	ug/l	
110-86-1	Pyridine	ND	12	0.61	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	50%		15-110%
4165-62-2	Phenol-d5	32%		15-110%
118-79-6	2,4,6-Tribromophenol	72%		15-110%
4165-60-0	Nitrobenzene-d5	69%		30-130%
321-60-8	2-Fluorobiphenyl	66%		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:	ROST3MW-ROX-041014	
Lab Sample ID:	MC29684-2	Date Sampled: 04/10/14
Matrix:	AQ - Ground Water	Date Received: 04/11/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids: n/a
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88592.D	1	04/16/14	MR	04/12/14	OP37587	MSI3299
Run #2							

Run #	Initial Volume	Final Volume
Run #1	840 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.12	0.082	ug/l	
208-96-8	Acenaphthylene	ND	0.12	0.059	ug/l	
120-12-7	Anthracene	ND	0.12	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.060	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.12	0.034	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.060	0.038	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.12	0.032	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.12	0.046	ug/l	
218-01-9	Chrysene	ND	0.12	0.028	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.12	0.038	ug/l	
206-44-0	Fluoranthene	ND	0.12	0.048	ug/l	
86-73-7	Fluorene	ND	0.12	0.12	ug/l	
193-39-5	Iudeno(1,2,3-cd)pyrene	ND	0.12	0.036	ug/l	
90-12-0	1-Methylnaphthalene	0.75	0.24	0.059	ug/l	
91-57-6	2-Methylnaphthalene	0.80	0.24	0.088	ug/l	
85-01-8	Phenanthrene	0.10	0.060	0.015	ug/l	
129-00-0	Pyreue	ND	0.12	0.046	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	84%		30-130%

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

4.2
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Report of Analysis

Client Sample ID:	ROST3MW-ROX-041014	
Lab Sample ID:	MC29684-2	Date Sampled: 04/10/14
Matrix:	AQ - Ground Water	Date Received: 04/11/14
Method:	SW846 8011 SW846 8011	Percent Solids: n/a
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89240.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
Run #2							

Run #	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)	91%		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

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Report of Analysis

Client Sample ID:	MW5-ROX-041014-EB	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-3	Date Received:	04/11/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29987.D	1	04/19/14	AMY	n/a	n/a	MSV1121
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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 E = Indicates value exceeds calibration range

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

Report of Analysis

Client Sample ID:	MW5-ROX-041014-EB	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-3	Date Received:	04/11/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW5-ROX-041014-EB	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-3	Date Received:	04/11/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%
2037-26-5	Toluene-D8	87%		70-130%
460-00-4	4-Bromofluorobenzene	91%		70-130%

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

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

Report of Analysis

Client Sample ID: MW5-ROX-041014-EB	Date Sampled: 04/10/14
Lab Sample ID: MC29684-3	Date Received: 04/11/14
Matrix: AQ - Equipment Blank	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F72369.D	1	04/18/14	WK	04/12/14	OP37586	MSF3219
Run #2							

Run #	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.35	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.93	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.45	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.63	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.2	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.60	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.42	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.20	ug/l	
62-53-3	Aniline	ND	11	0.72	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.53	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.60	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.63	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.34	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	0.40	5.6	0.19	ug/l	JB
117-84-0	Di-n-octyl phthalate	ND	5.6	0.32	ug/l	

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

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

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Report of Analysis

Client Sample ID:	MW5-ROX-041014-EB	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-3	Date Received:	04/11/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.23	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.45	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.44	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.22	ug/l	
110-86-1	Pyridine	ND	11	0.58	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	39%		15-110%
4165-62-2	Phenol-d5	26%		15-110%
118-79-6	2,4,6-Tribromophenol	69%		15-110%
4165-60-0	Nitrobenzene-d5	57%		30-130%
321-60-8	2-Fluorobiphenyl	59%		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	

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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:	MW5-ROX-041014-EB	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-3	Date Received:	04/11/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88593.D	1	04/16/14	MR	04/12/14	OP37587	MSI3299
Run #2							

Run #	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.056	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.036	ng/l	
206-44-0	Fluoranthene	ND	0.11	0.046	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.22	0.056	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.083	ug/l	
85-01-8	Phenanthrene	ND	0.056	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	54%		30-130%
321-60-8	2-Fluorobiphenyl	51%		30-130%
1718-51-0	Terphenyl-d14	87%		30-130%

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 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW5-ROX-041014-EB	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-3	Date Received:	04/11/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89241.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
Run #2							

Run #	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)	90%		36-173%
460-00-4	Bromofluorobenzene (S)	69%		36-173%

ND = Not detected MDL = Method Detection Limit
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J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	MW5-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-4	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29994.D	1	04/19/14	AMY	n/a	n/a	MSV1121
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	21.0	10	2.5	ug/l	J
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	3.7	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	1.7	5.0	0.42	ug/l	J
98-06-6	tert-Butylbenzene	6.2	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	WJ
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoroethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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

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Report of Analysis

Client Sample ID:	MW5-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-4	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	34.4	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	1.0	5.0	0.69	ug/l	J
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ng/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	1.3	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.52	5.0	0.32	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	1.3	1.0	0.93	ug/l	
95-47-6	o-Xylene	0.95	1.0	0.36	ug/l	J
1330-20-7	Xylene (total)	2.3	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW5-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-4	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	80%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	92%		70-130%
CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units Q
	Total TIC, Volatile		0	ug/l

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

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

Report of Analysis

Client Sample ID:	MW5-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-4	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F72370.D	1	04/18/14	WK	04/12/14	OP37586	MSF3219
Run #2							

Run #	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	WJ
95-57-8	2-Chlorophenol	ND	5.6	0.35	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.93	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.45	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.63	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.2	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.60	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.42	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.20	ug/l	
62-53-3	Aniline	ND	11	0.72	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.53	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.60	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.63	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.34	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dihenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	0.87 W	5.6	0.19	ug/l	JB W
117-84-0	Di-n-octyl phthalate	ND	5.6	0.32	ug/l	

ND = Not detected MDL = Method Detection Limit
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Report of Analysis

Client Sample ID:	MW5-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-4	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.23	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.45	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.44	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.22	ug/l	
110-86-1	Pyridine	ND	11	0.58	ng/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	50%		15-110%
4165-62-2	Phenol-d5	31%		15-110%
118-79-6	2,4,6-Tribromophenol	86%		15-110%
4165-60-0	Nitrobenzene-d5	76%		30-130%
321-60-8	2-Fluorobiphenyl	73%		30-130%
1718-51-0	Terphenyl-d14	87%		30-130%

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

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

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

Report of Analysis

Client Sample ID: MW5-ROX-041014	Date Sampled: 04/10/14
Lab Sample ID: MC29684-4	Date Received: 04/11/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D BY SIM SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88594.D	1	04/16/14	MR	04/12/14	OP37587	MSI3299
Run #2							

Run #	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.056	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.036	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.046	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	3.8	0.22	0.056	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.083	ug/l	
85-01-8	Phenanthrene	ND	0.056	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	71%		30-130%
321-60-8	2-Fluorobiphenyl	64%		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

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Report of Analysis

Client Sample ID:	MW5-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-4	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89242.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
Run #2							

Run #	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)	107%		36-173%
460-00-4	Bromofluorobenzene (S)	90%		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

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Report of Analysis

Client Sample ID:	MW2-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-5	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29995.D	1	04/19/14	AMY	n/a	n/a	MSV1121
Run #2	V30049.D	10	04/22/14	AMY	n/a	n/a	MSV1123

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	21.4	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	13.6	5.0	2.3	ng/l	
104-51-8	n-Butylbenzene	20.8	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	7.7	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	uJ
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW2-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-5	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ng/l	
100-41-4	Ethylbenzene	478 ^a	10	3.8	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	81.6	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	9.0	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	47.4	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	106	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Tolnene	7.2	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	181	5.0	0.32	ng/l	
108-67-8	1,3,5-Trimethylbenzene	121	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	444	1.0	0.93	ug/l	
95-47-6	o-Xylene	27.5	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	472	1.0	0.36	ug/l	

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 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW2-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-5	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Per cent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	75%	79%	70-130%
2037-26-5	Toluene-D8	90%	92%	70-130%
460-00-4	4-Bromofluorobenzene	96%	92%	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-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-5	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F72371.D	1	04/18/14	WK	04/12/14	OP37586	MSF3219
Run #2							

Run #	Initial Volume	Final Volume
Run #1	840 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	12	3.0	ug/l	WJ
95-57-8	2-Chlorophenol	ND	6.0	0.37	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	12	0.98	ug/l	
120-83-2	2,4-Dichlorophenol	ND	12	0.47	ug/l	
105-67-9	2,4-Dimethylphenol	ND	12	0.67	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	3.0	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	12	2.3	ug/l	
95-48-7	2-Methylphenol	ND	12	0.27	ug/l	
	3&4-Methylphenol	ND	12	0.56	ug/l	
88-75-5	2-Nitrophenol	ND	12	3.4	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.64	ug/l	
87-86-5	Pentachlorophenol	ND	12	1.3	ug/l	
108-95-2	Phenol	ND	6.0	0.36	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	12	0.44	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	12	0.21	ug/l	
62-53-3	Aniline	ND	12	0.76	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	6.0	0.56	ug/l	
85-68-7	Butyl benzyl phthalate	ND	6.0	0.63	ug/l	
100-51-6	Benzyl Alcohol	ND	12	2.7	ug/l	
91-58-7	2-Chloronaphthalene	ND	6.0	0.37	ug/l	
106-47-8	4-Chloroaniline	ND	12	0.66	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	6.0	0.34	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	6.0	0.42	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	6.0	0.40	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	6.0	0.30	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	6.0	0.29	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	12	0.54	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	12	0.36	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	6.0	0.32	ug/l	
132-64-9	Dibenzofuran	ND	2.4	0.31	ug/l	
84-74-2	Di-n-butyl phthalate	0.46 W	6.0	0.21	ng/l	JB W
117-84-0	Di-n-octyl phthalate	ND	6.0	0.33	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:	MW2-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-5	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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	6.0	0.24	ug/l	
131-11-3	Dimethyl phthalate	ND	6.0	0.40	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.4	0.40	ug/l	
118-74-1	Hexachlorobenzene	ND	6.0	0.34	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	1.5	ug/l	
67-72-1	Hexachloroethane	ND	6.0	0.36	ug/l	
78-59-1	Isophorone	ND	6.0	0.53	ug/l	
88-74-4	2-Nitroaniline	ND	12	0.47	ug/l	
99-09-2	3-Nitroaniline	ND	12	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	12	2.6	ug/l	
98-95-3	Nitrobenzene	ND	6.0	0.47	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	6.0	1.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	6.0	0.48	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	6.0	0.23	ug/l	
110-86-1	Pyridine	ND	12	0.61	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	52%		15-110%
4165-62-2	Phenol-d5	33%		15-110%
118-79-6	2,4,6-Tribromophenol	86%		15-110%
4165-60-0	Nitrobenzene-d5	78%		30-130%
321-60-8	2-Fluorobiphenyl	76%		30-130%
1718-51-0	Terphenyl-d14	90%		30-130%

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: MW2-ROX-041014	Date Sampled: 04/10/14
Lab Sample ID: MC29684-5	Date Received: 04/11/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D BY SIM SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88595.D	1	04/16/14	MR	04/12/14	OP37587	MSI3299
Run #2							

Run #	Initial Volume	Final Volume
Run #1	840 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.12	0.082	ug/l	
208-96-8	Acenaphthylene	ND	0.12	0.059	ug/l	
120-12-7	Anthracene	ND	0.12	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.060	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.12	0.034	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.060	0.038	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.12	0.032	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.12	0.046	ug/l	
218-01-9	Chrysene	ND	0.12	0.028	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.12	0.038	ug/l	
206-44-0	Fluoranthene	ND	0.12	0.048	ug/l	
86-73-7	Fluorene	ND	0.12	0.12	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.12	0.036	ug/l	
90-12-0	1-Methylnaphthalene	8.3	0.24	0.059	ug/l	
91-57-6	2-Methylnaphthalene	19.3	0.24	0.088	ug/l	
85-01-8	Phenanthrene	ND	0.060	0.015	ug/l	
129-00-0	Pyrene	ND	0.12	0.046	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	74%		30-130%
321-60-8	2-Fluorobiphenyl	65%		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

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Report of Analysis

Client Sample ID:	MW2-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-5	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89243.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
Run #2							

Run #	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)	106%		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

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Report of Analysis

Client Sample ID:	MW22-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-6	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29996.D	1	04/19/14	AMY	n/a	n/a	MSV1121
Run #2	V30050.D	50	04/22/14	AMY	n/a	n/a	MSV1123

Run #	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	91.1	10	2.5	ug/l	J
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	1700 ^a	25	16	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	33.4	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	33.1	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	12.8	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	15.2	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	WJ
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW22-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-6	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Per cent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	3320 ^a	50	19	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	157	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	9.4	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	334	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	254	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	5950 ^a	50	17	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	1100 ^a	250	16	ug/l	
108-67-8	1,3,5-Trimethylbenzene	384	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	6850 ^a	50	47	ug/l	
95-47-6	o-Xylene	3380 ^a	50	18	ug/l	
1330-20-7	Xylene (total)	10200 ^a	50	18	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW22-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-6	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	79%	83%	70-130%
2037-26-5	Toluene-D8	89%	89%	70-130%
460-00-4	4-Bromofluorobenzene	99%	92%	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-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-6	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F72372.D	5	04/18/14	WK	04/12/14	OP37586	MSF3219
Run #2							

Run #	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	56	14	ug/l	WJ
95-57-8	2-Chlorophenol	ND	28	1.7	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	56	4.6	ug/l	
120-83-2	2,4-Dichlorophenol	ND	56	2.2	ug/l	
105-67-9	2,4-Dimethylphenol	31.6	56	3.2	ug/l	J
51-28-5	2,4-Dinitrophenol	ND	110	14	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	56	11	ug/l	
95-48-7	2-Methylphenol	15.6	56	1.3	ug/l	J
	3&4-Methylphenol	35.0	56	2.6	ug/l	J
88-75-5	2-Nitrophenol	ND	56	16	ug/l	
100-02-7	4-Nitrophenol	ND	110	3.0	ug/l	
87-86-5	Pentachlorophenol	ND	56	6.3	ug/l	
108-95-2	Phenol	ND	28	1.7	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	56	2.1	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	56	0.99	ug/l	
62-53-3	Aniline	ND	56	3.6	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	28	2.6	ug/l	
85-68-7	Butyl benzyl phthalate	ND	28	3.0	ug/l	
100-51-6	Benzyl Alcohol	ND	56	13	ug/l	
91-58-7	2-Chloronaphthalene	ND	28	1.8	ug/l	
106-47-8	4-Chloroaniline	ND	56	3.1	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	28	1.6	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	28	2.0	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	28	1.9	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	28	1.4	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	28	1.3	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	56	2.6	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	56	1.7	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	28	1.5	ug/l	
132-64-9	Dibenzofuran	ND	11	1.5	ug/l	
84-74-2	Di-n-butyl phthalate	1.6 LA	28	0.97	ug/l	JB LA
117-84-0	Di-n-octyl phthalate	ND	28	1.6	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:	MW22-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-6	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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	28	1.1	ug/l	
131-11-3	Dimethyl phthalate	ND	28	1.9	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	11	1.9	ug/l	
118-74-1	Hexachlorobenzene	ND	28	1.6	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	56	7.2	ug/l	
67-72-1	Hexachloroethane	ND	28	1.7	ug/l	
78-59-1	Isophorone	ND	28	2.5	ug/l	
88-74-4	2-Nitroaniline	ND	56	2.2	ug/l	
99-09-2	3-Nitroaniline	ND	56	7.7	ug/l	
100-01-6	4-Nitroaniline	ND	56	12	ug/l	
98-95-3	Nitrobenzene	ND	28	2.2	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	28	5.6	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	28	2.3	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	28	1.1	ug/l	
110-86-1	Pyridine	ND	56	2.9	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	84%		15-110%
4165-62-2	Phenol-d5	34%		15-110%
118-79-6	2,4,6-Tribromophenol	91%		15-110%
4165-60-0	Nitrobenzene-d5	81%		30-130%
321-60-8	2-Fluorobiphenyl	82%		30-130%
1718-51-0	Terphenyl-d14	103%		30-130%

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

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

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

Report of Analysis

Client Sample ID:	MW22-ROX-041014	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-6	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88596.D	1	04/16/14	MR	04/12/14	OP37587	MSI3299
Run #2							

Run #	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.10	0.11	0.077	ug/l	J
208-96-8	Acenaphthylene	ND	0.11	0.056	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.036	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.046	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	17.4	0.22	0.056	ug/l	
91-57-6	2-Methylnaphthalene	28.7	0.22	0.083	ug/l	
85-01-8	Phenanthrene	0.10	0.056	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	66%		30-130%
321-60-8	2-Fluorobiphenyl	60%		30-130%
1718-51-0	Terphenyl-d14	88%		30-130%

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

4.6
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Report of Analysis

Client Sample ID: MW22-ROX-041014	Date Sampled: 04/10/14
Lab Sample ID: MC29684-6	Date Received: 04/11/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89244.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
Run #2							

Run #	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)	127%		36-173%
460-00-4	Bromofluorobenzene (S)	56%		36-173%

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

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Report of Analysis

Client Sample ID:	MW22-ROX-041014-DUP	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-7	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29997.D	1	04/19/14	AMY	n/a	n/a	MSV1121
Run #2	V30051.D	50	04/22/14	AMY	n/a	n/a	MSV1123

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	WJ
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	1560 ^a	25	16	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	28.7	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	31.9	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	12.3	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	14.4	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbou tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	0.46	1.0	0.43	ug/l	J
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	WJ
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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

4.7
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Report of Analysis

Client Sample ID:	MW22-ROX-041014-DUP	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-7	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	3020 ^a	50	19	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	138	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	8.9	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	8.2	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	280 ^a	250	34	ug/l	
103-65-1	n-Propylbenzene	235	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	5520 ^a	50	17	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	1000 ^a	250	16	ug/l	
108-67-8	1,3,5-Trimethylbenzene	350	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	6230 ^a	50	47	ug/l	
95-47-6	o-Xylene	3120 ^a	50	18	ug/l	
1330-20-7	Xylene (total)	9350 ^a	50	18	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW22-ROX-041014-DUP	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-7	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	75%	83%	70-130%
2037-26-5	Toluene-D8	88%	90%	70-130%
460-00-4	4-Bromofluorobenzene	90%	93%	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 J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW22-ROX-041014-DUP	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-7	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F72373.D	5	04/18/14	WK	04/12/14	OP37586	MSF3219
Run #2							

Run #	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	56	14	ug/l	W
95-57-8	2-Chlorophenol	ND	28	1.7	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	56	4.6	ug/l	
120-83-2	2,4-Dichlorophenol	ND	56	2.2	ug/l	
105-67-9	2,4-Dimethylphenol	32.0	56	3.2	ug/l	J
51-28-5	2,4-Dinitrophenol	ND	110	14	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	56	11	ug/l	
95-48-7	2-Methylphenol	15.9	56	1.3	ug/l	J
	3&4-Methylphenol	38.0	56	2.6	ug/l	J
88-75-5	2-Nitrophenol	ND	56	16	ug/l	
100-02-7	4-Nitrophenol	ND	110	3.0	ug/l	
87-86-5	Pentachlorophenol	ND	56	6.3	ug/l	
108-95-2	Phenol	ND	28	1.7	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	56	2.1	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	56	0.99	ug/l	
62-53-3	Aniline	ND	56	3.6	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	28	2.6	ug/l	
85-68-7	Butyl benzyl phthalate	ND	28	3.0	ug/l	
100-51-6	Benzyl Alcohol	ND	56	13	ug/l	
91-58-7	2-Chloronaphthalene	ND	28	1.8	ug/l	
106-47-8	4-Chloroaniline	ND	56	3.1	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	28	1.6	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	28	2.0	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	28	1.9	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	28	1.4	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	28	1.3	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	56	2.6	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	56	1.7	ug/l	
91-94-1	3,3'-Dichlorohenzidine	ND	28	1.5	ug/l	
132-64-9	Dibenzofuran	ND	11	1.5	ug/l	
84-74-2	Di-n-butyl phthalate	1.8 u	28	0.97	ug/l	JB u
117-84-0	Di-n-octyl phthalate	ND	28	1.6	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:	MW22-ROX-041014-DUP	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-7	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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	28	1.1	ug/l	
131-11-3	Dimethyl phthalate	ND	28	1.9	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	11	1.9	ug/l	
118-74-1	Hexachlorobenzene	ND	28	1.6	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	56	7.2	ug/l	
67-72-1	Hexachloroethane	ND	28	1.7	ug/l	
78-59-1	Isophorone	ND	28	2.5	ug/l	
88-74-4	2-Nitroaniline	ND	56	2.2	ug/l	
99-09-2	3-Nitroaniline	ND	56	7.7	ug/l	
100-01-6	4-Nitroaniline	ND	56	12	ug/l	
98-95-3	Nitrobenzene	ND	28	2.2	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	28	5.6	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	28	2.3	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	28	1.1	ug/l	
110-86-1	Pyridine	ND	56	2.9	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	88%		15-110%
4165-62-2	Phenol-d5	35%		15-110%
118-79-6	2,4,6-Tribromophenol	90%		15-110%
4165-60-0	Nitrobenzene-d5	81%		30-130%
321-60-8	2-Fluorobiphenyl	87%		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	

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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-041014-DUP	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-7	Date Received:	04/11/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88597.D	1	04/16/14	MR	04/12/14	OP37587	MSI3299
Run #2							

Run #	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.12	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.056	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.036	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.046	ug/l	
86-73-7	Fluorene	0.12	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	19.9	0.22	0.056	ug/l	
91-57-6	2-Methylnaphthalene	32.2	0.22	0.083	ug/l	
85-01-8	Phenanthrene	0.10	0.056	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	70%		30-130%
321-60-8	2-Fluorobiphenyl	65%		30-130%
1718-51-0	Terphenyl-d14	91%		30-130%

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Report of Analysis

Client Sample ID: MW22-ROX-041014-DUP	Date Sampled: 04/10/14
Lab Sample ID: MC29684-7	Date Received: 04/11/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89245.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
Run #2							

Run #	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	
I06-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	152%		36-173%
460-00-4	Bromofluorobenzene (S)	68%		36-173%

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

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Report of Analysis

Client Sample ID:	TB-ROX-041014-HCL	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-8	Date Received:	04/11/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V29986.D	1	04/19/14	AMY	n/a	n/a	MSV1121
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromohenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-041014-HCL	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-8	Date Received:	04/11/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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J = Indicates an estimated value
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 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-041014-HCL	Date Sampled:	04/10/14
Lab Sample ID:	MC29684-8	Date Received:	04/11/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		70-130%
2037-26-5	Toluene-D8	87%		70-130%
460-00-4	4-Bromofluorobenzene	90%		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-041014-ST	Date Sampled: 04/10/14
Lab Sample ID: MC29684-9	Date Received: 04/11/14
Matrix: AQ - Trip Blank Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89247.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
Run #2							

Run #	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)	89%		36-173%
460-00-4	Bromofluorobenzene (S)	70%		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

4.9
4

Misc. Forms



Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

LAB (LOCATION) MEMO CASUALTY OTHER SFL

LAB VENDOR # _____

Shell Oil Products Chain Of Custody Record

URS

Print Bill To Contact Name: Bob Bliman

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

DATE: 4/10/14

PO # _____

SAP # 3 4 0 0 6 1

PAGE 1 of 1

URS CORPORATION
1901 HIGHLANDS PLAZA DRIVE WEST - SUITE 306, ST. LOUIS, MO 63110

900 South Central Ave, ROXANA, IL

Elizabeth Kunkel, Wendy Pennington, Bob Bliman

314-429-0100

314-429-0462

DMattindy, MManster

mc29684

ROXANA QUARTERLY GW I 21562873.03092

LAB USE ONLY

REQUESTED ANALYSIS

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

180, 5A2

21°C

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE						NO. OF CONT.	PID (ppm)		
		DATE	TIME		NCL	NHCL	NHCL/2N	NEWT	OTHER					
-1	ROST4PZC-ROX-041014	4/10/14	0920	water	2			2	2	6	X	X	X	
-2	ROST3MW-ROX-041014		1055		2			2	2	6	X	X	X	
-3	MW6-ROX-041014-EB		1240		2			2	2	6	X	X	X	
-4	MW5-ROX-041014		1340		2			2	2	6	X	X	X	
-5	MW2-ROX-041014		1446		2			2	2	6	X	X	X	
-6	MW22-ROX-041014		1555		2			2	2	6	X	X	X	180, 5A2
-7	MW22-ROX-041014-DUP		1555		2			2	2	6	X	X	X	
-8	TB-ROX-041014-HCL		0000		2					2	X			
-9	TB-ROX-041014-ST		0000							2	2	X		

Accepted by (Signature): [Signature]

Received by (Signature): [Signature]

FED EX

Date: 4/10/14

Date: 4-11-14

Time: 1700

Time: 970

5.1
5



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC29684 Client: URS Immediate Client Services Action Required: No
 Date / Time Received: 4/11/2014 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: Infrared 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

5.1

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC29684

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

5.2

5

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
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MC29684-1 Collected: 10-APR-14 09:20 By: DMMM Received: 11-APR-14 By: ROST4PZC-ROX-041014

MC29684-1	SW846 8011	15-APR-14 19:44	SZ	14-APR-14	MT	V8011SL
MC29684-1	SW846 8270D BY SIM	16-APR-14 12:30	MR	12-APR-14	PA	B8270SIMSL
MC29684-1	SW846 8270D	18-APR-14 10:32	WK	12-APR-14	PA	AB8270SL+
MC29684-1	SW846 8260C	19-APR-14 13:06	AMY			V8260SL+

MC29684-2 Collected: 10-APR-14 10:55 By: DMMM Received: 11-APR-14 By: ROST3MW-ROX-041014

MC29684-2	SW846 8011	15-APR-14 20:11	SZ	14-APR-14	MT	V8011SL
MC29684-2	SW846 8270D BY SIM	16-APR-14 13:10	MR	12-APR-14	PA	B8270SIMSL
MC29684-2	SW846 8270D	18-APR-14 10:55	WK	12-APR-14	PA	AB8270SL+
MC29684-2	SW846 8260C	19-APR-14 13:32	AMY			V8260SL+

MC29684-3 Collected: 10-APR-14 12:40 By: DMMM Received: 11-APR-14 By: MW5-ROX-041014-EB

MC29684-3	SW846 8011	15-APR-14 20:37	SZ	14-APR-14	MT	V8011SL
MC29684-3	SW846 8270D BY SIM	16-APR-14 13:33	MR	12-APR-14	PA	B8270SIMSL
MC29684-3	SW846 8270D	18-APR-14 11:18	WK	12-APR-14	PA	AB8270SL+
MC29684-3	SW846 8260C	19-APR-14 10:55	AMY			V8260SL+

MC29684-4 Collected: 10-APR-14 13:40 By: DMMM Received: 11-APR-14 By: MW5-ROX-041014

MC29684-4	SW846 8011	15-APR-14 21:05	SZ	14-APR-14	MT	V8011SL
MC29684-4	SW846 8270D BY SIM	16-APR-14 13:58	MR	12-APR-14	PA	B8270SIMSL
MC29684-4	SW846 8270D	18-APR-14 11:41	WK	12-APR-14	PA	AB8270SL+
MC29684-4	SW846 8260C	19-APR-14 13:58	AMY			V8260SL+

MC29684-5 Collected: 10-APR-14 14:45 By: DMMM Received: 11-APR-14 By: MW2-ROX-041014

MC29684-5	SW846 8011	15-APR-14 21:33	SZ	14-APR-14	MT	V8011SL
MC29684-5	SW846 8270D BY SIM	16-APR-14 14:22	MR	12-APR-14	PA	B8270SIMSL
MC29684-5	SW846 8270D	18-APR-14 12:05	WK	12-APR-14	PA	AB8270SL+
MC29684-5	SW846 8260C	19-APR-14 14:25	AMY			V8260SL+
MC29684-5	SW846 8260C	22-APR-14 01:04	AMY			V8260SL+

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC29684

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

5.2



Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
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MC29684-6 Collected: 10-APR-14 15:55 By: DMMM Received: 11-APR-14 By:
MW22-ROX-041014

MC29684-6 SW846 8011		15-APR-14 21:59	SZ	14-APR-14	MT	V8011SL
MC29684-6 SW846 8270D BY SIM		16-APR-14 14:45	MR	12-APR-14	PA	B8270SIMSL
MC29684-6 SW846 8270D		18-APR-14 12:28	WK	12-APR-14	PA	AB8270SL+
MC29684-6 SW846 8260C		19-APR-14 14:51	AMY			V8260SL+
MC29684-6 SW846 8260C		22-APR-14 01:30	AMY			V8260SL+

MC29684-7 Collected: 10-APR-14 15:55 By: DMMM Received: 11-APR-14 By:
MW22-ROX-041014-DUP

MC29684-7 SW846 8011		15-APR-14 22:26	SZ	14-APR-14	MT	V8011SL
MC29684-7 SW846 8270D BY SIM		16-APR-14 15:08	MR	12-APR-14	PA	B8270SIMSL
MC29684-7 SW846 8270D		18-APR-14 12:51	WK	12-APR-14	PA	AB8270SL+
MC29684-7 SW846 8260C		19-APR-14 15:17	AMY			V8260SL+
MC29684-7 SW846 8260C		22-APR-14 01:56	AMY			V8260SL+

MC29684-8 Collected: 10-APR-14 00:00 By: DMMM Received: 11-APR-14 By:
TB-ROX-041014-HCL

MC29684-8 SW846 8260C		19-APR-14 10:29	AMY			V8260SL+
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MC29684-9 Collected: 10-APR-14 00:00 By: DMMM Received: 11-APR-14 By:
TB-ROX-041014-ST

MC29684-9 SW846 8011		15-APR-14 23:19	SZ	14-APR-14	MT	V8011SL
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Accutest Internal Chain of Custody

Job Number: MC29684
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Received: 04/11/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29684-1.1	Walk In Ref #22	Michael DiBuono	04/12/14 09:37	Retrieve from Storage
MC29684-1.3	VOC Ref #5	Amy Min Yang	04/19/14 09:17	Retrieve from Storage
MC29684-1.3	Amy Min Yang	GCMSV	04/19/14 09:17	Load on Instrument
MC29684-1.3	GCMSV	Amy Min Yang	04/21/14 16:46	Unload from Instrument
MC29684-1.3	Amy Min Yang	VOC Ref #5	04/21/14 16:46	Return to Storage
MC29684-1.6	VOC Ref #5	Marc Tahtamoni	04/14/14 19:14	Retrieve from Storage
MC29684-2.2	Walk In Ref #22	Michael DiBuono	04/12/14 09:37	Retrieve from Storage
MC29684-2.3	VOC Ref #5	Amy Min Yang	04/19/14 09:17	Retrieve from Storage
MC29684-2.3	Amy Min Yang	GCMSV	04/19/14 09:17	Load on Instrument
MC29684-2.3	GCMSV	Amy Min Yang	04/21/14 16:46	Unload from Instrument
MC29684-2.3	Amy Min Yang	VOC Ref #5	04/21/14 16:46	Return to Storage
MC29684-2.6	VOC Ref #5	Marc Tahtamoni	04/14/14 19:14	Retrieve from Storage
MC29684-3.1	Walk In Ref #22	Michael DiBuono	04/12/14 09:37	Retrieve from Storage
MC29684-3.4	VOC Ref #5	Amy Min Yang	04/19/14 09:17	Retrieve from Storage
MC29684-3.4	Amy Min Yang	GCMSV	04/19/14 09:17	Load on Instrument
MC29684-3.4	GCMSV	Amy Min Yang	04/21/14 16:46	Unload from Instrument
MC29684-3.4	Amy Min Yang	VOC Ref #5	04/21/14 16:46	Return to Storage
MC29684-3.5	VOC Ref #5	Marc Tahtamoni	04/14/14 19:14	Retrieve from Storage
MC29684-4.1	Walk In Ref #22	Michael DiBuono	04/12/14 09:37	Retrieve from Storage
MC29684-4.3	VOC Ref #5	Amy Min Yang	04/19/14 09:17	Retrieve from Storage
MC29684-4.3	Amy Min Yang	GCMSV	04/19/14 09:17	Load on Instrument
MC29684-4.3	GCMSV	Amy Min Yang	04/21/14 16:46	Unload from Instrument
MC29684-4.3	Amy Min Yang	VOC Ref #5	04/21/14 16:46	Return to Storage
MC29684-4.5	VOC Ref #5	Marc Tahtamoni	04/14/14 19:14	Retrieve from Storage
MC29684-5.1	Walk In Ref #22	Thomas Abruzzise	04/15/14 14:51	Retrieve from Storage
MC29684-5.1	Thomas Abruzzise	Walk In Ref #22	04/15/14 16:22	Return to Storage
MC29684-5.2	Walk In Ref #22	Michael DiBuono	04/12/14 09:37	Retrieve from Storage
MC29684-5.3	VOC Ref #5	Amy Min Yang	04/21/14 10:48	Retrieve from Storage
MC29684-5.3	Amy Min Yang	GCMSV	04/21/14 10:48	Load on Instrument
MC29684-5.3	GCMSV	Amy Min Yang	04/22/14 16:22	Unload from Instrument

5.3

Accutest Internal Chain of Custody

Job Number: MC29684
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Received: 04/11/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29684-5.3	Amy Min Yang	VOC Ref #5	04/22/14 16:22	Return to Storage
MC29684-5.4	VOC Ref #5	Amy Min Yang	04/19/14 09:17	Retrieve from Storage
MC29684-5.4	Amy Min Yang	GCMSV	04/19/14 09:17	Load on Instrument
MC29684-5.4	GCMSV	Amy Min Yang	04/21/14 16:46	Unload from Instrument
MC29684-5.4	Amy Min Yang	VOC Ref #5	04/21/14 16:46	Return to Storage
MC29684-5.6	VOC Ref #5	Marc Tahtamoni	04/14/14 19:14	Retrieve from Storage
MC29684-6.1	Walk In Ref #22	Thomas Abruzzise	04/15/14 14:51	Retrieve from Storage
MC29684-6.1	Thomas Abruzzise	Walk In Ref #22	04/15/14 19:48	Return to Storage
MC29684-6.2	Walk In Ref #22	Michael DiBuono	04/12/14 09:37	Retrieve from Storage
MC29684-6.3	VOC Ref #5	Amy Min Yang	04/21/14 10:48	Retrieve from Storage
MC29684-6.3	Amy Min Yang	GCMSV	04/21/14 10:48	Load on Instrument
MC29684-6.3	GCMSV	Amy Min Yang	04/22/14 16:22	Unload from Instrument
MC29684-6.3	Amy Min Yang	VOC Ref #5	04/22/14 16:22	Return to Storage
MC29684-6.4	VOC Ref #5	Amy Min Yang	04/19/14 09:17	Retrieve from Storage
MC29684-6.4	Amy Min Yang	GCMSV	04/19/14 09:17	Load on Instrument
MC29684-6.4	GCMSV	Amy Min Yang	04/21/14 16:46	Unload from Instrument
MC29684-6.4	Amy Min Yang	VOC Ref #5	04/21/14 16:46	Return to Storage
MC29684-6.6	VOC Ref #5	Marc Tahtamoni	04/14/14 19:14	Retrieve from Storage
MC29684-7.1	Walk In Ref #22	Michael DiBuono	04/12/14 09:37	Retrieve from Storage
MC29684-7.3	VOC Ref #5	Amy Min Yang	04/19/14 09:17	Retrieve from Storage
MC29684-7.3	Amy Min Yang	GCMSV	04/19/14 09:17	Load on Instrument
MC29684-7.3	GCMSV	Amy Min Yang	04/21/14 16:46	Unload from Instrument
MC29684-7.3	Amy Min Yang	VOC Ref #5	04/21/14 16:46	Return to Storage
MC29684-7.4	VOC Ref #5	Amy Min Yang	04/21/14 10:48	Retrieve from Storage
MC29684-7.4	Amy Min Yang	GCMSV	04/21/14 10:48	Load on Instrument
MC29684-7.4	GCMSV	Amy Min Yang	04/22/14 16:22	Unload from Instrument
MC29684-7.4	Amy Min Yang	VOC Ref #5	04/22/14 16:22	Return to Storage
MC29684-7.6	VOC Ref #5	Marc Tahtamoni	04/14/14 19:14	Retrieve from Storage
MC29684-8.1	VOC Ref #5	Amy Min Yang	04/19/14 09:17	Retrieve from Storage
MC29684-8.1	Amy Min Yang	GCMSV	04/19/14 09:17	Load on Instrument
MC29684-8.1	GCMSV	Amy Min Yang	04/21/14 16:46	Unload from Instrument
MC29684-8.1	Amy Min Yang	VOC Ref #5	04/21/14 16:46	Return to Storage

5.3
5

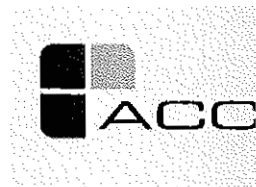
Accutest Internal Chain of Custody

Job Number: MC29684
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
Received: 04/11/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29684-9.1	VOC Ref #5	Marc Tahtamoni	04/14/14 19:14	Retrieve from Storage

5.3





New England
ACCUTEST
LABORATORIES

GC/MS Volatiles



QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: MC29684

Account: SHELLWIC Shell Oil

Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1121-MB	V29985.D	1	04/19/14	AMY	n/a	n/a	MSV1121

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7, MC29684-8

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ng/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromohenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ng/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

6.1.1



Method Blank Summary

Job Number: MC29684
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1121-MB	V29985.D	1	04/19/14	AMY	n/a	n/a	MSV1121

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7, MC29684-8

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobntadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

6.1.1



Method Blank Summary

Job Number: MC29684
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1121-MB	V29985.D	1	04/19/14	AMY	n/a	n/a	MSV1121

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

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7, MC29684-8

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	93% 70-130%
2037-26-5	Toluene-D8	88% 70-130%
460-00-4	4-Bromofluorobenzene	92% 70-130%

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

6.1.1



Method Blank Summary

Job Number: MC29684
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1123-MB	V30044.D	1	04/21/14	AMY	n/a	n/a	MSV1123

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29684-5, MC29684-6, MC29684-7

6.1.2



CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.32	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	97% 70-130%
2037-26-5	Toluene-D8	88% 70-130%
460-00-4	4-Bromofluorobenzene	90% 70-130%

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

Blank Spike Summary

Job Number: MC29684
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1121-BS	V29982.D	1	04/19/14	AMY	n/a	n/a	MSV1121

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7, MC29684-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	66.1	132* a	70-130
107-02-8	Acrolein	250	418	167* a	70-130
107-13-1	Acrylonitrile	50	44.9	90	70-130
71-43-2	Benzene	50	49.7	99	70-130
108-86-1	Bromobenzene	50	54.0	108	70-130
74-97-5	Bromochloromethane	50	47.6	95	70-130
75-27-4	Bromodichloromethane	50	51.3	103	70-130
75-25-2	Bromoform	50	44.8	90	70-130
74-83-9	Bromomethane	50	56.1	112	70-130
78-93-3	2-Butanone (MEK)	50	57.4	115	70-130
104-51-8	n-Butylbenzene	50	55.5	111	70-130
135-98-8	sec-Butylbenzene	50	56.1	112	70-130
98-06-6	tert-Butylbenzene	50	55.9	112	70-130
75-15-0	Carbon disulfide	50	46.6	93	70-130
56-23-5	Carbon tetrachloride	50	59.9	120	70-130
108-90-7	Chlorobenzene	50	51.1	102	70-130
75-00-3	Chloroethane	50	65.0	130	70-130
110-75-8	2-Chloroethyl vinyl ether	50	34.5	69* a	70-130
67-66-3	Chloroform	50	48.5	97	70-130
74-87-3	Chloromethane	50	59.9	120	70-130
95-49-8	o-Chlorotoluene	50	52.2	104	70-130
106-43-4	p-Chlorotoluene	50	54.9	110	70-130
124-48-1	Dibromochloromethane	50	48.5	97	70-130
95-50-1	1,2-Dichlorobenzene	50	50.4	101	70-130
541-73-1	1,3-Dichlorobenzene	50	51.8	104	70-130
106-46-7	1,4-Dichlorobenzene	50	52.0	104	70-130
75-71-8	Dichlorodifluoromethane	50	42.4	85	70-130
75-34-3	1,1-Dichloroethane	50	49.3	99	70-130
107-06-2	1,2-Dichloroethane	50	51.4	103	70-130
75-35-4	1,1-Dichloroethene	50	53.0	106	70-130
156-59-2	cis-1,2-Dichloroethene	50	48.7	97	70-130
156-60-5	trans-1,2-Dichloroethene	50	49.0	98	70-130
78-87-5	1,2-Dichloropropane	50	51.7	103	70-130
142-28-9	1,3-Dichloropropane	50	50.9	102	70-130
594-20-7	2,2-Dichloropropane	50	52.2	104	70-130
563-58-6	1,1-Dichloropropene	50	53.9	108	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC29684
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1121-BS	V29982.D	1	04/19/14	AMY	n/a	n/a	MSV1121

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7, MC29684-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	46.2	92	70-130
10061-02-6	trans-1,3-Dichloropropene	50	59.4	119	70-130
123-91-1	1,4-Dioxane	250	209	84	70-130
97-63-2	Ethyl methacrylate	50	45.7	91	77-137
100-41-4	Ethylbenzene	50	54.8	110	70-130
87-68-3	Hexachlorobutadiene	50	49.2	98	70-130
591-78-6	2-Hexanone	50	66.7	133* a	70-130
98-82-8	Isopropylbenzene	50	55.1	110	70-130
99-87-6	p-Isopropyltoluene	50	56.5	113	70-130
1634-04-4	Methyl Tert Butyl Ether	50	48.2	96	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	49.0	98	70-130
74-95-3	Methylene bromide	50	50.1	100	70-130
75-09-2	Methylene chloride	50	48.1	96	70-130
91-20-3	Naphthalene	50	53.8	108	70-130
103-65-1	n-Propylbenzene	50	54.0	108	70-130
100-42-5	Styrene	50	55.3	111	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	57.0	114	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	53.9	108	70-130
127-18-4	Tetrachloroethene	50	54.2	108	70-130
108-88-3	Toluene	50	53.2	106	70-130
87-61-6	1,2,3-Trichlorobenzene	50	57.3	115	70-130
120-82-1	1,2,4-Trichlorobenzene	50	47.0	94	70-130
71-55-6	1,1,1-Trichloroethane	50	53.8	108	70-130
79-00-5	1,1,2-Trichloroethane	50	51.7	103	70-130
79-01-6	Trichloroethene	50	49.8	100	70-130
75-69-4	Trichlorofluoromethane	50	60.5	121	70-130
96-18-4	1,2,3-Trichloropropane	50	52.3	105	70-130
95-63-6	1,2,4-Trimethylbenzene	50	55.0	110	70-130
108-67-8	1,3,5-Trimethylbenzene	50	55.7	111	70-130
108-05-4	Vinyl Acetate	50	45.9	92	70-130
75-01-4	Vinyl chloride	50	60.1	120	70-130
	m,p-Xylene	100	107	107	70-130
95-47-6	o-Xylene	50	53.3	107	70-130
1330-20-7	Xylene (total)	150	160	107	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC29684
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1121-BS	V29982.D	1	04/19/14	AMY	n/a	n/a	MSV1121

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

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7, MC29684-8

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	82%	70-130%
2037-26-5	Toluene-D8	88%	70-130%
460-00-4	4-Bromofluorobenzene	91%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

6.2.1



Blank Spike Summary

Job Number: MC29684

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1123-BS	V30042.D	1	04/21/14	AMY	n/a	n/a	MSV1123

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29684-5, MC29684-6, MC29684-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	48.0	96	70-130
100-41-4	Ethylbenzene	50	52.6	105	70-130
91-20-3	Naphthalene	50	51.7	103	70-130
108-88-3	Toluene	50	51.9	104	70-130
95-63-6	1,2,4-Trimethylbenzene	50	51.5	103	70-130
	m,p-Xylene	100	103	103	70-130
95-47-6	o-Xylene	50	51.2	102	70-130
1330-20-7	Xylene (total)	150	154	103	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	84%	70-130%
2037-26-5	Toluene-D8	89%	70-130%
460-00-4	4-Bromofluorobenzene	92%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29684

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29640-1MS	V30006.D	5	04/19/14	AMY	n/a	n/a	MSV1121
MC29640-1MSD	V30007.D	5	04/19/14	AMY	n/a	n/a	MSV1121
MC29640-1	V29988.D	1	04/19/14	AMY	n/a	n/a	MSV1121

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7, MC29684-8

CAS No.	Compound	MC29640-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
67-64-1	Acetone	ND		250	185	74	250	207	83	11	70-130/30
107-02-8	Acrolein	ND		1250	1860	149* ^a	1250	1890	151* ^a	2	70-130/30
107-13-1	Acrylonitrile	ND		250	222	89	250	220	88	1	70-130/30
71-43-2	Benzene	0.34	J	250	241	96	250	244	97	1	70-130/30
108-86-1	Bromobenzene	ND		250	255	102	250	262	105	3	70-130/30
74-97-5	Bromochloromethane	ND		250	231	92	250	233	93	1	70-130/30
75-27-4	Bromodichloromethane	ND		250	225	90	250	226	90	0	70-130/30
75-25-2	Bromoform	ND		250	205	82	250	200	80	2	70-130/30
74-83-9	Bromomethane	ND		250	234	94	250	236	94	1	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	182	73	250	183	73	1	70-130/30
104-51-8	n-Butylbenzene	ND		250	249	100	250	255	102	2	70-130/30
135-98-8	sec-Butylbenzene	ND		250	256	102	250	267	107	4	70-130/30
98-06-6	tert-Butylbenzene	ND		250	245	98	250	254	102	4	70-130/30
75-15-0	Carbon disulfide	ND		250	218	87	250	219	88	0	70-130/30
56-23-5	Carbon tetrachloride	ND		250	238	95	250	240	96	1	70-130/30
108-90-7	Chlorobenzene	ND		250	248	99	250	248	99	0	70-130/30
75-00-3	Chloroethane	ND		250	282	113	250	281	112	0	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	ND	0* ^a	250	ND	0* ^a	nc	70-130/30
67-66-3	Chloroform	ND		250	218	87	250	221	88	1	70-130/30
74-87-3	Chloromethane	ND		250	242	97	250	242	97	0	70-130/30
95-49-8	o-Chlorotoluene	ND		250	244	98	250	250	100	2	70-130/30
106-43-4	p-Chlorotoluene	ND		250	248	99	250	253	101	2	70-130/30
124-48-1	Dibromochloromethane	ND		250	227	91	250	222	89	2	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	226	90	250	239	96	6	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	239	96	250	245	98	2	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	239	96	250	247	99	3	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	160	64* ^a	250	160	64* ^a	0	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	230	92	250	234	94	2	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	219	88	250	218	87	0	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	245	98	250	249	100	2	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	236	94	250	238	95	1	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	233	93	250	235	94	1	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	253	101	250	256	102	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	250	100	250	246	98	2	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	188	75	250	188	75	0	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	243	97	250	244	98	0	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29684
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29640-1MS	V30006.D	5	04/19/14	AMY	n/a	n/a	MSV1121
MC29640-1MSD	V30007.D	5	04/19/14	AMY	n/a	n/a	MSV1121
MC29640-1	V29988.D	1	04/19/14	AMY	n/a	n/a	MSV1121

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7, MC29684-8

CAS No.	Compound	MC29640-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND	250	205	82	250	205	82	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND	250	268	107	250	267	107	0	70-130/30
123-91-1	1,4-Dioxane	ND	1250	802	64* a	1250	958	77	18	70-130/30
97-63-2	Ethyl methacrylate	ND	250	232	93	250	225	90	3	72-139/30
100-41-4	Ethylbenzene	ND	250	265	106	250	264	106	0	70-130/30
87-68-3	Hexachlorobutadiene	ND	250	207	83	250	236	94	13	70-130/30
591-78-6	2-Hexanone	ND	250	197	79	250	191	76	3	70-130/30
98-82-8	Isopropylbenzene	ND	250	260	104	250	268	107	3	70-130/30
99-87-6	p-Isopropyltoluene	ND	250	258	103	250	267	107	3	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	250	229	92	250	227	91	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	250	223	89	250	218	87	2	70-130/30
74-95-3	Methylene bromide	ND	250	232	93	250	233	93	0	70-130/30
75-09-2	Methylene chloride	ND	250	233	93	250	233	93	0	70-130/30
91-20-3	Naphthalene	ND	250	156	62* a	250	251	100	47* b	70-130/30
103-65-1	n-Propylbenzene	ND	250	251	100	250	256	102	2	70-130/30
100-42-5	Styrene	ND	250	267	107	250	267	107	0	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND	250	266	106	250	266	106	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	256	102	250	266	106	4	70-130/30
127-18-4	Tetrachloroethene	ND	250	256	102	250	256	102	0	70-130/30
108-88-3	Toluene	ND	250	259	104	250	260	104	0	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND	250	161	64* a	250	251	100	44* b	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND	250	177	71	250	222	89	23	70-130/30
71-55-6	1,1,1-Trichloroethane	ND	250	230	92	250	231	92	0	70-130/30
79-00-5	1,1,2-Trichloroethane	ND	250	249	100	250	249	100	0	70-130/30
79-01-6	Trichloroethene	ND	250	232	93	250	234	94	1	70-130/30
75-69-4	Trichlorofluoromethane	ND	250	225	90	250	225	90	0	70-130/30
96-18-4	1,2,3-Trichloropropane	ND	250	228	91	250	230	92	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND	250	255	102	250	263	105	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND	250	257	103	250	266	106	3	70-130/30
108-05-4	Vinyl Acetate	ND	250	214	86	250	214	86	0	70-130/30
75-01-4	Vinyl chloride	ND	250	259	104	250	260	104	0	70-130/30
	m,p-Xylene	ND	500	531	106	500	531	106	0	70-130/30
95-47-6	o-Xylene	ND	250	261	104	250	263	105	1	70-130/30
1330-20-7	Xylene (total)	ND	750	793	106	750	794	106	0	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29684

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29640-1MS	V30006.D	5	04/19/14	AMY	n/a	n/a	MSV1121
MC29640-1MSD	V30007.D	5	04/19/14	AMY	n/a	n/a	MSV1121
MC29640-1	V29988.D	1	04/19/14	AMY	n/a	n/a	MSV1121

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7, MC29684-8

CAS No.	Surrogate Recoveries	MS	MSD	MC29640-1	Limits
1868-53-7	Dibromofluoromethane	79%	79%	98%	70-130%
2037-26-5	Toluene-D8	88%	88%	87%	70-130%
460-00-4	4-Bromofluorobenzene	91%	90%	89%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

(b) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

6.3.1


Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29684

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29893-1MS	V30047.D	5	04/22/14	AMY	n/a	n/a	MSV1123
MC29893-1MSD	V30048.D	5	04/22/14	AMY	n/a	n/a	MSV1123
MC29893-1	V30046.D	1	04/21/14	AMY	n/a	n/a	MSV1123

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29684-5, MC29684-6, MC29684-7

CAS No.	Compound	MC29893-1		MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
		ug/l	Q							
71-43-2	Benzene	ND	250	265	106	250	250	100	6	70-130/30
100-41-4	Ethylbenzene	ND	250	291	116	250	279	112	4	70-130/30
91-20-3	Naphthalene	ND	250	144	58* a	250	248	99	53* b	70-130/30
108-88-3	Toluene	ND	250	287	115	250	272	109	5	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND	250	274	110	250	267	107	3	70-130/30
	m,p-Xylene	ND	500	559	112	500	542	108	3	70-130/30
95-47-6	o-Xylene	ND	250	277	111	250	269	108	3	70-130/30
1330-20-7	Xylene (total)	ND	750	836	111	750	811	108	3	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC29893-1	Limits
1868-53-7	Dibromofluoromethane	86%	85%	101%	70-130%
2037-26-5	Toluene-D8	91%	89%	89%	70-130%
460-00-4	4-Bromofluorobenzene	89%	90%	91%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

(b) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

6.3.2

6

Volatile Internal Standard Area Summary

Job Number: MC29684
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSV1121-CC1058	Injection Date:	04/19/14
Lab File ID:	V29981.D	Injection Time:	08:18
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
	AREA		AREA		AREA		AREA		AREA	
Check Std	303408	6.54	403111	7.72	192622	11.07	204497	13.28	45385	3.49
Upper Limit ^a	606816	7.04	806222	8.22	385244	11.57	408994	13.78	90770	3.99
Lower Limit ^b	151704	6.04	201556	7.22	96311	10.57	102249	12.78	22693	2.99

Lab	IS 1	IS 2	IS 3	IS 4	IS 5					
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
MSV1121-BS	297302	6.53	397730	7.72	189553	11.07	199177	13.28	44281	3.48
MSV1121-MB	234115	6.54	333256	7.72	169551	11.07	162070	13.28	34600	3.49
MC29684-8	207308	6.54	295276	7.72	150238	11.07	143416	13.28	30387	3.48
MC29684-3	192458	6.53	274580	7.72	139981	11.07	133045	13.28	32995	3.48
MC29640-1	198583	6.53	283208	7.72	144102	11.07	140364	13.28	33711	3.48
ZZZZZ	181600	6.53	260775	7.72	136614	11.07	132852	13.28	30345	3.48
ZZZZZ	180258	6.53	258841	7.72	134167	11.07	126262	13.28	30040	3.48
ZZZZZ	235988	6.53	290904	7.72	148625	11.07	142075	13.28	40896	3.49
MC29684-1	217533	6.53	281991	7.72	144893	11.07	140975	13.28	40988	3.48
MC29684-2	240601	6.53	299561	7.72	145307	11.07	147815	13.28	67573	3.48
MC29684-4	257322	6.54	315566	7.72	168172	11.07	166111	13.28	49190	3.49
MC29684-5	325444	6.54	437917	7.72	214625	11.07	209094	13.28	117146 ^c	3.51
MC29684-6	377310	6.54	577770	7.73	274416	11.07	325618	13.28	136812 ^c	3.51
MC29684-7	450636	6.54	693943	7.73	326250	11.07	379848	13.28	161653 ^c	3.51
ZZZZZ	314296	6.53	447566	7.72	206872	11.07	207372	13.28	52756	3.48
ZZZZZ	357126	6.53	488523	7.72	237912	11.06	237896	13.28	65954	3.49
ZZZZZ	405848	6.53	555886	7.72	248663	11.06	243739	13.28	90315	3.50
ZZZZZ	336958	6.53	464213	7.71	216490	11.06	226853	13.28	47274	3.48
MC29640-1MS	386838	6.53	527120	7.72	243278	11.06	256191	13.28	55439	3.48
MC29640-1MSD	381357	6.53	518387	7.72	239500	11.06	245390	13.28	51334	3.48

- 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 Internal Standard Area Summary

Job Number: MC29684
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSV1123-CC1058	Injection Date:	04/21/14
Lab File ID:	V30041.D	Injection Time:	21:11
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	267879	6.56	355556	7.74	173294	11.08	188388	13.29	42350	3.51
Upper Limit ^a	535758	7.06	711112	8.24	346588	11.58	376776	13.79	84700	4.01
Lower Limit ^b	133940	6.06	177778	7.24	86647	10.58	94194	12.79	21175	3.01

Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
MSV1123-BS	274572	6.56	364363	7.74	177597	11.08	192303	13.29	44421	3.50
MSV1123-MB	190260	6.56	272744	7.74	141057	11.08	135309	13.29	33168	3.50
ZZZZZZ	181025	6.56	257729	7.74	137501	11.08	136177	13.30	31762	3.50
MC29893-1	178762	6.56	259819	7.74	139495	11.08	134767	13.30	31373	3.50
MC29893-1MS	231450	6.56	301072	7.74	152012	11.08	168202	13.29	34449	3.50
MC29893-1MSD	260769	6.56	349983	7.75	169544	11.08	183476	13.30	39531	3.51
MC29684-5	277355	6.57	360152	7.75	185573	11.08	186545	13.30	45603	3.52
MC29684-6	247657	6.57	328606	7.75	166650	11.08	175314	13.30	39856	3.51
MC29684-7	252873	6.57	338602	7.75	172306	11.09	177904	13.30	40365	3.51
ZZZZZZ	247244	6.57	309807	7.75	156700	11.09	170175	13.30	39388	3.51
ZZZZZZ	263926	6.57	332109	7.75	167696	11.09	176931	13.30	42758	3.51
ZZZZZZ	224682	6.57	318699	7.75	164369	11.09	158921	13.30	36993	3.51
MC29893-3	210498	6.57	295486	7.75	157486	11.09	148877	13.30	35764	3.51
ZZZZZZ	178593	6.57	250172	7.75	137765	11.09	132893	13.30	30884	3.50
ZZZZZZ	233192	6.57	294642	7.75	165280	11.09	164153	13.30	45595	3.51
ZZZZZZ	221631	6.57	313354	7.75	163666	11.09	159043	13.30	42091	3.51
ZZZZZZ	266804	6.57	362585	7.75	195572	11.09	201319	13.30	50232	3.51
ZZZZZZ	334143	6.57	455782	7.75	211686	11.09	215861	13.30	50306	3.51
ZZZZZZ	329680	6.57	449946	7.75	220904	11.09	218453	13.30	46703	3.51
ZZZZZZ	374344	6.57	495664	7.75	249465	11.09	249028	13.30	52879	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.

6.4.2



Volatile Surrogate Recovery Summary

Job Number: MC29684

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Method: SW846 8260C	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC29684-1	V29992.D	87	93	92
MC29684-2	V29993.D	77	93	89
MC29684-3	V29987.D	94	87	91
MC29684-4	V29994.D	80	93	92
MC29684-5	V30049.D	79	92	92
MC29684-5	V29995.D	75	90	96
MC29684-6	V30050.D	83	89	92
MC29684-6	V29996.D	79	89	99
MC29684-7	V30051.D	83	90	93
MC29684-7	V29997.D	75	88	90
MC29684-8	V29986.D	96	87	90
MC29640-1MS	V30006.D	79	88	91
MC29640-1MSD	V30007.D	79	88	90
MC29893-1MS	V30047.D	86	91	89
MC29893-1MSD	V30048.D	85	89	90
MSV1121-BS	V29982.D	82	88	91
MSV1121-MB	V29985.D	93	88	92
MSV1123-BS	V30042.D	84	89	92
MSV1123-MB	V30044.D	97	88	90

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	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: MC29684
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37586-MB	F72362.D	1	04/18/14	WK	04/12/14	OP37586	MSF3219

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Diuitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	0.54	5.0	0.17	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	2.8	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

7.1.1



Method Blank Summary

Job Number: MC29684
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37586-MB	F72362.D	1	04/18/14	WK	04/12/14	OP37586	MSF3219

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridiue	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries	Limits	
367-12-4	2-Fluorophenol	46%	15-110%
4165-62-2	Phenol-d5	29%	15-110%
118-79-6	2,4,6-Tribromophenol	74%	15-110%
4165-60-0	Nitrobenzene-d5	70%	30-130%
321-60-8	2-Fluorobiphenyl	71%	30-130%
1718-51-0	Terphenyl-d14	88%	30-130%

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

7.1.1
7

Method Blank Summary

Job Number: MC29684
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37587-MB	I88586.D	1	04/16/14	MR	04/12/14	OP37587	MSI3299

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7

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
367-12-4	2-Fluorophenol	35%	15-110%
4165-62-2	Phenol-d5	23%	15-110%
118-79-6	2,4,6-Tribromophenol	70%	15-110%
4165-60-0	Nitrobenzene-d5	67%	30-130%
321-60-8	2-Fluorobiphenyl	62%	30-130%
1718-51-0	Terphenyl-d14	90%	30-130%

7.1.2
7

Blank Spike Summary

Job Number: MC29684
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37586-BS	F72363.D	1	04/18/14	WK	04/12/14	OP37586	MSF3219

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	11.1	22* a	30-130
95-57-8	2-Chlorophenol	50	37.0	74	30-130
59-50-7	4-Chloro-3-methyl phenol	50	36.6	73	30-130
120-83-2	2,4-Dichlorophenol	50	38.3	77	30-130
105-67-9	2,4-Dimethylphenol	50	29.2	58	30-130
51-28-5	2,4-Dinitrophenol	50	27.7	55	30-130
534-52-1	4,6-Dinitro-o-cresol	50	39.8	80	30-130
95-48-7	2-Methylphenol	50	32.6	65	30-130
	3&4-Methylphenol	100	58.6	59	30-130
88-75-5	2-Nitrophenol	50	40.5	81	30-130
100-02-7	4-Nitrophenol	50	14.9	30	30-130
87-86-5	Pentachlorophenol	50	35.7	71	30-130
108-95-2	Phenol	50	16.7	33	30-130
95-95-4	2,4,5-Trichlorophenol	50	41.8	84	30-130
88-06-2	2,4,6-Trichlorophenol	50	40.9	82	30-130
62-53-3	Aniline	50	29.0	58	40-140
101-55-3	4-Bromophenyl phenyl ether	50	49.6	99	40-140
85-68-7	Butyl benzyl phthalate	50	47.5	95	40-140
100-51-6	Benzyl Alcohol	50	33.6	67	40-140
91-58-7	2-Chloronaphthalene	50	47.2	94	40-140
106-47-8	4-Chloroaniline	50	38.3	77	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	45.6	91	40-140
111-44-4	bis(2-Chloroethyl)ether	50	45.6	91	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	50.5	101	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	45.5	91	40-140
122-66-7	1,2-Diphenylhydrazine	50	48.0	96	40-140
121-14-2	2,4-Dinitrotoluene	50	46.3	93	40-140
606-20-2	2,6-Dinitrotoluene	50	48.1	96	40-140
91-94-1	3,3'-Dichlorobenzidine	50	45.0	90	40-140
132-64-9	Dibenzofuran	50	43.3	87	40-140
84-74-2	Di-n-butyl phthalate	50	45.6	91	40-140
117-84-0	Di-n-octyl phthalate	50	48.8	98	40-140
84-66-2	Diethyl phthalate	50	46.3	93	40-140
131-11-3	Dimethyl phthalate	50	47.3	95	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	49.3	99	40-140
118-74-1	Hexachlorobenzene	50	48.4	97	40-140

* = Outside of Control Limits.

7.2.1



Blank Spike Summary

Job Number: MC29684
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37586-BS	F72363.D	1	04/18/14	WK	04/12/14	OP37586	MSF3219

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

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	22.7	45	40-140
67-72-1	Hexachloroethane	50	26.0	52	40-140
78-59-1	Isophorone	50	40.0	80	40-140
88-74-4	2-Nitroaniline	50	47.2	94	40-140
99-09-2	3-Nitroaniline	50	43.8	88	40-140
100-01-6	4-Nitroaniline	50	43.9	88	40-140
98-95-3	Nitrobenzene	50	43.5	87	40-140
62-75-9	n-Nitrosodimethylamine	50	30.1	60	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	44.8	90	40-140
86-30-6	N-Nitrosodiphenylamine	50	45.6	91	40-140
110-86-1	Pyridine	50	26.5	53	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	86%	15-110%
4165-60-0	Nitrobenzene-d5	76%	30-130%
321-60-8	2-Fluorobiphenyl	78%	30-130%
1718-51-0	Terphenyl-d14	88%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

7.2.1
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Blank Spike Summary

Job Number: MC29684
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37587-BS	188587.D	1	04/16/14	MR	04/12/14	OP37587	MSI3299

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	39.2	78	40-140
208-96-8	Acenaphthylene	50	35.9	72	40-140
120-12-7	Anthracene	50	39.8	80	40-140
56-55-3	Benzo(a)anthracene	50	43.6	87	40-140
50-32-8	Benzo(a)pyrene	50	41.2	82	40-140
205-99-2	Benzo(b)fluoranthene	50	43.2	86	40-140
191-24-2	Benzo(g,h,i)perylene	50	47.2	94	40-140
207-08-9	Benzo(k)fluoranthene	50	44.6	89	40-140
218-01-9	Chrysene	50	41.8	84	40-140
53-70-3	Dibenzo(a,h)anthracene	50	49.8	100	40-140
206-44-0	Fluoranthene	50	41.5	83	40-140
86-73-7	Fluorene	50	42.5	85	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	48.1	96	40-140
90-12-0	1-Methylnaphthalene	50	35.8	72	40-140
91-57-6	2-Methylnaphthalene	50	34.9	70	40-140
85-01-8	Phenanthrene	50	40.3	81	40-140
129-00-0	Pyrene	50	41.5	83	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	41%	15-110%
4165-62-2	Phenol-d5	26%	15-110%
118-79-6	2,4,6-Tribromophenol	82%	15-110%
4165-60-0	Nitrobenzene-d5	73%	30-130%
321-60-8	2-Fluorobiphenyl	68%	30-130%
1718-51-0	Terphenyl-d14	86%	30-130%

* = Outside of Control Limits.

7.2.2
 7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29684
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37586-MS	F72364.D	1	04/18/14	WK	04/12/14	OP37586	MSF3219
OP37586-MSD	F72365.D	1	04/18/14	WK	04/12/14	OP37586	MSF3219
MC29400-1	F72366.D	1	04/18/14	WK	04/12/14	OP37586	MSF3219

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7

CAS No.	Compound	MC29400-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND	50	8.8	18* ^a	50	10.3	21* ^a	16	30-130/20
95-57-8	2-Chlorophenol	ND	50	32.1	64	50	35.0	70	9	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND	50	32.1	64	50	33.6	67	5	30-130/20
120-83-2	2,4-Dichlorophenol	ND	50	33.9	68	50	36.0	72	6	30-130/20
105-67-9	2,4-Dimethylphenol	ND	50	25.9	52	50	20.0	40	26* ^b	30-130/20
51-28-5	2,4-Dinitrophenol	ND	50	26.9	54	50	28.2	56	5	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND	50	38.3	77	50	39.7	79	4	30-130/20
95-48-7	2-Methylphenol	ND	50	28.6	57	50	29.4	59	3	30-130/20
	3&4-Methylphenol	ND	100	49.8	50	100	52.2	52	5	30-130/20
88-75-5	2-Nitrophenol	ND	50	36.9	74	50	39.0	78	6	30-130/20
100-02-7	4-Nitrophenol	ND	50	13.5	27* ^c	50	14.1	28* ^c	4	30-130/20
87-86-5	Pentachlorophenol	ND	50	33.9	68	50	34.1	68	1	30-130/20
108-95-2	Phenol	ND	50	14.3	29* ^c	50	15.4	31	7	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND	50	36.9	74	50	39.1	78	6	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND	50	36.5	73	50	38.7	77	6	30-130/20
62-53-3	Aniline	ND	50	26.9	54	50	27.7	55	3	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND	50	47.8	96	50	48.3	97	1	40-140/20
85-68-7	Butyl benzyl phthalate	ND	50	48.3	97	50	48.3	97	0	40-140/20
100-51-6	Benzyl Alcohol	ND	50	30.4	61	50	32.3	65	6	40-140/20
91-58-7	2-Chloronaphthalene	ND	50	42.9	86	50	45.2	90	5	40-140/20
106-47-8	4-Chloroaniline	ND	50	36.0	72	50	36.8	74	2	40-140/20
111-91-1	his(2-Chloroethoxy)methane	ND	50	42.1	84	50	44.2	88	5	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND	50	41.7	83	50	44.0	88	5	40-140/20
108-60-1	bis(2-Cbloroisopropyl)ether	ND	50	47.0	94	50	49.2	98	5	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND	50	43.5	87	50	43.8	88	1	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND	50	45.4	91	50	47.4	95	4	40-140/20
121-14-2	2,4-Dinitrotoluene	ND	50	45.7	91	50	45.3	91	1	40-140/20
606-20-2	2,6-Dinitrotoluene	ND	50	46.3	93	50	46.0	92	1	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND	50	44.7	89	50	45.4	91	2	40-140/20
132-64-9	Dibenzofuran	ND	50	40.1	80	50	41.2	82	3	40-140/20
84-74-2	Di-n-butyl phthalate	0.53	JB 50	45.4	90	50	44.6	88	2	40-140/20
117-84-0	Di-n-octyl phthalate	ND	50	49.5	99	50	50.3	101	2	40-140/20
84-66-2	Diethyl phthalate	ND	50	44.7	89	50	45.1	90	1	40-140/20
131-11-3	Dimethyl phthalate	ND	50	45.5	91	50	46.3	93	2	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND	50	50.2	100	50	49.7	99	1	40-140/20
118-74-1	Hexachlorobenzene	ND	50	48.0	96	50	48.4	97	1	40-140/20

* = Outside of Control Limits.

7.3.1
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29684
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37586-MS	F72364.D	1	04/18/14	WK	04/12/14	OP37586	MSF3219
OP37586-MSD	F72365.D	1	04/18/14	WK	04/12/14	OP37586	MSF3219
MC29400-1	F72366.D	1	04/18/14	WK	04/12/14	OP37586	MSF3219

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7

CAS No.	Compound	MC29400-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND	50	21.5	43	50	22.7	45	5	40-140/20
67-72-1	Hexachloroethane	ND	50	24.6	49	50	25.7	51	4	40-140/20
78-59-1	Isophorone	ND	50	36.7	73	50	38.7	77	5	40-140/20
88-74-4	2-Nitroaniline	ND	50	44.8	90	50	46.6	93	4	40-140/20
99-09-2	3-Nitroaniline	ND	50	43.5	87	50	43.5	87	0	40-140/20
100-01-6	4-Nitroaniline	ND	50	43.6	87	50	43.0	86	1	40-140/20
98-95-3	Nitrobenzene	ND	50	40.7	81	50	42.3	85	4	40-140/20
62-75-9	n-Nitrosodimethylamine	ND	50	27.0	54	50	29.3	59	8	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND	50	40.3	81	50	42.4	85	5	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND	50	44.3	89	50	44.5	89	0	40-140/20
110-86-1	Pyridine	ND	50	22.1	44	50	25.7	51	15	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29400-1	Limits
367-12-4	2-Fluorophenol	46%	49%	49%	15-110%
4165-62-2	Phenol-d5	28%	31%	30%	15-110%
118-79-6	2,4,6-Tribromophenol	84%	87%	79%	15-110%
4165-60-0	Nitrobenzene-d5	71%	75%	75%	30-130%
321-60-8	2-Fluorobiphenyl	73%	76%	74%	30-130%
1718-51-0	Terphenyl-d14	88%	91%	87%	30-130%

- (a) Outside control limits. Blank Spike meets program technical requirements.
- (b) High RPD due to possible matrix interference and/or sample non-homogeneity.
- (c) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Outside of Control Limits.

7.3.1
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29684

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37587-MS	I88588.D	1	04/16/14	MR	04/12/14	OP37587	MSI3299
OP37587-MSD	I88589.D	1	04/16/14	MR	04/12/14	OP37587	MSI3299
MC29400-2	I88590.D	1	04/16/14	MR	04/12/14	OP37587	MSI3299

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7

CAS No.	Compound	MC29400-2 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND	50	36.7	73	50	36.9	74	1	40-140/20
208-96-8	Acenaphthylene	ND	50	33.7	67	50	33.6	67	0	40-140/20
120-12-7	Anthracene	ND	50	39.5	79	50	38.9	78	2	40-140/20
56-55-3	Benzo(a)anthracene	ND	50	43.4	87	50	42.6	85	2	40-140/20
50-32-8	Benzo(a)pyrene	ND	50	41.6	83	50	40.9	82	2	40-140/20
205-99-2	Benzo(b)fluoranthene	ND	50	43.3	87	50	42.8	86	1	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND	50	47.2	94	50	46.5	93	1	40-140/20
207-08-9	Benzo(k)fluoranthene	ND	50	44.4	89	50	44.0	88	1	40-140/20
218-01-9	Chrysene	ND	50	41.4	83	50	41.0	82	1	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND	50	50.0	100	50	49.5	99	1	40-140/20
206-44-0	Fluoranthene	ND	50	42.1	84	50	42.8	86	2	40-140/20
86-73-7	Fluorene	ND	50	39.0	78	50	39.9	80	2	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND	50	48.3	97	50	47.6	95	1	40-140/20
90-12-0	1-Methylnaphthalene	ND	50	31.9	64	50	34.4	69	8	40-140/20
91-57-6	2-Methylnaphthalene	ND	50	31.3	63	50	33.5	67	7	40-140/20
85-01-8	Phenanthrene	0.018	J	50	39.9	80	39.4	79	1	40-140/20
129-00-0	Pyrene	ND	50	42.3	85	50	41.8	84	1	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29400-2	Limits
367-12-4	2-Fluorophenol	35%	39%	39%	15-110%
4165-62-2	Phenol-d5	23%	25%	24%	15-110%
118-79-6	2,4,6-Tribromophenol	80%	80%	78%	15-110%
4165-60-0	Nitrobenzene-d5	65%	71%	73%	30-130%
321-60-8	2-Fluorobiphenyl	63%	64%	65%	30-130%
1718-51-0	Terphenyl-d14	88%	88%	89%	30-130%

* = Outside of Control Limits.



Semivolatile Internal Standard Area Summary

Job Number: MC29684
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSF3219-CC3181	Injection Date:	04/18/14
Lab File ID:	F72361.D	Injection Time:	08:13
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	660375	4.16	2309514	5.20	1326408	6.71	2237582	8.00	2364413	10.55	2260231	12.23
Upper Limit ^a	1320750	4.66	4619028	5.70	2652816	7.21	4475164	8.50	4728826	11.05	4520462	12.73
Lower Limit ^b	330188	3.66	1154757	4.70	663204	6.21	1118791	7.50	1182207	10.05	1130116	11.73

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37586-MB	812968	4.15	2833987	5.20	1595395	6.71	2635849	8.00	2724140	10.55	2593509	12.23
OP37586-BS	778148	4.16	2722673	5.20	1554352	6.71	2541291	8.01	2628714	10.55	2537288	12.23
OP37586-MS	791087	4.16	2706426	5.20	1532781	6.71	2511936	8.00	2545001	10.55	2482145	12.23
OP37586-MSD	863129	4.16	2968500	5.20	1676992	6.71	2708641	8.00	2711655	10.55	2532752	12.23
MC29400-1	778814	4.16	2791024	5.20	1613353	6.71	2710997	8.01	2841712	10.55	2716918	12.23
MC29684-1	705360	4.15	2568023	5.20	1500507	6.71	2587139	8.00	2865694	10.55	2791979	12.23
MC29684-2	746447	4.16	2665697	5.20	1566357	6.71	2646151	8.00	2779293	10.55	2712829	12.23
MC29684-3	751998	4.16	2688138	5.20	1573294	6.71	2653997	8.00	2838307	10.55	2753545	12.23
MC29684-4	775984	4.16	2689283	5.20	1555593	6.71	2512608	8.01	2647461	10.55	2559181	12.23
MC29684-5	775833	4.16	2685165	5.20	1561251	6.71	2570639	8.00	2668416	10.55	2581801	12.23
MC29684-6	677334	4.16	2362597	5.20	1396211	6.71	2303975	8.00	2438341	10.55	2359620	12.23
MC29684-7	671269	4.16	2410217	5.20	1364256	6.71	2303668	8.00	2418659	10.55	2325045	12.23
ZZZZZZ	625293	4.16	2201304	5.20	1266201	6.71	2119277	8.00	2308904	10.55	2204815	12.23
ZZZZZZ	591191	4.15	2100814	5.20	1211759	6.71	2107524	8.01	2363015	10.55	2324390	12.23
ZZZZZZ	594730	4.16	2134983	5.20	1244153	6.71	2138032	8.00	2390735	10.55	2382888	12.23
ZZZZZZ	657737	4.16	2165467	5.20	1245422	6.72	2154707	8.02	2564281	10.55	2569140	12.23

- 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
7

Semivolatile Internal Standard Area Summary

Job Number: MC29684
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSI3299-CC3238	Injection Date:	04/16/14
Lab File ID:	I88579.D	Injection Time:	07:55
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	370324	4.00	872147	5.05	514507	6.57	868405	7.95	640069	10.73	1569010	12.20
Upper Limit ^a	740648	4.50	1744294	5.55	1029014	7.07	1736810	8.45	1280138	11.23	3138020	12.70
Lower Limit ^b	185162	3.50	436074	4.55	257254	6.07	434203	7.45	320035	10.23	784505	11.70

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37594-MB	315183	4.00	755330	5.04	445330	6.57	765045	7.95	583321	10.72	1425017	12.20
OP37594-BS	339403	4.00	789058	5.05	456043	6.57	767490	7.95	571022	10.73	1382866	12.20
ZZZZZZ	323900	4.00	760896	5.04	452959	6.57	761304	7.95	546568	10.72	1338653	12.20
OP37587-MB	325242	4.00	750083	5.04	445625	6.57	726815	7.95	535708	10.72	1332242	12.20
OP37587-BS	315987	4.00	744779	5.05	443827	6.57	747078	7.95	575038	10.73	1376649	12.20
OP37587-MS	321593	4.00	764716	5.05	434523	6.57	720205	7.95	535725	10.73	1280924	12.20
OP37587-MSD	329250	4.00	758270	5.05	445891	6.57	728476	7.95	541609	10.73	1299335	12.20
MC29400-2	309920	4.00	725153	5.04	441479	6.57	758750	7.94	569220	10.72	1380400	12.20
MC29684-1	333182	4.00	788307	5.04	455447	6.57	772247	7.94	558611	10.72	1375887	12.20
MC29684-2	324064	4.00	757862	5.04	447246	6.57	754882	7.95	550689	10.72	1355292	12.20
MC29684-3	326472	4.00	781249	5.04	456951	6.57	751922	7.94	550624	10.72	1351710	12.20
MC29684-4	314621	4.00	732048	5.04	428491	6.57	722669	7.95	533540	10.72	1312788	12.20
MC29684-5	332163	4.00	765576	5.05	447068	6.57	734571	7.95	521254	10.72	1261821	12.20
MC29684-6	336476	4.00	783265	5.05	457559	6.57	749424	7.95	545956	10.72	1346745	12.20
MC29684-7	324598	4.00	752962	5.05	435051	6.57	721516	7.95	521677	10.72	1263969	12.20
OP37612-MB	320733	4.00	772649	5.04	453746	6.57	759956	7.94	563312	10.72	1370990	12.20
OP37612-BS	376369	4.00	877491	5.05	493867	6.57	785907	7.95	558219	10.73	1322152	12.20
ZZZZZZ	328215	3.99	754173	5.04	458665	6.57	773788	7.94	556646	10.72	1355766	12.20
ZZZZZZ	316930	3.99	767559	5.04	450047	6.57	746601	7.94	539304	10.72	1314866	12.20
ZZZZZZ	351293	4.00	831042	5.04	485482	6.57	808809	7.94	592723	10.72	1447029	12.20
ZZZZZZ	332035	4.00	760092	5.04	460804	6.57	765129	7.94	558150	10.72	1362382	12.20
ZZZZZZ	317910	4.00	754952	5.04	441839	6.57	739033	7.94	532047	10.72	1314733	12.19
ZZZZZZ	328173	3.99	771686	5.04	448642	6.57	743459	7.94	545353	10.72	1308336	12.19
ZZZZZZ	331494	4.00	784015	5.04	450989	6.57	740698	7.94	541484	10.72	1316760	12.19
ZZZZZZ	316438	3.97	737678	5.03	426166	6.57	702248	7.94	518224	10.72	1253025	12.19
ZZZZZZ	316722	3.99	758453	5.04	439698	6.57	730565	7.94	544072	10.72	1300827	12.19

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

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

7.4.2
7

Semivolatile Internal Standard Area Summary

Job Number: MC29684
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSI3299-CC3238	Injection Date:	04/16/14
Lab File ID:	I88579.D	Injection Time:	07:55
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

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

7.4.2



Semivolatile Surrogate Recovery Summary

Job Number: MC29684

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29684-1	F72367.D	45	30	75	70	70	83
MC29684-2	F72368.D	50	32	72	69	66	85
MC29684-3	F72369.D	39	26	69	57	59	86
MC29684-4	F72370.D	50	31	86	76	73	87
MC29684-5	F72371.D	52	33	86	78	76	90
MC29684-6	F72372.D	84	34	91	81	82	103
MC29684-7	F72373.D	88	35	90	81	87	100
OP37586-BS	F72363.D	52	33	86	76	78	88
OP37586-MB	F72362.D	46	29	74	70	71	88
OP37586-MS	F72364.D	46	28	84	71	73	88
OP37586-MSD	F72365.D	49	31	87	75	76	91

Surrogate Compounds Recovery Limits

- S1 = 2-Fluorophenol 15-110%
- S2 = Phenol-d5 15-110%
- S3 = 2,4,6-Tribromophenol 15-110%
- S4 = Nitrobenzene-d5 30-130%
- S5 = 2-Fluorobiphenyl 30-130%
- S6 = Terphenyl-d14 30-130%

7.5.1



Semivolatile Surrogate Recovery Summary

Job Number: MC29684

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29684-1	I88591.D	67	61	89
MC29684-2	I88592.D	66	58	84
MC29684-3	I88593.D	54	51	87
MC29684-4	I88594.D	71	64	87
MC29684-5	I88595.D	74	65	91
MC29684-6	I88596.D	66	60	88
MC29684-7	I88597.D	70	65	91
OP37587-BS	I88587.D	73	68	86
OP37587-MB	I88586.D	67	62	90
OP37587-MS	I88588.D	65	63	88
OP37587-MSD	I88589.D	71	64	88

Surrogate Compounds Recovery Limits

S1 = Nitrobenzene-d5 30-130%
 S2 = 2-Fluorobiphenyl 30-130%
 S3 = Terphenyl-d14 30-130%

7.5.2





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: MC29684

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37606-MB	YZ89225.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541

The QC reported here applies to the following samples:

Method: SW846 8011

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7, MC29684-9

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)	74% 36-173%
460-00-4	Bromofluorobenzene (S)	59% 36-173%

8.1.1

8

Blank Spike Summary

Job Number: MC29684
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37606-BS	YZ89226.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541

The QC reported here applies to the following samples: Method: SW846 8011

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7, MC29684-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.049	69	60-140
106-93-4	1,2-Dibromoethane	0.071	0.046	65	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	52%	36-173%
460-00-4	Bromofluorobenzene (S)	50%	36-173%

8.2.1
8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29684
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37606-MS	YZ89227.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
OP37606-MSD	YZ89228.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
MC29713-2	YZ89229.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541

The QC reported here applies to the following samples:

Method: SW846 8011

MC29684-1, MC29684-2, MC29684-3, MC29684-4, MC29684-5, MC29684-6, MC29684-7, MC29684-9

CAS No.	Compound	MC29713-2 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.0685	0.061	89	0.0675	0.063	93	3	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.0685	0.045	66	0.0675	0.054	80	18	63-163/27

8.3.1

CAS No.	Surrogate Recoveries	MS	MSD	MC29713-2	Limits
460-00-4	Bromofluorobenzene (S)	67%	88%	62%	36-173%
460-00-4	Bromofluorobenzene (S)	63%	73%	54%	36-173%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC29684

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29684-1	YZ89239.D	77	60
MC29684-2	YZ89240.D	91	77
MC29684-3	YZ89241.D	90	69
MC29684-4	YZ89242.D	107	90
MC29684-5	YZ89243.D	106	74
MC29684-6	YZ89244.D	127	56
MC29684-7	YZ89245.D	152	68
MC29684-9	YZ89247.D	89	70
OP37606-BS	YZ89226.D	52	50
OP37606-MB	YZ89225.D	74	59
OP37606-MS	YZ89227.D	67	63
OP37606-MSD	YZ89228.D	88	73

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: MC29684
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7541-ICC7541	Injection Date:	04/15/14
Lab File ID:	YZ89221.D	Injection Time:	10:38
Instrument ID:	GCYZ	Method:	SW846 8011

S1^a S1^b
 RT RT

Check Std	4.08	4.76
-----------	------	------

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
OP37606-MB	YZ89225.D	04/15/14	13:15	4.08	4.76
OP37606-BS	YZ89226.D	04/15/14	13:42	4.08	4.76
OP37606-MS	YZ89227.D	04/15/14	14:10	4.08	4.76
OP37606-MSD	YZ89228.D	04/15/14	14:38	4.08	4.76
MC29713-2	YZ89229.D	04/15/14	15:05	4.08	4.76
ZZZZZZ	YZ89230.D	04/15/14	15:33	4.08	4.76
ZZZZZZ	YZ89231.D	04/15/14	16:00	4.08	4.76
ZZZZZZ	YZ89232.D	04/15/14	16:28	4.08	4.76
ZZZZZZ	YZ89233.D	04/15/14	16:56	4.08	4.76
ZZZZZZ	YZ89234.D	04/15/14	17:25	4.08	4.76

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: MC29684
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7541-CC7541	Injection Date:	04/15/14
Lab File ID:	YZ89235.D	Injection Time:	17:53
Instrument ID:	GCYZ	Method:	SW846 8011

S1^a S1^b
 RT RT

Check Std	4.08	4.76
-----------	------	------

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
ZZZZZZ	YZ89236.D	04/15/14	18:21	4.08	4.76
ZZZZZZ	YZ89237.D	04/15/14	18:49	4.08	4.76
ZZZZZZ	YZ89238.D	04/15/14	19:16	4.08	4.76
MC29684-1	YZ89239.D	04/15/14	19:44	4.08	4.76
MC29684-2	YZ89240.D	04/15/14	20:11	4.08	4.76
MC29684-3	YZ89241.D	04/15/14	20:37	4.08	4.76
MC29684-4	YZ89242.D	04/15/14	21:05	4.08	4.76
MC29684-5	YZ89243.D	04/15/14	21:33	4.08	4.76
MC29684-6	YZ89244.D	04/15/14	21:59	4.07	4.76
MC29684-7	YZ89245.D	04/15/14	22:26	4.07	4.76

Surrogate
 Compounds

S1 = Bromofluorobenzene (S)

- (a) Retention time from GC signal #2
- (b) Retention time from GC signal #1

8.5.2
8

GC Surrogate Retention Time Summary

Job Number: MC29684
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7541-CC7541	Injection Date:	04/15/14
Lab File ID:	YZ89246.D	Injection Time:	22:53
Instrument ID:	GCRYZ	Method:	SW846 8011

S1^a S1^b
RT RT

Check Std	4.08	4.76
-----------	------	------

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
MC29684-9	YZ89247.D	04/15/14	23:19	4.08	4.76
GYZ7541-ECC754	YZ89248.D	04/15/14	23:46	4.08	4.76

Surrogate
Compounds

S1 = Bromofluorobenzene (S)

- (a) Retention time from GC signal #2
- (b) Retention time from GC signal #1

8.5.3
8

Roxana Groundwater Quarterly – 2nd Quarter 2014 Data Review

Laboratory SDG: MC29713

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 5/15/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2013

Sample Identification	Sample Identification
MW13-ROX-041114	MW14-ROX-041114
P66-ROX-041114	TB-ROX-041114-HCL
TB-ROX-041114-ST	

1.0 Data Package Completeness

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

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated SVOCs were detected in the method blank. Acrolein LCS recovery was outside evaluation criteria. VOC and SVOC MS/MSD recoveries and MS/MSD RPDs were outside evaluation criteria in sample MW14-ROX-0401114. These issues are addressed further in the appropriate sections below. Additionally, continuing calibration verification for acrolein exceeded 40 percent difference (%D).

The cooler receipt form indicated that one of two coolers were received by the laboratory at a temperature of 1.5°C, which is outside the 4°C ± 2°C 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
OP37591-MB	SVOCs	Di-n-butyl phthalate	0.72 µg/L
OP37591-MB	SVOCs	bis(2-Ethylhexyl)phthalate	0.41 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-041114	SVOCs	Di-n-butyl phthalate	-	U
MW13-ROX-041114	SVOCs	bis(2-Ethylhexyl)phthalate	-	U
MW14-ROX-041114	SVOCs	Di-n-butyl phthalate	-	U
MW14-ROX-041114	SVOCs	bis(2-Ethylhexyl)phthalate	-	U
P66-ROX-041114	SVOCs	Di-n-butyl phthalate	-	U
P66-ROX-041114	SVOCs	bis(2-Ethylhexyl)phthalate	-	U

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV1126-BS	VOCs	Acrolein	179	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?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

Yes, sample MW14-ROX-041114 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
MW14-ROX-041114	VOCs	Acrolein	162/181	11	70-130/30
MW14-ROX-041114	VOCs	Benzene	102/131	24	70-130/30
MW14-ROX-041114	VOCs	Chloroethane	137/106	25	70-130/30
MW14-ROX-041114	VOCs	2-Chloroethyl vinyl ether	0/0	NA	70-130/30
MW14-ROX-041114	VOCs	Chloromethane	123/89	33	70-130/30
MW14-ROX-041114	VOCs	Dichlorodifluoromethane	75/57	28	70-130/30

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
MW14-ROX-041114	VOCs	1,4-Dioxane	68/72	6	70-130/30
MW14-ROX-041114	VOCs	Trichlorofluoromethane	127/91	34	70-130/30
MW14-ROX-041114	SVOCs	3,3'-Dichlorobenzidine	25/56	76	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 analytes listed and qualified as appropriate in Section 5.0 of this data review. No further qualification of data was required.

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

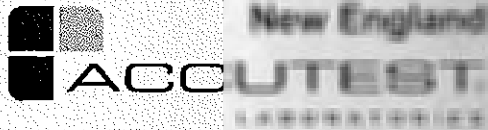
For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; samples analyzed did not require dilution.

12.0 Additional Qualifications

Were additional qualifications applied?

No



Technical Report for

Shell Oil

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana,

Accutest Job Number: MC29713

Sampling Date: 04/11/14

Report to:

URS Corporation
Melissa.mansker@urs.com
ATTN: Melissa Mansker

Total number of pages in report: 72



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
5/15/2014
Reza and
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: MC29713

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
MC29713-1	04/11/14	10:25	DMMN04/12/14	AQ	Ground Water	MW13-ROX-041114 ✓
MC29713-2	04/11/14	12:40	DMMN04/12/14	AQ	Ground Water	MW14-ROX-041114 ✓
MC29713-2D	04/11/14	12:40	DMMN04/12/14	AQ	Water Dup/MSD	MW14-ROX-041114 ✓
MC29713-2S	04/11/14	12:40	DMMN04/12/14	AQ	Water Matrix Spike	MW14-ROX-041114 ✓
MC29713-3	04/11/14	14:20	DMMN04/12/14	AQ	Ground Water	P66-ROX-041114 ✓
MC29713-4	04/11/14	00:00	DMMN04/12/14	AQ	Trip Blank Water	TB-ROX-041114-HCL ✓
MC29713-5	04/11/14	00:00	DMMN04/12/14	AQ	Trip Blank Water	TB-ROX-041114-ST ✓



SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Shell Oil Job No MC29713
 Site: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Report Date 4/25/2014 2:55:20 PM

3 Sample(s) and 2 Trip Blank(s) were collected on 04/11/2014 and were received at Accutest on 04/12/2014 properly preserved, at 1.5 Deg. C and intact. These Samples received an Accutest job number of MC29713. 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:	MSV1126
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- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29713-2MS, MC29713-2MSD 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.
- Matrix Spike Recovery(s) for 1,4-Dioxane, 2-Chloroethyl vinyl ether, Acrolein, Chloroethane 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, Acrolein, Benzene, Dichlorodifluoromethane are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for Chloromethane, Trichlorofluoromethane are outside control limits for sample MC29713-2MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- Continuing calibration check standard MSV1126-CC1058 for acrolein exceed 40% difference (response bias high). Associated samples are non-detect for this compound.

Extractables by GCMS By Method SW846 8270D

Matrix	AQ	Batch ID:	OP37591
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- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29713-2MS, MC29713-2MSD were used as the QC samples indicated.
- Sample(s) MC29713-1, MC29713-2, MC29713-3 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- Matrix Spike Recovery(s) for 3,3'-Dichlorobenzidine are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 3,3'-Dichlorobenzidine are outside control limits for sample OP37591-MSD. 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:	OP37592
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- 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) MC29713-2MS, MC29713-2MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8011

Matrix	AQ	Batch ID:	OP37606
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- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29713-2MS, MC29713-2MSD 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(MC29713).

Summary of Hits

Job Number: MC29713
 Account: Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Collected: 04/11/14



Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
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MC29713-1 MW13-ROX-041114

Benzene	0.58	0.50	0.32	ug/l	SW846 8260C
Methyl Tert Butyl Ether	6.2	1.0	0.51	ug/l	SW846 8260C
Di-n-butyl phthalate	0.79 JB U	6.0	0.21	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate	0.69 JB U	2.4	0.40	ug/l	SW846 8270D
Acenaphthene	0.13	0.12	0.083	ug/l	SW846 8270D BY SIM
Acenaphthylene	0.066 J	0.12	0.060	ug/l	SW846 8270D BY SIM
Phenanthrene	0.033 J	0.060	0.015	ug/l	SW846 8270D BY SIM

MC29713-2 MW14-ROX-041114

Benzene	1.7	0.50	0.32	ug/l	SW846 8260C
tert-Butylbenzene	0.46 J	5.0	0.39	ug/l	SW846 8260C
Di-n-butyl phthalate	0.82 JB U	6.0	0.21	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate	0.69 JB U	2.4	0.40	ug/l	SW846 8270D
Acenaphthene	0.37	0.11	0.079	ug/l	SW846 8270D BY SIM
Acenaphthylene	0.089 J	0.11	0.057	ug/l	SW846 8270D BY SIM
Fluorene	0.30	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene	1.8	0.23	0.057	ug/l	SW846 8270D BY SIM

MC29713-3 P66-ROX-041114

Benzene	5.2	0.50	0.32	ug/l	SW846 8260C
n-Butylbenzene	12.9	5.0	1.1	ug/l	SW846 8260C
sec-Butylbenzene	16.8	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene	4.1 J	5.0	0.39	ug/l	SW846 8260C
Chlorobenzene	0.52 J	1.0	0.43	ug/l	SW846 8260C
Ethylbenzene	1.4	1.0	0.38	ug/l	SW846 8260C
Isopropylbenzene	115	5.0	0.35	ug/l	SW846 8260C
Naphthalene	1.4 J	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene	136	5.0	0.49	ug/l	SW846 8260C
Toluene	1.7	1.0	0.33	ug/l	SW846 8260C
o-Xylene	0.72 J	1.0	0.36	ug/l	SW846 8260C
Xylene (total)	1.3	1.0	0.36	ug/l	SW846 8260C
Di-n-butyl phthalate	0.88 JB U	5.8	0.20	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate	0.68 JB U	2.3	0.39	ug/l	SW846 8270D
Acenaphthene	0.58	0.12	0.080	ug/l	SW846 8270D BY SIM
Acenaphthylene	0.17	0.12	0.058	ug/l	SW846 8270D BY SIM
Fluorene	1.3	0.12	0.12	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene	64.9	0.23	0.058	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene	23.0	0.23	0.086	ug/l	SW846 8270D BY SIM
Phenanthrene	0.49	0.058	0.015	ug/l	SW846 8270D BY SIM
Pyrene	0.049 J	0.12	0.045	ug/l	SW846 8270D BY SIM

Summary of Hits

Job Number: MC29713

Account: Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Collected: 04/11/14



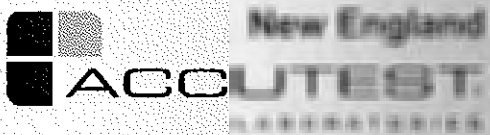
Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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MC29713-4 TB-ROX-041114-HCL

No hits reported in this sample.

MC29713-5 TB-ROX-041114-ST

No hits reported in this sample.



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW13-ROX-041114	Date Sampled:	04/11/14
Lab Sample ID:	MC29713-1	Date Received:	04/12/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30136.D	1	04/23/14	AMY	n/a	n/a	MSV1126
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	0.58	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ng/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW13-ROX-041114	Date Sampled:	04/11/14
Lab Sample ID:	MC29713-1	Date Received:	04/12/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ng/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ng/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	6.2	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID: MW13-ROX-041114		
Lab Sample ID: MC29713-1		Date Sampled: 04/11/14
Matrix: AQ - Ground Water		Date Received: 04/12/14
Method: SW846 8260C		Percent Solids: n/a
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		70-130%
2037-26-5	Toluene-D8	76%		70-130%
460-00-4	4-Bromofluorobenzene	96%		70-130%

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

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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:	MW13-ROX-041114	Date Sampled:	04/11/14
Lab Sample ID:	MC29713-1	Date Received:	04/12/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F72258.D	1	04/16/14	WK	04/14/14	OP37591	MSF3215
Run #2							

Run #	Initial Volume	Final Volume
Run #1	830 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	12	3.0	ug/l	
95-57-8	2-Chlorophenol	ND	6.0	0.37	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	12	0.99	ug/l	
120-83-2	2,4-Dichlorophenol	ND	12	0.48	ug/l	
105-67-9	2,4-Dimethylphenol	ND	12	0.68	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	3.0	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	12	2.3	ug/l	
95-48-7	2-Methylphenol	ND	12	0.27	ug/l	
	3&4-Methylphenol	ND	12	0.56	ug/l	
88-75-5	2-Nitrophenol	ND	12	3.5	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.64	ug/l	
87-86-5	Pentachlorophenol	ND	12	1.3	ug/l	
108-95-2	Phenol	ND	6.0	0.36	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	12	0.45	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	12	0.21	ug/l	
62-53-3	Aniline	ND	12	0.77	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	6.0	0.57	ug/l	
85-68-7	Butyl benzyl phthalate	ND	6.0	0.64	ug/l	
100-51-6	Benzyl Alcohol	ND	12	2.7	ug/l	
91-58-7	2-Chloronaphthalene	ND	6.0	0.38	ug/l	
106-47-8	4-Chloroaniline	ND	12	0.67	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	6.0	0.35	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	6.0	0.42	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	6.0	0.40	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	6.0	0.30	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	6.0	0.29	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	12	0.55	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	12	0.36	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	6.0	0.32	ug/l	
132-64-9	Dibenzofuran	ND	2.4	0.31	ug/l	
84-74-2	Di-n-butyl phthalate	0.79 ✓	6.0	0.21	ug/l	JB ✓
117-84-0	Di-n-octyl phthalate	ND	6.0	0.34	ug/l	

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Report of Analysis

Client Sample ID:	MW13-ROX-041114	Date Sampled:	04/11/14
Lab Sample ID:	MC29713-1	Date Received:	04/12/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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	6.0	0.24	ug/l	
131-11-3	Dimethyl phthalate	ND	6.0	0.41	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.69 J	2.4	0.40	ug/l	JB A
118-74-1	Hexachlorobenzene	ND	6.0	0.35	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	1.5	ug/l	
67-72-1	Hexachloroethane	ND	6.0	0.36	ug/l	
78-59-1	Isophorone	ND	6.0	0.54	ug/l	
88-74-4	2-Nitroaniline	ND	12	0.48	ug/l	
99-09-2	3-Nitroaniline	ND	12	1.7	ug/l	
100-01-6	4-Nitroaniline	ND	12	2.6	ug/l	
98-95-3	Nitrobenzene	ND	6.0	0.47	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	6.0	1.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	6.0	0.49	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	6.0	0.23	ug/l	
110-86-1	Pyridine	ND	12	0.62	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		15-110%
4165-62-2	Phenol-d5	32%		15-110%
118-79-6	2,4,6-Tribromophenol	83%		15-110%
4165-60-0	Nitrobenzene-d5	74%		30-130%
321-60-8	2-Fluorobiphenyl	76%		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
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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: MW13-ROX-041114	Date Sampled: 04/11/14
Lab Sample ID: MC29713-1	Date Received: 04/12/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D BY SIM SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88570.D	1	04/15/14	MR	04/14/14	OP37592	MSI3298
Run #2							

Run #	Initial Volume	Final Volume
Run #1	830 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.13	0.12	0.083	ug/l	
208-96-8	Acenaphthylene	0.066	0.12	0.060	ug/l	J
120-12-7	Anthracene	ND	0.12	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.060	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.12	0.035	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.060	0.038	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.12	0.032	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.12	0.047	ug/l	
218-01-9	Chrysene	ND	0.12	0.029	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.12	0.038	ug/l	
206-44-0	Fluoranthene	ND	0.12	0.049	ug/l	
86-73-7	Fluorene	ND	0.12	0.12	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.12	0.037	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.24	0.060	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.24	0.089	ug/l	
85-01-8	Phenanthrene	0.033	0.060	0.015	ug/l	J
129-00-0	Pyrene	ND	0.12	0.046	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	72%		30-130%
321-60-8	2-Fluorobiphenyl	66%		30-130%
1718-51-0	Terphenyl-d14	92%		30-130%

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

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

Report of Analysis

Client Sample ID: MW13-ROX-041114	Date Sampled: 04/11/14
Lab Sample ID: MC29713-1	Date Received: 04/12/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89230.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
Run #2							

Run #	Initial Volume	Final Volume
Run #1	37.1 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0051	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)	94%		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

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Report of Analysis

Client Sample ID:	MW14-ROX-041114	Date Sampled:	04/11/14
Lab Sample ID:	MC29713-2	Date Received:	04/12/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30130.D	1	04/23/14	AMY	n/a	n/a	MSV1126
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	1.7	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochlorometbane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	0.46	5.0	0.39	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW14-ROX-041114	Date Sampled:	04/11/14
Lab Sample ID:	MC29713-2	Date Received:	04/12/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ng/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID: MW14-ROX-041114		
Lab Sample ID: MC29713-2	Date Sampled: 04/11/14	
Matrix: AQ - Ground Water	Date Received: 04/12/14	
Method: SW846 8260C	Percent Solids: n/a	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	80%		70-130%
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	92%		70-130%

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

ND = Not detected MDL = Method Detection Limit
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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-041114	Date Sampled:	04/11/14
Lab Sample ID:	MC29713-2	Date Received:	04/12/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F72262.D	1	04/16/14	WK	04/14/14	OP37591	MSF3215
Run #2							

Run #	Initial Volume	Final Volume
Run #1	840 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	12	3.0	ug/l	
95-57-8	2-Chlorophenol	ND	6.0	0.37	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	12	0.98	ug/l	
120-83-2	2,4-Dichlorophenol	ND	12	0.47	ug/l	
105-67-9	2,4-Dimethylphenol	ND	12	0.67	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	3.0	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	12	2.3	ug/l	
95-48-7	2-Methylphenol	ND	12	0.27	ug/l	
	3&4-Methylphenol	ND	12	0.56	ug/l	
88-75-5	2-Nitrophenol	ND	12	3.4	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.64	ug/l	
87-86-5	Pentachlorophenol	ND	12	1.3	ug/l	
108-95-2	Phenol	ND	6.0	0.36	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	12	0.44	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	12	0.21	ug/l	
62-53-3	Aniline	ND	12	0.76	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	6.0	0.56	ug/l	
85-68-7	Butyl benzyl phthalate	ND	6.0	0.63	ug/l	
100-51-6	Benzyl Alcohol	ND	12	2.7	ug/l	
91-58-7	2-Chloronaphthalene	ND	6.0	0.37	ug/l	
106-47-8	4-Chloroaniline	ND	12	0.66	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	6.0	0.34	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	6.0	0.42	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	6.0	0.40	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	6.0	0.30	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	6.0	0.29	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	12	0.54	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	12	0.36	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	6.0	0.32	ug/l	
132-64-9	Dibenzofuran	ND	2.4	0.31	ug/l	
84-74-2	Di-n-butyl phthalate	0.82 U	6.0	0.21	ug/l	JB U
117-84-0	Di-n-octyl phthalate	ND	6.0	0.33	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW14-ROX-041114	Date Sampled:	04/11/14
Lab Sample ID:	MC29713-2	Date Received:	04/12/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	6.0	0.24	ug/l	
131-11-3	Dimethyl phthalate	ND	6.0	0.40	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.69 u	2.4	0.40	ug/l	JB ^u
118-74-1	Hexachlorobenzene	ND	6.0	0.34	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	1.5	ug/l	
67-72-1	Hexachloroethane	ND	6.0	0.36	ug/l	
78-59-1	Isophorone	ND	6.0	0.53	ug/l	
88-74-4	2-Nitroaniline	ND	12	0.47	ug/l	
99-09-2	3-Nitroaniline	ND	12	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	12	2.6	ug/l	
98-95-3	Nitrobenzene	ND	6.0	0.47	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	6.0	1.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	6.0	0.48	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	6.0	0.23	ug/l	
110-86-1	Pyridine	ND	12	0.61	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	51%		15-110%
4165-62-2	Phenol-d5	34%		15-110%
118-79-6	2,4,6-Tribromophenol	86%		15-110%
4165-60-0	Nitrobenzene-d5	78%		30-130%
321-60-8	2-Fluorobiphenyl	78%		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: MW14-ROX-041114	Date Sampled: 04/11/14
Lab Sample ID: MC29713-2	Date Received: 04/12/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D BY SIM SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	188569.D	1	04/15/14	MR	04/14/14	OP37592	MSI3298
Run #2							

Run #	Initial Volume	Final Volume
Run #1	870 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.37	0.11	0.079	ug/l	
208-96-8	Acenaphthylene	0.089	0.11	0.057	ug/l	J
120-12-7	Anthracene	ND	0.11	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.057	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.033	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.057	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.031	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.044	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ng/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.037	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.047	ug/l	
86-73-7	Fluorene	0.30	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.035	ug/l	
90-12-0	1-Methylnaphthalene	1.8	0.23	0.057	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.23	0.085	ug/l	
85-01-8	Phenanthrene	ND	0.057	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.044	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	73%		30-130%
321-60-8	2-Fluorobiphenyl	69%		30-130%
1718-51-0	Terphenyl-d14	99%		30-130%

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

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

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Report of Analysis

Client Sample ID: MW14-ROX-041114	Date Sampled: 04/11/14
Lab Sample ID: MC29713-2	Date Received: 04/12/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89229.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
Run #2							

Run #	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)	62%		36-173%
460-00-4	Bromofluorobenzene (S)	54%		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

4.2
4

Report of Analysis

Client Sample ID:	P66-ROX-041114	Date Sampled:	04/11/14
Lab Sample ID:	MC29713-3	Date Received:	04/12/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30137.D	1	04/23/14	AMY	n/a	n/a	MSV1126
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	5.2	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromo-chloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	12.9	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	16.8	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	4.1	5.0	0.39	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	0.52	1.0	0.43	ug/l	J
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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

Report of Analysis

Client Sample ID:	P66-ROX-041114	Date Sampled:	04/11/14
Lab Sample ID:	MC29713-3	Date Received:	04/12/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	1.4	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	115	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	1.4	5.0	0.69	ug/l	J
103-65-1	n-Propylbenzene	136	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	1.7	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	0.72	1.0	0.36	ug/l	J
1330-20-7	Xylene (total)	1.3	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID: P66-ROX-041114		Date Sampled: 04/11/14
Lab Sample ID: MC29713-3		Date Received: 04/12/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260C		
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	81%		70-130%
2037-26-5	Toluene-D8	106%		70-130%
460-00-4	4-Bromofluorobenzene	93%		70-130%

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

ND = Not detected MDL = Method Detection Limit
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J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: P66-ROX-041114	Date Sampled: 04/11/14
Lab Sample ID: MC29713-3	Date Received: 04/12/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F72286.D	1	04/16/14	WK	04/14/14	OP37591	MSF3216
Run #2							

Run #	Initial Volume	Final Volume
Run #1	860 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	12	2.9	ug/l	
95-57-8	2-Chlorophenol	ND	5.8	0.36	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	12	0.96	ug/l	
120-83-2	2,4-Dichlorophenol	ND	12	0.46	ug/l	
105-67-9	2,4-Dimethylphenol	ND	12	0.65	ug/l	
51-28-5	2,4-Dinitrophenol	ND	23	2.9	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	12	2.2	ug/l	
95-48-7	2-Methylphenol	ND	12	0.26	ug/l	
	3&4-Methylphenol	ND	12	0.54	ug/l	
88-75-5	2-Nitrophenol	ND	12	3.4	ug/l	
100-02-7	4-Nitrophenol	ND	23	0.62	ug/l	
87-86-5	Pentachlorophenol	ND	12	1.3	ug/l	
108-95-2	Phenol	ND	5.8	0.35	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	12	0.43	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	12	0.20	ug/l	
62-53-3	Aniline	ND	12	0.74	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.8	0.55	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.8	0.62	ug/l	
100-51-6	Benzyl Alcohol	ND	12	2.6	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.8	0.36	ug/l	
106-47-8	4-Chloroaniline	ND	12	0.65	ug/l	
111-91-1	his(2-Chloroethoxy)methane	ND	5.8	0.33	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.8	0.41	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.8	0.39	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.8	0.29	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.8	0.28	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	12	0.53	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	12	0.35	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.8	0.31	ug/l	
132-64-9	Dibenzofuran	ND	2.3	0.30	ug/l	
84-74-2	Di-n-butyl phthalate	0.88 u	5.8	0.20	ug/l	JB u
117-84-0	Di-n-octyl phthalate	ND	5.8	0.33	ug/l	

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Report of Analysis

Client Sample ID:	P66-ROX-041114	Date Sampled:	04/11/14
Lab Sample ID:	MC29713-3	Date Received:	04/12/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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	5.8	0.23	ug/l	
131-11-3	Dimethyl phthalate	ND	5.8	0.40	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.68 ^u	2.3	0.39	ug/l	JB u
118-74-1	Hexachlorobenzene	ND	5.8	0.34	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	1.5	ug/l	
67-72-1	Hexachloroethane	ND	5.8	0.35	ug/l	
78-59-1	Isophorone	ND	5.8	0.52	ug/l	
88-74-4	2-Nitroaniline	ND	12	0.46	ug/l	
99-09-2	3-Nitroaniline	ND	12	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	12	2.5	ug/l	
98-95-3	Nitrobenzene	ND	5.8	0.45	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.8	1.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.8	0.47	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.8	0.22	ug/l	
110-86-1	Pyridine	ND	12	0.60	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	49%		15-110%
4165-62-2	Phenol-d5	32%		15-110%
118-79-6	2,4,6-Tribromophenol	86%		15-110%
4165-60-0	Nitrobenzene-d5	79%		30-130%
321-60-8	2-Fluorobiphenyl	73%		30-130%
1718-51-0	Terphenyl-d14	88%		30-130%

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

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 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID:	P66-ROX-041114	Date Sampled:	04/11/14
Lab Sample ID:	MC29713-3	Date Received:	04/12/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88571.D	1	04/15/14	MR	04/14/14	OP37592	MSI3298
Run #2							

Run #	Initial Volume	Final Volume
Run #1	860 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.58	0.12	0.080	ug/l	
208-96-8	Acenaphthylene	0.17	0.12	0.058	ug/l	
120-12-7	Anthracene	ND	0.12	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.058	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.12	0.033	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.058	0.037	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.12	0.031	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.12	0.045	ug/l	
218-01-9	Chrysene	ND	0.12	0.028	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.12	0.037	ug/l	
206-44-0	Fluoranthene	ND	0.12	0.047	ug/l	
86-73-7	Fluorene	1.3	0.12	0.12	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.12	0.036	ug/l	
90-12-0	1-Methylnaphthalene	64.9	0.23	0.058	ug/l	
91-57-6	2-Methylnaphthalene	23.0	0.23	0.086	ug/l	
85-01-8	Phenanthrene	0.49	0.058	0.015	ug/l	
129-00-0	Pyrene	0.049	0.12	0.045	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	71%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	92%		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: P66-ROX-041114		Date Sampled: 04/11/14
Lab Sample ID: MC29713-3		Date Received: 04/12/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8011 SW846 8011		
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89231.D	i	04/15/14	SZ	04/14/14	OP37606	GYZ7541
Run #2							

Run #	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)	127%		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

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Report of Analysis

Client Sample ID:	TB-ROX-041114-HCL	Date Sampled:	04/11/14
Lab Sample ID:	MC29713-4	Date Received:	04/12/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30129.D	1	04/23/14	AMY	n/a	n/a	MSV1126
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ng/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:	TB-ROX-041114-HCL	Date Sampled:	04/11/14
Lab Sample ID:	MC29713-4	Date Received:	04/12/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB-ROX-041114-HCL	Date Sampled:	04/11/14
Lab Sample ID:	MC29713-4	Date Received:	04/12/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

4.4
4

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	90%		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	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TB-ROX-041114-ST	Date Sampled: 04/11/14
Lab Sample ID: MC29713-5	Date Received: 04/12/14
Matrix: AQ - Trip Blank Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89232.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
Run #2							

Run #	Initial Volume	Final Volume
Run #1	36.9 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0051	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)	81%		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

4.5
4

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) REMO ()

CALSINT
 OTHER
 SFL

LAB VENDOR #

Lab Vendor #

URGENT LINES: 895-7820000
Mansfield, MA 01752 (508-481-6200)

Please Check Appropriate Box:

INV. SERVICES MOTIVA RETAIL SHELL RETAIL
 MOTIVA SUBCH CONSULTANT LUBES
 SHELL PIPELINE OTHER

Print Bill To Contact Name: Bob Bliman
PO #

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

DATE: 4/11/14
PAGE: 1 of 1

ADDRESS: 900 South Central Ave. ROXANA, IL 60070
ROXANA QUARTERLY GW / 21562973.03002

LAB USE ONLY
Requested Analysis: DMattingley, MManster
mc29713

TURNAROUND TIME (TAT) FASTER (TAT):
 STANDARD (10 DAY) 5 DAYS 3 DAYS 2 DAYS 24 HOURS RESULTS NEEDED ON RELEAS-D

DELIVERABLES: LEVEL 1 LEVEL 2 LEVEL 3 LEVEL 4 OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT: °C

SPECIAL INSTRUCTIONS OR NOTES:
Please include "J" values on Reports.
Please provide sample receipt upon login.
*Please contact Accutest PM regarding SVOC Extractions.

SHELL CONTRACT RATE APPLIES
 STATE REIMBURSEMENT RATE APPLIES
 FEO NOT NEEDED
 RECEIPT VERIFICATION REQUESTED
 PROVIDE LISO DISA

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT.	VOC 8260C SL-TICS	VOC 8011 SL	SVOC 8270D SL-TICS	PAH 8270LL	PID (ppm)	FIELD NOTES:	
		DATE	TIME		NCL	MRO	HOSCH	MORE	OTHER								
	-1 MW13-ROX-041114	4/11/14	10:25	Water	2					2	2	6	X	X	X		
	-2 MW14-ROX-041114	4/11/14	12:40		2					2	2	6	X	X	X		
	-3 MW14-ROX-041114MS	4/11/14	12:40		2					2	2	6	X	X	X		
	-3 MW14-ROX-041114MSD	4/11/14	12:40		2					2	2	6	XX	XX	XX		
	-3 Pilot-ROX-041114	4/11/14	14:20		2					2	2	6	XX	XX	XX		
	-4 TB-ROX-041114-HCI	4/11/14	09:00		2					2	2		X				
	-5 TB-ROX-041114-ST	4/11/14	08:00							2	2		X				582, 18C

2.2° 1.5°

Prepared by (Signature): *DMattingley* Date: 4/11/14 Time: 16:00
 Reviewed by (Signature): *[Signature]* Date: 4/12/14 Time: 10:00
 Managed by (Signature): *FX*

5.1
5MC29713: Chain of Custody
Page 1 of 2



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC29713 Client: URS Immediate Client Services Action Required: No
 Date / Time Received: 4/12/2014 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: Infrared 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

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC29713

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

5.2

5

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
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MC29713-1 Collected: 11-APR-14 10:25 By: DMMM Received: 12-APR-14 By: MW13-ROX-041114

MC29713-1	SW846 8011	15-APR-14 15:33	SZ	14-APR-14	MT	V8011SL
MC29713-1	SW846 8270D BY SIM	15-APR-14 15:46	MR	14-APR-14	MEW	B8270SIMSL
MC29713-1	SW846 8270D	16-APR-14 10:21	WK	14-APR-14	MEW	AB8270SL+
MC29713-1	SW846 8260C	23-APR-14 15:29	AMY			V8260SL+

MC29713-2 Collected: 11-APR-14 12:40 By: DMMM Received: 12-APR-14 By: MW14-ROX-041114

MC29713-2	SW846 8011	15-APR-14 15:05	SZ	14-APR-14	MT	V8011SL
MC29713-2	SW846 8270D BY SIM	15-APR-14 15:23	MR	14-APR-14	MEW	B8270SIMSL
MC29713-2	SW846 8270D	16-APR-14 11:54	WK	14-APR-14	MEW	AB8270SL+
MC29713-2	SW846 8260C	23-APR-14 12:52	AMY			V8260SL+

MC29713-3 Collected: 11-APR-14 14:20 By: DMMM Received: 12-APR-14 By: P66-ROX-041114

MC29713-3	SW846 8011	15-APR-14 16:00	SZ	14-APR-14	MT	V8011SL
MC29713-3	SW846 8270D BY SIM	15-APR-14 16:10	MR	14-APR-14	MEW	B8270SIMSL
MC29713-3	SW846 8270D	16-APR-14 21:23	WK	14-APR-14	MEW	AB8270SL+
MC29713-3	SW846 8260C	23-APR-14 15:56	AMY			V8260SL+

MC29713-4 Collected: 11-APR-14 00:00 By: DMMM Received: 12-APR-14 By: TB-ROX-041114-HCL

MC29713-4	SW846 8260C	23-APR-14 12:25	AMY			V8260SL+
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MC29713-5 Collected: 11-APR-14 00:00 By: DMMM Received: 12-APR-14 By: TB-ROX-041114-ST

MC29713-5	SW846 8011	15-APR-14 16:28	SZ	14-APR-14	MT	V8011SL
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Accutest Internal Chain of Custody

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Received: 04/12/14

Sample Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29713-1.2	Walk In Ref #22	Thomas Abruzzise	04/14/14 14:09	Retrieve from Storage
MC29713-1.2	Thomas Abruzzise		04/30/14 21:28	Depleted
MC29713-1.3	VOC Ref #5	Amy Min Yang	04/23/14 12:01	Retrieve from Storage
MC29713-1.3	Amy Min Yang	GCMSV	04/23/14 12:01	Load on Instrument
MC29713-1.3	GCMSV	Amy Min Yang	04/24/14 11:59	Unload from Instrument
MC29713-1.3	Amy Min Yang	VOC Ref #5	04/24/14 11:59	Return to Storage
MC29713-1.6	VOC Ref #5	Marc Tahtamoni	04/14/14 19:14	Retrieve from Storage
MC29713-2.1	Walk In Ref #22	Thomas Abruzzise	04/14/14 14:09	Retrieve from Storage
MC29713-2.1	Thomas Abruzzise		04/30/14 21:28	Depleted
MC29713-2.4	Walk In Ref #22	Thomas Abruzzise	04/14/14 14:09	Retrieve from Storage
MC29713-2.4	Thomas Abruzzise		04/30/14 21:28	Depleted
MC29713-2.6	Walk In Ref #22	Thomas Abruzzise	04/14/14 14:09	Retrieve from Storage
MC29713-2.6	Thomas Abruzzise		04/30/14 21:28	Depleted
MC29713-2.7	VOC Ref #5	Amy Min Yang	04/23/14 12:01	Retrieve from Storage
MC29713-2.7	Amy Min Yang	GCMSV	04/23/14 12:01	Load on Instrument
MC29713-2.7	GCMSV	Amy Min Yang	04/24/14 11:59	Unload from Instrument
MC29713-2.7	Amy Min Yang	VOC Ref #5	04/24/14 11:59	Return to Storage
MC29713-2.9	VOC Ref #5	Amy Min Yang	04/23/14 12:01	Retrieve from Storage
MC29713-2.9	Amy Min Yang	GCMSV	04/23/14 12:01	Load on Instrument
MC29713-2.9	GCMSV	Amy Min Yang	04/24/14 11:59	Unload from Instrument
MC29713-2.9	Amy Min Yang	VOC Ref #5	04/24/14 11:59	Return to Storage
MC29713-2.11	VOC Ref #5	Amy Min Yang	04/23/14 12:01	Retrieve from Storage
MC29713-2.11	Amy Min Yang	GCMSV	04/23/14 12:01	Load on Instrument
MC29713-2.11	GCMSV	Amy Min Yang	04/24/14 11:59	Unload from Instrument
MC29713-2.11	Amy Min Yang	VOC Ref #5	04/24/14 11:59	Return to Storage
MC29713-2.12	VOC Ref #5	Amy Min Yang	04/23/14 12:01	Retrieve from Storage
MC29713-2.12	Amy Min Yang	GCMSV	04/23/14 12:01	Load on Instrument
MC29713-2.12	GCMSV	Amy Min Yang	04/24/14 11:59	Unload from Instrument
MC29713-2.12	Amy Min Yang	VOC Ref #5	04/24/14 11:59	Return to Storage
MC29713-2.13	VOC Ref #5	Marc Tahtamoni	04/14/14 19:14	Retrieve from Storage
MC29713-2.14	VOC Ref #5	Marc Tahtamoni	04/14/14 19:14	Retrieve from Storage
MC29713-2.17	VOC Ref #5	Marc Tahtamoni	04/14/14 19:14	Retrieve from Storage

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Accutest Internal Chain of Custody

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Received: 04/12/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29713-3.2	Walk In Ref #22	Thomas Abruzzise	04/14/14 14:09	Retrieve from Storage
MC29713-3.2	Thomas Abruzzise		04/30/14 21:28	Depleted
MC29713-3.3	VOC Ref #5	Amy Min Yang	04/23/14 12:01	Retrieve from Storage
MC29713-3.3	Amy Min Yang	GCMSV	04/23/14 12:01	Load on Instrument
MC29713-3.3	GCMSV	Amy Min Yang	04/24/14 11:59	Unload from Instrument
MC29713-3.3	Amy Min Yang	VOC Ref #5	04/24/14 11:59	Return to Storage
MC29713-3.5	VOC Ref #5	Marc Tahtamoni	04/14/14 19:14	Retrieve from Storage
MC29713-4.1	VOC Ref #5	Amy Min Yang	04/23/14 12:01	Retrieve from Storage
MC29713-4.1	Amy Min Yang	GCMSV	04/23/14 12:01	Load on Instrument
MC29713-4.1	GCMSV	Amy Min Yang	04/24/14 11:59	Unload from Instrument
MC29713-4.1	Amy Min Yang	VOC Ref #5	04/24/14 11:59	Return to Storage
MC29713-5.2	VOC Ref #5	Marc Tahtamoni	04/14/14 19:14	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: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1126-MB	V30128.D	1	04/23/14	AMY	n/a	n/a	MSV1126

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29713-1, MC29713-2, MC29713-3, MC29713-4

6.1.1



CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ng/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1126-MB	V30128.D	1	04/23/14	AMY	n/a	n/a	MSV1126

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29713-1, MC29713-2, MC29713-3, MC29713-4

6.1.1
6

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

Method Blank Summary

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1126-MB	V30128.D	1	04/23/14	AMY	n/a	n/a	MSV1126

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29713-1, MC29713-2, MC29713-3, MC29713-4

6.1.1



CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	70-130%
2037-26-5	Toluene-D8	92%	70-130%
460-00-4	4-Bromofluorobenzene	92%	70-130%

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

Blank Spike Summary

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1126-BS	V30125.D	1	04/23/14	AMY	n/a	n/a	MSV1126

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29713-1, MC29713-2, MC29713-3, MC29713-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	52.2	104	70-130
107-02-8	Acrolein	250	448	179* a	70-130
107-13-1	Acrylonitrile	50	47.6	95	70-130
71-43-2	Benzene	50	49.7	99	70-130
108-86-1	Bromohenzene	50	50.5	101	70-130
74-97-5	Bromochloromethane	50	47.6	95	70-130
75-27-4	Bromodichloromethane	50	47.3	95	70-130
75-25-2	Bromoform	50	43.5	87	70-130
74-83-9	Bromomethane	50	53.7	107	70-130
78-93-3	2-Butanone (MEK)	50	51.8	104	70-130
104-51-8	n-Butylbenzene	50	51.2	102	70-130
135-98-8	sec-Butylbenzene	50	51.3	103	70-130
98-06-6	tert-Butylbenzene	50	48.8	98	70-130
75-15-0	Carbon disulfide	50	44.0	88	70-130
56-23-5	Carbon tetrachloride	50	52.4	105	70-130
108-90-7	Chlorobenzene	50	49.8	100	70-130
75-00-3	Chloroethane	50	63.6	127	70-130
110-75-8	2-Chloroethyl vinyl ether	50	38.7	77	70-130
67-66-3	Chloroform	50	46.3	93	70-130
74-87-3	Chloromethane	50	57.1	114	70-130
95-49-8	o-Chlorotoluene	50	48.7	97	70-130
106-43-4	p-Chlorotoluene	50	49.9	100	70-130
124-48-1	Dibromochloromethane	50	44.2	88	70-130
95-50-1	1,2-Dichlorobenzene	50	46.9	94	70-130
541-73-1	1,3-Dichlorobenzene	50	48.6	97	70-130
106-46-7	1,4-Dichlorobenzene	50	48.9	98	70-130
75-71-8	Dichlorodifluoromethane	50	38.6	77	70-130
75-34-3	1,1-Dichloroethane	50	48.8	98	70-130
107-06-2	1,2-Dichloroethane	50	46.7	93	70-130
75-35-4	1,1-Dichloroethene	50	51.0	102	70-130
156-59-2	cis-1,2-Dichloroethene	50	48.9	98	70-130
156-60-5	trans-1,2-Dichloroethene	50	48.8	98	70-130
78-87-5	1,2-Dichloropropane	50	52.8	106	70-130
142-28-9	1,3-Dichloropropane	50	50.4	101	70-130
594-20-7	2,2-Dichloropropane	50	48.1	96	70-130
563-58-6	1,1-Dichloropropene	50	49.9	100	70-130

* = Outside of Control Limits.

6.2.1

6

Blank Spike Summary

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1126-BS	V30125.D	1	04/23/14	AMY	n/a	n/a	MSV1126

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29713-1, MC29713-2, MC29713-3, MC29713-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	45.3	91	70-130
10061-02-6	trans-1,3-Dichloropropene	50	57.0	114	70-130
123-91-1	1,4-Dioxane	250	186	74	70-130
97-63-2	Ethyl methacrylate	50	48.2	96	77-137
100-41-4	Ethylbenzene	50	52.8	106	70-130
87-68-3	Hexachlorobutadiene	50	43.8	88	70-130
591-78-6	2-Hexanone	50	56.6	113	70-130
98-82-8	Isopropylbenzene	50	50.5	101	70-130
99-87-6	p-Isopropyltoluene	50	51.1	102	70-130
1634-04-4	Methyl Tert Butyl Ether	50	47.6	95	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	49.4	99	70-130
74-95-3	Methylene bromide	50	48.8	98	70-130
75-09-2	Methylene chloride	50	48.6	97	70-130
91-20-3	Naphthalene	50	51.9	104	70-130
103-65-1	n-Propylbenzene	50	50.1	100	70-130
100-42-5	Styrene	50	54.6	109	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	52.6	105	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	52.5	105	70-130
127-18-4	Tetrachloroethene	50	50.4	101	70-130
108-88-3	Toluene	50	53.1	106	70-130
87-61-6	1,2,3-Trichlorobenzene	50	54.2	108	70-130
120-82-1	1,2,4-Trichlorobenzene	50	45.7	91	70-130
71-55-6	1,1,1-Trichloroethane	50	49.7	99	70-130
79-00-5	1,1,2-Trichloroethane	50	52.8	106	70-130
79-01-6	Trichloroethene	50	48.0	96	70-130
75-69-4	Trichlorofluoromethane	50	56.3	113	70-130
96-18-4	1,2,3-Trichloropropane	50	61.5	123	70-130
95-63-6	1,2,4-Trimethylbenzene	50	50.6	101	70-130
108-67-8	1,3,5-Trimethylbenzene	50	50.8	102	70-130
108-05-4	Vinyl Acetate	50	46.5	93	70-130
75-01-4	Vinyl chloride	50	60.3	121	70-130
	m,p-Xylene	100	106	106	70-130
95-47-6	o-Xylene	50	52.6	105	70-130
1330-20-7	Xylene (total)	150	158	105	70-130

* = Outside of Control Limits.



Blank Spike Summary

Page 3 of 3

Job Number: MC29713

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1126-BS	V30125.D	1	04/23/14	AMY	n/a	n/a	MSV1126

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29713-1, MC29713-2, MC29713-3, MC29713-4

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	81%	70-130%
2037-26-5	Toluene-D8	90%	70-130%
460-00-4	4-Bromofluorobenzene	90%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29713-2MS	V30138.D	1	04/23/14	AMY	n/a	n/a	MSV1126
MC29713-2MSD	V30139.D	1	04/23/14	AMY	n/a	n/a	MSV1126
MC29713-2	V30130.D	1	04/23/14	AMY	n/a	n/a	MSV1126

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29713-1, MC29713-2, MC29713-3, MC29713-4

6.3.1



CAS No.	Compound	MC29713-2 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
67-64-1	Acetone	ND		50	38.1	76	50	44.8	90	16	70-130/30
107-02-8	Acrolein	ND		250	404	162*	250	453	181*	11	70-130/30
107-13-1	Acrylonitrile	ND		50	57.0	114	50	62.0	124	8	70-130/30
71-43-2	Benzene	1.7		50	52.6	102	50	67.2	131*	24	70-130/30
108-86-1	Bromobenzene	ND		50	50.6	101	50	49.0	98	3	70-130/30
74-97-5	Bromochloromethane	ND		50	48.6	97	50	48.7	97	0	70-130/30
75-27-4	Bromodichloromethane	ND		50	51.2	102	50	47.7	95	7	70-130/30
75-25-2	Bromoform	ND		50	43.2	86	50	40.7	81	6	70-130/30
74-83-9	Bromomethane	ND		50	57.1	114	50	43.4	87	27	70-130/30
78-93-3	2-Butanone (MEK)	ND		50	41.2	82	50	42.6	85	3	70-130/30
104-51-8	n-Butylbenzene	ND		50	51.4	103	50	49.0	98	5	70-130/30
135-98-8	sec-Butylbenzene	ND		50	49.6	99	50	48.8	98	2	70-130/30
98-06-6	tert-Butylbenzene	0.46	J	50	48.5	96	50	46.2	91	5	70-130/30
75-15-0	Carbon disulfide	ND		50	45.1	90	50	48.5	97	7	70-130/30
56-23-5	Carbon tetrachloride	ND		50	58.3	117	50	63.0	126	8	70-130/30
108-90-7	Chlorobenzene	ND		50	49.6	99	50	47.7	95	4	70-130/30
75-00-3	Chloroethane	ND		50	68.4	137* a	50	53.1	106	25	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		50	ND	0* a	50	ND	0* a	nc	70-130/30
67-66-3	Chloroform	ND		50	49.6	99	50	46.0	92	8	70-130/30
74-87-3	Chloromethane	ND		50	61.5	123	50	44.3	89	33* b	70-130/30
95-49-8	o-Chlorotoluene	ND		50	48.5	97	50	45.9	92	6	70-130/30
106-43-4	p-Chlorotoluene	ND		50	50.8	102	50	48.9	98	4	70-130/30
124-48-1	Dibromochloromethane	ND		50	45.8	92	50	43.0	86	6	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		50	46.0	92	50	45.1	90	2	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		50	48.5	97	50	46.3	93	5	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		50	48.6	97	50	46.8	94	4	70-130/30
75-71-8	Dichlorodifluoromethane	ND		50	37.5	75	50	28.4	57* a	28	70-130/30
75-34-3	1,1-Dichloroethane	ND		50	51.4	103	50	51.0	102	1	70-130/30
107-06-2	1,2-Dichloroethane	ND		50	52.0	104	50	54.4	109	5	70-130/30
75-35-4	1,1-Dichloroethene	ND		50	53.1	106	50	54.1	108	2	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50	50.2	100	50	51.3	103	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50	51.1	102	50	51.3	103	0	70-130/30
78-87-5	1,2-Dichloropropane	ND		50	54.8	110	50	51.8	104	6	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	50.4	101	50	49.2	98	2	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	51.1	102	50	46.4	93	10	70-130/30
563-58-6	1,1-Dichloropropene	ND		50	54.6	109	50	64.0	128	16	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29713-2MS	V30138.D	1	04/23/14	AMY	n/a	n/a	MSV1126
MC29713-2MSD	V30139.D	1	04/23/14	AMY	n/a	n/a	MSV1126
MC29713-2	V30130.D	1	04/23/14	AMY	n/a	n/a	MSV1126

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29713-1, MC29713-2, MC29713-3, MC29713-4

6.3.1



CAS No.	Compound	MC29713-2 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND	50	46.1	92	50	44.5	89	4	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND	50	62.1	124	50	59.6	119	4	70-130/30
123-91-1	1,4-Dioxane	ND	250	169	68* a	250	179	72	6	70-130/30
97-63-2	Ethyl methacrylate	ND	50	54.7	109	50	52.8	106	4	72-139/30
100-41-4	Ethylbenzene	ND	50	52.9	106	50	50.9	102	4	70-130/30
87-68-3	Hexachlorobutadiene	ND	50	41.4	83	50	42.6	85	3	70-130/30
591-78-6	2-Hexanone	ND	50	42.8	86	50	41.8	84	2	70-130/30
98-82-8	Isopropylbenzene	ND	50	49.1	98	50	47.3	95	4	70-130/30
99-87-6	p-Isopropyltoluene	ND	50	50.2	100	50	48.8	98	3	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	50	49.6	99	50	49.2	98	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	50	51.8	104	50	50.2	100	3	70-130/30
74-95-3	Methylene bromide	ND	50	52.4	105	50	49.4	99	6	70-130/30
75-09-2	Methylene chloride	ND	50	49.8	100	50	53.1	106	6	70-130/30
91-20-3	Naphthalene	ND	50	39.3	79	50	53.1	106	30	70-130/30
103-65-1	n-Propylbenzene	ND	50	50.1	100	50	47.3	95	6	70-130/30
100-42-5	Styrene	ND	50	53.9	108	50	51.7	103	4	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND	50	51.7	103	50	49.1	98	5	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	51.8	104	50	51.5	103	1	70-130/30
127-18-4	Tetrachloroethene	ND	50	49.3	99	50	47.5	95	4	70-130/30
108-88-3	Toluene	ND	50	55.6	111	50	53.3	107	4	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND	50	38.3	77	50	50.6	101	28	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND	50	41.4	83	50	45.5	91	9	70-130/30
71-55-6	1,1,1-Trichloroethane	ND	50	53.6	107	50	47.5	95	12	70-130/30
79-00-5	1,1,2-Trichloroethane	ND	50	56.6	113	50	54.9	110	3	70-130/30
79-01-6	Trichloroethene	ND	50	50.5	101	50	46.9	94	7	70-130/30
75-69-4	Trichlorofluoromethane	ND	50	63.7	127	50	45.4	91	34* b	70-130/30
96-18-4	1,2,3-Trichloropropane	ND	50	61.8	124	50	58.2	116	6	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND	50	49.2	98	50	47.7	95	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND	50	49.3	99	50	47.7	95	3	70-130/30
108-05-4	Vinyl Acetate	ND	50	48.3	97	50	49.1	98	2	70-130/30
75-01-4	Vinyl chloride	ND	50	64.8	130	50	49.0	98	28	70-130/30
	m,p-Xylene	ND	100	105	105	100	100	100	5	70-130/30
95-47-6	o-Xylene	ND	50	50.7	101	50	49.4	99	3	70-130/30
1330-20-7	Xylene (total)	ND	150	155	103	150	150	100	3	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29713-2MS	V30138.D	1	04/23/14	AMY	n/a	n/a	MSV1126
MC29713-2MSD	V30139.D	1	04/23/14	AMY	n/a	n/a	MSV1126
MC29713-2	V30130.D	1	04/23/14	AMY	n/a	n/a	MSV1126

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29713-1, MC29713-2, MC29713-3, MC29713-4

6.3.1
6

CAS No.	Surrogate Recoveries	MS	MSD	MC29713-2	Limits
1868-53-7	Dibromofluoromethane	83%	81%	80%	70-130%
2037-26-5	Toluene-D8	92%	92%	92%	70-130%
460-00-4	4-Bromofluorobenzene	92%	92%	92%	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: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSV1126-CC1058	Injection Date:	04/23/14
Lab File ID:	V30124.D	Injection Time:	10:15
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
	AREA		AREA		AREA		AREA		AREA	
Check Std	338780	6.59	467554	7.77	235437	11.10	256981	13.31	47320	3.53
Upper Limit ^a	677560	7.09	935108	8.27	470874	11.60	513962	13.81	94640	4.03
Lower Limit ^b	169390	6.09	233777	7.27	117719	10.60	128491	12.81	23660	3.03

Lab	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
Sample ID	AREA		AREA		AREA		AREA		AREA	
MSV1126-BS	334921	6.59	460754	7.77	225846	11.10	247886	13.31	46635	3.52
MSV1126-MB	237484	6.59	350347	7.77	192761	11.10	184586	13.31	37728	3.52
MC29713-4	230775	6.59	341807	7.77	186616	11.10	180524	13.31	35879	3.53
MC29713-2	275159	6.59	350156	7.77	194396	11.10	193875	13.31	44081	3.53
ZZZZZZ	242359	6.59	338958	7.77	194285	11.10	187016	13.31	39878	3.53
ZZZZZZ	209909	6.59	310684	7.77	178170	11.10	173406	13.31	48133	3.52
ZZZZZZ	209054	6.59	299495	7.77	171864	11.10	162799	13.31	36430	3.52
ZZZZZZ	203461	6.59	299648	7.77	172857	11.10	156786	13.31	36372	3.53
ZZZZZZ	190141	6.60	287180	7.77	167039	11.10	154874	13.31	40081	3.53
MC29713-1	235503	6.59	337392	7.77	158759	11.10	162689	13.31	50463	3.53
MC29713-3	247708	6.59	317357	7.77	195342	11.10	202566	13.31	44649	3.53
MC29713-2MS	312452	6.59	419072	7.77	223149	11.10	243823	13.31	52715	3.53
MC29713-2MSD	401199	6.58	432339	7.76	226936	11.10	249652	13.31	71079	3.52
ZZZZZZ	275946	6.59	407894	7.77	221271	11.10	237528	13.31	60316	3.53
ZZZZZZ	261885	6.58	384192	7.76	209880	11.10	212237	13.31	44314	3.52
ZZZZZZ	301640	6.58	462145	7.76	255177	11.10	239536	13.31	53762	3.52
ZZZZZZ	225324	6.58	328568	7.76	190669	11.10	184253	13.31	40631	3.52
ZZZZZZ	213312	6.58	318255	7.76	179131	11.10	176268	13.31	40863	3.52
ZZZZZZ	264450	6.59	515521	7.76	177427	11.10	164140	13.31	49911	3.52
ZZZZZZ	200371	6.59	303318	7.76	171294	11.10	162373	13.31	42353	3.53
ZZZZZZ	178918	6.58	267629	7.76	159574	11.10	151938	13.31	39230	3.52
ZZZZZZ	242957	6.59	381552	7.76	222923	11.10	201308	13.31	41086	3.52
ZZZZZZ	202932	6.58	285257	7.76	153855	11.09	146882	13.31	32544	3.52
ZZZZZZ	204244	6.58	282688	7.76	159209	11.09	149042	13.31	32287	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
6

Volatile Surrogate Recovery Summary

Job Number: MC29713

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29713-1	V30136.D	102	76	96
MC29713-2	V30130.D	80	92	92
MC29713-3	V30137.D	81	106	93
MC29713-4	V30129.D	94	93	90
MC29713-2MS	V30138.D	83	92	92
MC29713-2MSD	V30139.D	81	92	92
MSV1126-BS	V30125.D	81	90	90
MSV1126-MB	V30128.D	93	92	92

Surrogate Compounds Recovery Limits

S1 = Dibromofluoromethane 70-130%
S2 = Toluene-D8 70-130%
S3 = 4-Bromofluorobenzene 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: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37591-MB	F72254.D	1	04/16/14	WK	04/14/14	OP37591	MSF3215

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29713-1, MC29713-2, MC29713-3

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ng/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dihenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	0.72	5.0	0.17	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.41	2.0	0.33	ng/l	J
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

7.1.1
7

Method Blank Summary

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37591-MB	F72254.D	1	04/16/14	WK	04/14/14	OP37591	MSF3215

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29713-1, MC29713-2, MC29713-3

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	49% 15-110%
4165-62-2	Phenol-d5	32% 15-110%
118-79-6	2,4,6-Tribromophenol	80% 15-110%
4165-60-0	Nitrobenzene-d5	78% 30-130%
321-60-8	2-Fluorobiphenyl	78% 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	

7.1.1



Method Blank Summary

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37592-MB	188565.D	1	04/15/14	MR	04/14/14	OP37592	MSI3298

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29713-1, MC29713-2, MC29713-3

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	Pheuanthreue	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	70%	30-130%
321-60-8	2-Fluorobiphenyl	68%	30-130%
1718-51-0	Terpheyyl-d14	97%	30-130%

7.1.2



Blank Spike Summary

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37591-BS	F72255.D	1	04/16/14	WK	04/14/14	OP37591	MSF3215

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29713-1, MC29713-2, MC29713-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	16.5	33	30-130
95-57-8	2-Chlorophenol	50	39.0	78	30-130
59-50-7	4-Chloro-3-methyl phenol	50	41.5	83	30-130
120-83-2	2,4-Dichlorophenol	50	40.9	82	30-130
105-67-9	2,4-Dimethylphenol	50	36.3	73	30-130
51-28-5	2,4-Dinitrophenol	50	39.6	79	30-130
534-52-1	4,6-Dinitro-o-cresol	50	48.3	97	30-130
95-48-7	2-Methylphenol	50	35.3	71	30-130
	3&4-Methylphenol	100	66.2	66	30-130
88-75-5	2-Nitrophenol	50	41.6	83	30-130
100-02-7	4-Nitrophenol	50	19.2	38	30-130
87-86-5	Pentachlorophenol	50	41.4	83	30-130
108-95-2	Phenol	50	17.6	35	30-130
95-95-4	2,4,5-Trichlorophenol	50	47.3	95	30-130
88-06-2	2,4,6-Trichlorophenol	50	45.5	91	30-130
62-53-3	Aniline	50	29.3	59	40-140
101-55-3	4-Bromophenyl phenyl ether	50	48.4	97	40-140
85-68-7	Butyl benzyl phthalate	50	50.3	101	40-140
100-51-6	Benzyl Alcohol	50	34.7	69	40-140
91-58-7	2-Chloronaphthalene	50	46.8	94	40-140
106-47-8	4-Chloroaniline	50	38.5	77	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	45.6	91	40-140
111-44-4	bis(2-Chloroethyl)ether	50	45.4	91	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	54.0	108	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	46.0	92	40-140
122-66-7	1,2-Diphenylhydrazine	50	50.8	102	40-140
121-14-2	2,4-Dinitrotoluene	50	48.1	96	40-140
606-20-2	2,6-Dinitrotoluene	50	47.9	96	40-140
91-94-1	3,3'-Dichlorobenzidine	50	44.1	88	40-140
132-64-9	Dihenzofuran	50	44.0	88	40-140
84-74-2	Di-n-butyl phthalate	50	48.6	97	40-140
117-84-0	Di-n-octyl phthalate	50	54.2	108	40-140
84-66-2	Diethyl phthalate	50	49.0	98	40-140
131-11-3	Dimethyl phthalate	50	49.1	98	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	52.4	105	40-140
118-74-1	Hexachlorobenzene	50	46.3	93	40-140

* = Outside of Control Limits.

7.2.1



Blank Spike Summary

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37591-BS	F72255.D	1	04/16/14	WK	04/14/14	OP37591	MSF3215

The QC r reported here applies to the following samples:

Method: SW846 8270D

MC29713-1, MC29713-2, MC29713-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	22.4	45	40-140
67-72-1	Hexachloroethane	50	27.7	55	40-140
78-59-1	Isophorone	50	41.1	82	40-140
88-74-4	2-Nitroaniline	50	47.2	94	40-140
99-09-2	3-Nitroaniline	50	45.6	91	40-140
100-01-6	4-Nitroaniline	50	46.5	93	40-140
98-95-3	Nitrobenzene	50	42.6	85	40-140
62-75-9	n-Nitrosodimethylamine	50	29.1	58	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	48.8	98	40-140
86-30-6	N-Nitrosodiphenylamine	50	45.3	91	40-140
110-86-1	Pyridine	50	24.6	49	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	46%	15-110%
4165-62-2	Phenol-d5	30%	15-110%
118-79-6	2,4,6-Trihromophenol	80%	15-110%
4165-60-0	Nitrobenzene-d5	74%	30-130%
321-60-8	2-Fluorobiphenyl	79%	30-130%
1718-51-0	Terphenyl-d14	91%	30-130%

* = Outside of Control Limits.



Blank Spike Summary

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37592-BS	188566.D	1	04/15/14	MR	04/14/14	OP37592	MSI3298

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29713-1, MC29713-2, MC29713-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	38.5	77	40-140
208-96-8	Acenaphthylene	50	35.8	72	40-140
120-12-7	Anthracene	50	39.8	80	40-140
56-55-3	Benzo(a)anthracene	50	43.8	88	40-140
50-32-8	Benzo(a)pyrene	50	41.5	83	40-140
205-99-2	Benzo(b)fluoranthene	50	46.8	94	40-140
191-24-2	Benzo(g,h,i)perylene	50	46.6	93	40-140
207-08-9	Benzo(k)fluoranthene	50	41.4	83	40-140
218-01-9	Chrysene	50	41.7	83	40-140
53-70-3	Dibenzo(a,h)anthracene	50	49.8	100	40-140
206-44-0	Fluoranthene	50	42.6	85	40-140
86-73-7	Fluorene	50	41.4	83	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	48.0	96	40-140
90-12-0	1-Methylnaphthalene	50	36.7	73	40-140
91-57-6	2-Methylnaphthalene	50	34.5	69	40-140
85-01-8	Phenanthrene	50	40.4	81	40-140
129-00-0	Pyrene	50	42.3	85	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	69%	30-130%
321-60-8	2-Fluorobiphenyl	67%	30-130%
1718-51-0	Terphenyl-d14	90%	30-130%

* = Outside of Control Limits.

7.2.2



Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37591-MS	F72256.D	1	04/16/14	WK	04/14/14	OP37591	MSF3215
OP37591-MSD	F72257.D	1	04/16/14	WK	04/14/14	OP37591	MSF3215
MC29713-2	F72262.D	1	04/16/14	WK	04/14/14	OP37591	MSF3215

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29713-1, MC29713-2, MC29713-3

CAS No.	Compound	MC29713-2 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
65-85-0	Benzoic Acid	ND		58.1	26.2	45	58.8	26.5	45	1	30-130/20
95-57-8	2-Chlorophenol	ND		58.1	48.3	83	58.8	47.4	81	2	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		58.1	53.4	92	58.8	53.4	91	0	30-130/20
120-83-2	2,4-Dichlorophenol	ND		58.1	51.8	89	58.8	51.8	88	0	30-130/20
105-67-9	2,4-Dimethylphenol	ND		58.1	52.2	90	58.8	51.2	87	2	30-130/20
51-28-5	2,4-Dinitrophenol	ND		58.1	54.6	94	58.8	55.8	95	2	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		58.1	62.4	107	58.8	61.3	104	2	30-130/20
95-48-7	2-Methylphenol	ND		58.1	46.1	79	58.8	43.9	75	5	30-130/20
	3&4-Methylphenol	ND		116	86.7	75	118	84.6	72	2	30-130/20
88-75-5	2-Nitrophenol	ND		58.1	54.1	93	58.8	52.5	89	3	30-130/20
100-02-7	4-Nitrophenol	ND		58.1	25.6	44	58.8	25.9	44	1	30-130/20
87-86-5	Pentachlorophenol	ND		58.1	55.7	96	58.8	53.0	90	5	30-130/20
108-95-2	Phenol	ND		58.1	24.0	41	58.8	23.0	39	4	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		58.1	57.1	98	58.8	55.5	94	3	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		58.1	55.7	96	58.8	56.7	96	2	30-130/20
62-53-3	Aniline	ND		58.1	31.8	55	58.8	34.5	59	8	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		58.1	57.3	99	58.8	57.3	97	0	40-140/20
85-68-7	Butyl benzyl phthalate	ND		58.1	61.6	106	58.8	61.0	104	1	40-140/20
100-51-6	Benzyl Alcohol	ND		58.1	43.6	75	58.8	41.8	71	4	40-140/20
91-58-7	2-Chloronaphthalene	ND		58.1	55.3	95	58.8	55.7	95	1	40-140/20
106-47-8	4-Chloroaniline	ND		58.1	42.6	73	58.8	45.4	77	6	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		58.1	55.3	95	58.8	54.9	93	1	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		58.1	54.3	93	58.8	53.4	91	2	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		58.1	65.4	112	58.8	63.0	107	4	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		58.1	54.9	94	58.8	54.8	93	0	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		58.1	60.3	104	58.8	59.0	100	2	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		58.1	57.8	99	58.8	57.1	97	1	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		58.1	56.8	98	58.8	56.5	96	1	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		58.1	14.8	25* a	58.8	33.0	56	76* b	40-140/20
132-64-9	Dibenzofuran	ND		58.1	52.7	91	58.8	51.3	87	3	40-140/20
84-74-2	Di-u-butyl phthalate	0.82	JB	58.1	60.4	102	58.8	58.8	99	3	40-140/20
117-84-0	Di-n-octyl phthalate	ND		58.1	65.0	112	58.8	64.8	110	0	40-140/20
84-66-2	Diethyl phthalate	ND		58.1	58.4	100	58.8	57.9	98	1	40-140/20
131-11-3	Dimethyl phthalate	ND		58.1	58.5	101	58.8	57.6	98	2	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	0.69	JB	58.1	64.1	109	58.8	64.0	108	0	40-140/20
118-74-1	Hexachlorobenzene	ND		58.1	55.3	95	58.8	55.5	94	0	40-140/20

* = Outside of Control Limits.

7.3.1

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Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37591-MS	F72256.D	1	04/16/14	WK	04/14/14	OP37591	MSF3215
OP37591-MSD	F72257.D	1	04/16/14	WK	04/14/14	OP37591	MSF3215
MC29713-2	F72262.D	1	04/16/14	WK	04/14/14	OP37591	MSF3215

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29713-1, MC29713-2, MC29713-3

CAS No.	Compound	MC29713-2 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND	58.1	27.9	48	58.8	27.2	46	3	40-140/20
67-72-1	Hexachloroethane	ND	58.1	34.1	59	58.8	35.2	60	3	40-140/20
78-59-1	Isophorone	ND	58.1	50.6	87	58.8	50.3	86	1	40-140/20
88-74-4	2-Nitroaniline	ND	58.1	56.3	97	58.8	57.8	98	3	40-140/20
99-09-2	3-Nitroaniline	ND	58.1	49.7	85	58.8	52.0	88	5	40-140/20
100-01-6	4-Nitroaniline	ND	58.1	52.2	90	58.8	54.1	92	4	40-140/20
98-95-3	Nitrobenzene	ND	58.1	52.6	90	58.8	51.5	88	2	40-140/20
62-75-9	n-Nitrosodimethylamine	ND	58.1	37.4	64	58.8	35.7	61	5	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND	58.1	57.9	100	58.8	56.7	96	2	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND	58.1	55.7	96	58.8	54.7	93	2	40-140/20
110-86-1	Pyridine	ND	58.1	30.3	52	58.8	30.4	52	0	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29713-2	Limits
367-12-4	2-Fluorophenol	50%	48%	51%	15-110%
4165-62-2	Phenol-d5	34%	32%	34%	15-110%
118-79-6	2,4,6-Tribromophenol	90%	82%	86%	15-110%
4165-60-0	Nitrobenzene-d5	84%	81%	78%	30-130%
321-60-8	2-Fluorobiphenyl	78%	76%	78%	30-130%
1718-51-0	Terphenyl-d14	92%	89%	93%	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.

7.3.1



Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37592-MS	I88567.D	1	04/15/14	MR	04/14/14	OP37592	MSI3298
OP37592-MSD	I88568.D	1	04/15/14	MR	04/14/14	OP37592	MSI3298
MC29713-2	I88569.D	1	04/15/14	MR	04/14/14	OP37592	MSI3298

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29713-1, MC29713-2, MC29713-3

7.3.2
7

CAS No.	Compound	MC29713-2 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
83-32-9	Acenaphthene	0.37		58.1	47.6	81	58.8	46.9	79	1	40-140/20
208-96-8	Acenaphthylene	0.089	J	58.1	44.5	76	58.8	43.5	74	2	40-140/20
120-12-7	Anthracene	ND		58.1	48.3	83	58.8	47.5	81	2	40-140/20
56-55-3	Benzo(a)anthracene	ND		58.1	53.0	91	58.8	53.3	91	1	40-140/20
50-32-8	Benzo(a)pyrene	ND		58.1	50.5	87	58.8	50.7	86	0	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		58.1	55.9	96	58.8	56.6	96	1	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		58.1	56.1	96	58.8	56.6	96	1	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		58.1	50.2	86	58.8	50.7	86	1	40-140/20
218-01-9	Chrysene	ND		58.1	50.4	87	58.8	50.4	86	0	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		58.1	60.2	104	58.8	60.2	102	0	40-140/20
206-44-0	Fluoranthene	ND		58.1	51.3	88	58.8	51.8	88	1	40-140/20
86-73-7	Fluorene	0.30		58.1	51.5	88	58.8	49.3	83	4	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		58.1	58.2	100	58.8	58.0	99	0	40-140/20
90-12-0	1-Methylnaphthalene	1.8		58.1	47.3	78	58.8	45.2	74	5	40-140/20
91-57-6	2-Methylnaphthalene	ND		58.1	42.9	74	58.8	41.6	71	3	40-140/20
85-01-8	Phenanthrene	ND		58.1	47.9	82	58.8	48.3	82	1	40-140/20
129-00-0	Pyrene	ND		58.1	50.7	87	58.8	51.8	88	2	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29713-2	Limits
4165-60-0	Nitrobenzene-d5	72%	68%	73%	30-130%
321-60-8	2-Fluorobiphenyl	71%	67%	69%	30-130%
1718-51-0	Terphenyl-d14	95%	92%	99%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSF3215-CC3181	Injection Date:	04/16/14
Lab File ID:	F72253.D	Injection Time:	08:03
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	427461	4.21	1552163	5.26	907082	6.77	1524506	8.07	1581238	10.65	1469359	12.33
Upper Limit ^a	854922	4.71	3104326	5.76	1814164	7.27	3049012	8.57	3162476	11.15	2938718	12.83
Lower Limit ^b	213731	3.71	776082	4.76	453541	6.27	762253	7.57	790619	10.15	734680	11.83

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37591-MB	364791	4.21	1338636	5.25	782025	6.77	1343731	8.07	1446139	10.64	1360191	12.33
OP37591-BS	388967	4.21	1428659	5.25	815322	6.77	1372781	8.07	1442809	10.64	1335992	12.33
OP37591-MS	370143	4.21	1344949	5.26	801894	6.77	1332389	8.07	1428703	10.64	1354569	12.33
OP37591-MSD	349289	4.21	1262960	5.26	757121	6.77	1291675	8.07	1378454	10.64	1295894	12.33
MC29713-1	346933	4.21	1272414	5.25	732561	6.77	1270672	8.07	1375355	10.64	1331542	12.33
ZZZZZZ	333966	4.21	1212494	5.25	718193	6.77	1224062	8.07	1357191	10.64	1273737	12.33
ZZZZZZ	383757	4.21	1406878	5.25	826531	6.77	1418251	8.07	1524211	10.64	1587502	12.33
ZZZZZZ	336588	4.21	1230139	5.25	732035	6.77	1254345	8.07	1381422	10.64	1375273	12.33
MC29713-2	276182	4.21	1010486	5.25	617123	6.77	1086938	8.07	1230875	10.64	1223227	12.33
OP37599-MB	494843	4.21	1822976	5.25	1059270	6.77	1759537	8.07	1782372	10.64	1620008	12.33
OP37599-BS	429894	4.21	1566849	5.26	895199	6.77	1510772	8.07	1575937	10.64	1468044	12.33
OP37599-MS	400947	4.21	1456310	5.26	835719	6.78	1411423	8.07	1459800	10.64	1397661	12.33
OP37599-MSD	448746	4.21	1622118	5.26	953499	6.77	1602832	8.07	1667638	10.64	1553735	12.33
MC29722-1	405184	4.21	1450826	5.26	840230	6.77	1400777	8.07	1497276	10.64	1429893	12.33

- 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
7

Semivolatiles Internal Standard Area Summary

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSF3216-CC3181	Injection Date:	04/16/14
Lab File ID:	F72269.D	Injection Time:	14:43
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	532860	4.21	1942999	5.26	1142898	6.77	1958306	8.07	2047693	10.64	1964039	12.33
Upper Limit ^a	1065720	4.71	3885998	5.76	2285796	7.27	3916612	8.57	4095386	11.14	3928078	12.83
Lower Limit ^b	266430	3.71	971500	4.76	571449	6.27	979153	7.57	1023847	10.14	982020	11.83

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37623-MB	430408	4.21	1544327	5.26	905478	6.77	1547462	8.07	1700085	10.64	1602197	12.33
OP37623-BS	399927	4.21	1451318	5.26	851046	6.77	1482694	8.07	1598771	10.64	1515750	12.33
OP37623-MS	453764	4.21	1628066	5.26	956526	6.77	1630540	8.07	1768304	10.64	1724429	12.33
OP37623-MSD	518830	4.21	1874514	5.26	1108702	6.77	1906164	8.07	1953512	10.65	1850083	12.33
MC29400-8	519605	4.21	1847270	5.26	1087088	6.77	1834740	8.07	1968709	10.64	1848156	12.33
ZZZZZZ	513356	4.21	1865665	5.25	1088301	6.77	1860334	8.07	2031244	10.64	1961573	12.33
ZZZZZZ	462482	4.21	1650839	5.26	985442	6.77	1678039	8.07	1862777	10.64	1784045	12.33
ZZZZZZ	473156	4.21	1687534	5.26	996939	6.77	1668717	8.07	1760650	10.64	1643548	12.33
ZZZZZZ	514408	4.21	1846921	5.25	1067837	6.77	1816621	8.07	1937232	10.64	1821908	12.33
ZZZZZZ	519766	4.21	1868159	5.25	1089802	6.77	1846276	8.07	1939409	10.64	1815337	12.33
ZZZZZZ	505250	4.21	1844517	5.25	1065250	6.77	1818859	8.07	1934319	10.64	1812412	12.33
ZZZZZZ	514207	4.21	1814889	5.25	1090067	6.77	1811297	8.07	1921826	10.64	1888500	12.33
ZZZZZZ	532564	4.21	1926562	5.25	1136033	6.77	1934895	8.07	2077383	10.64	2007288	12.33
ZZZZZZ	520805	4.21	1877449	5.25	1121284	6.78	1876584	8.07	2049082	10.64	2168167	12.34
ZZZZZZ	455031	4.21	1656459	5.26	975525	6.77	1648671	8.07	1782208	10.64	1826052	12.33
ZZZZZZ	464837	4.21	1681675	5.26	978944	6.77	1669751	8.07	1781607	10.64	1824242	12.33
MC29713-3	507071	4.21	1781983	5.26	1142059	6.77	1791218	8.07	1929940	10.64	1912833	12.33
ZZZZZZ	469836	4.21	1690415	5.26	986548	6.77	1681861	8.07	1766372	10.64	1741389	12.32
ZZZZZZ	505498	4.21	1833625	5.26	1083125	6.77	1850211	8.07	1995004	10.64	2004572	12.33
ZZZZZZ	570696	4.21	2029894	5.25	1190550	6.77	1989575	8.07	2097587	10.64	2133505	12.33
ZZZZZZ	883567	4.21	3051673	5.26	1706789	6.77	2598714	8.07	2461234	10.64	2455977	12.34
ZZZZZZ	831709	4.21	2848401	5.26	1591127	6.77	2491649	8.07	2296711	10.64	2232661	12.33
ZZZZZZ	876883	4.21	2990179	5.26	1656607	6.78	2609477	8.07	2369140	10.64	2448554	12.33
ZZZZZZ	861105	4.21	2998352	5.26	1641799	6.78	2512454	8.07	2316266	10.64	2466420	12.33

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

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

7.4.2
7

Semivolatile Internal Standard Area Summary

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSI3298-CC3238	Injection Date:	04/15/14
Lab File ID:	I88552.D	Injection Time:	08:47
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	332886	4.01	819718	5.05	495991	6.58	858008	7.96	639528	10.74	1535582	12.21
Upper Limit ^a	665772	4.51	1639436	5.55	991982	7.08	1716016	8.46	1279056	11.24	3071164	12.71
Lower Limit ^b	166443	3.51	409859	4.55	247996	6.08	429004	7.46	319764	10.24	767791	11.71

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37572-MB	272532	4.01	659884	5.05	395853	6.58	677617	7.95	496140	10.73	1205487	12.21
OP37572-BS	283867	4.01	691516	5.06	409526	6.58	676338	7.96	510226	10.74	1236309	12.21
OP37572-MS	324112	4.01	791786	5.06	463626	6.59	772032	7.96	578640	10.74	1374022	12.21
OP37572-MSD	302862	4.01	736896	5.06	431611	6.59	711900	7.96	536251	10.74	1274288	12.21
MC29655-8	303674	4.01	734132	5.05	433775	6.58	740229	7.95	544578	10.73	1313763	12.21
ZZZZZZ	288676	4.01	700105	5.05	418815	6.58	697419	7.95	531679	10.73	1281182	12.21
ZZZZZZ	294835	4.01	717415	5.05	419366	6.58	714615	7.95	520532	10.73	1269528	12.21
ZZZZZZ	308799	4.01	748955	5.05	439741	6.58	741967	7.95	542531	10.73	1340419	12.21
ZZZZZZ	313592	4.01	750259	5.05	439861	6.58	740368	7.96	550369	10.74	1280554	12.22
ZZZZZZ	306787	4.01	717908	5.05	430123	6.59	717171	7.96	542663	10.75	1247764	12.23
OP37592-MB	253094	4.01	602458	5.05	371179	6.58	631776	7.95	458945	10.73	1097505	12.21
OP37592-BS	263228	4.01	630638	5.05	379151	6.58	633550	7.96	478241	10.74	1131010	12.21
OP37592-MS	255549	4.01	618800	5.06	370534	6.58	618859	7.96	463165	10.74	1100783	12.21
OP37592-MSD	243867	4.01	600478	5.05	357815	6.59	596542	7.96	443409	10.74	1040269	12.21
MC29713-2	228892	4.01	563094	5.05	334970	6.58	556519	7.95	415843	10.73	1005946	12.20
MC29713-1	249476	4.01	573832	5.05	352542	6.58	595657	7.95	434377	10.73	1037550	12.21
MC29713-3	261552	4.01	626699	5.05	371703	6.58	627018	7.96	454700	10.73	1076886	12.21
ZZZZZZ	230838	4.01	537634	5.05	329982	6.58	559317	7.95	409290	10.73	968130	12.20
ZZZZZZ	247420	4.01	605197	5.05	360628	6.58	600230	7.95	438983	10.73	1041824	12.20

- 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.

7.4.3



Semivolatile Surrogate Recovery Summary

Job Number: MC29713

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29713-1	F72258.D	48	32	83	74	76	87
MC29713-2	F72262.D	51	34	86	78	78	93
MC29713-3	F72286.D	49	32	86	79	73	88
OP37591-BS	F72255.D	46	30	80	74	79	91
OP37591-MB	F72254.D	49	32	80	78	78	90
OP37591-MS	F72256.D	50	34	90	84	78	92
OP37591-MSD	F72257.D	48	32	82	81	76	89

Surrogate Compounds **Recovery Limits**

S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

7.5.1

Semivolatile Surrogate Recovery Summary

Job Number: MC29713

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Method: SW846 8270D BY SIM

Matrix: AQ

Samples and QC shown here apply to the above method

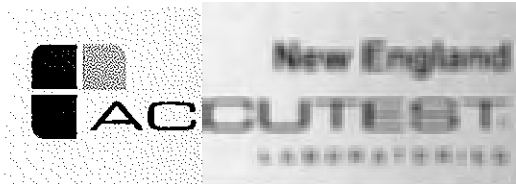
Lab Sample ID	Lab File ID	S1	S2	S3
MC29713-1	I88570.D	72	66	92
MC29713-2	I88569.D	73	69	99
MC29713-3	I88571.D	71	68	92
OP37592-BS	I88566.D	69	67	90
OP37592-MB	I88565.D	70	68	97
OP37592-MS	I88567.D	72	71	95
OP37592-MSD	I88568.D	68	67	92

Surrogate Compounds Recovery Limits

S1 = Nitrobenzene-d5 30-130%
S2 = 2-Fluorobiphenyl 30-130%
S3 = Terphenyl-d14 30-130%

7.5.2





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: MC29713
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37606-MB	YZ89225.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541

The QC reported here applies to the following samples:

Method: SW846 8011

MC29713-1, MC29713-2, MC29713-3, MC29713-5

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)	74%	36-173%
460-00-4	Bromofluorobenzene (S)	59%	36-173%

8.1.1



Blank Spike Summary

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37606-BS	YZ89226.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541

The QC reported here applies to the following samples:

Method: SW846 8011

MC29713-1, MC29713-2, MC29713-3, MC29713-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.049	69	60-140
106-93-4	1,2-Dibromoethane	0.071	0.046	65	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	52%	36-173%
460-00-4	Bromofluorobenzene (S)	50%	36-173%

8.2.1



* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37606-MS	YZ89227.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
OP37606-MSD	YZ89228.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
MC29713-2	YZ89229.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541

The QC reported here applies to the following samples:

Method: SW846 8011

MC29713-1, MC29713-2, MC29713-3, MC29713-5

CAS No.	Compound	MC29713-2 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.0685	0.061	89	0.0675	0.063	93	3	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.0685	0.045	66	0.0675	0.054	80	18	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC29713-2	Limits
460-00-4	Bromofluorobenzene (S)	67%	88%	62%	36-173%
460-00-4	Bromofluorobenzene (S)	63%	73%	54%	36-173%

8.3.1



* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC29713

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29713-1	YZ89230.D	94	85
MC29713-2	YZ89229.D	62	54
MC29713-3	YZ89231.D	127	77
MC29713-5	YZ89232.D	81	64
OP37606-BS	YZ89226.D	52	50
OP37606-MB	YZ89225.D	74	59
OP37606-MS	YZ89227.D	67	63
OP37606-MSD	YZ89228.D	88	73

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: MC29713
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7541-ICC7541	Injection Date:	04/15/14
Lab File ID:	YZ89221.D	Injection Time:	10:38
Instrument ID:	GCYZ	Method:	SW846 8011

	S1 ^a RT	S1 ^b RT
Check Std	4.08	4.76

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
OP37606-MB	YZ89225.D	04/15/14	13:15	4.08	4.76
OP37606-BS	YZ89226.D	04/15/14	13:42	4.08	4.76
OP37606-MS	YZ89227.D	04/15/14	14:10	4.08	4.76
OP37606-MSD	YZ89228.D	04/15/14	14:38	4.08	4.76
MC29713-2	YZ89229.D	04/15/14	15:05	4.08	4.76
MC29713-1	YZ89230.D	04/15/14	15:33	4.08	4.76
MC29713-3	YZ89231.D	04/15/14	16:00	4.08	4.76
MC29713-5	YZ89232.D	04/15/14	16:28	4.08	4.76
ZZZZZZ	YZ89233.D	04/15/14	16:56	4.08	4.76
ZZZZZZ	YZ89234.D	04/15/14	17:25	4.08	4.76

Surrogate
Compounds

S1 = Bromofluorobenzene (S)

- (a) Retention time from GC signal #2
- (b) Retention time from GC signal #1

8.5.1
8

Roxana Groundwater Quarterly – 2nd Quarter 2014 Data Review

Laboratory SDG: MC29766

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 5/16/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2013

Sample Identification	Sample Identification
P93D-ROX-041414	P56-ROX-041414
TB-ROX-041414-HCL	TB-ROX-041414-ST

1.0 Data Package Completeness

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

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated SVOCs and PAHs were detected in the method blank. Acetone LCS recoveries were outside evaluation criteria. The internal standard area recovery for tert butyl alcohol-d₉ was outside criteria in sample P56-ROX-041414. Sample P56-ROX-041414 was diluted due to high levels of VOC target analytes. These issues are addressed further in the appropriate sections below. Additionally, continuing calibration verification for 4-bromofluorobenzene exceeded criteria.

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
OP37623-MB	SVOCs	bis(2-Ethylhexyl)phthalate	0.66 µg/L
OP37624-MB	PAHs	Phenanthrene	0.019 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-041414	SVOCs	bis(2-Ethylhexyl)phthalate	-	U
P93D-ROX-041414	PAHs	Phenanthrene	-	U

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV1130-BS	VOCs	Acetone	135	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?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

No

Sample ID	Parameter	Analyte	IS Area Recovery	IS Criteria
P56-ROX-041414	VOCs	Tert butyl alcohol-d ₉	205542	37941-151764

There were no target analytes associated with tert butyl alcohol-d₉; 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?

No

11.0 Sample Dilutions

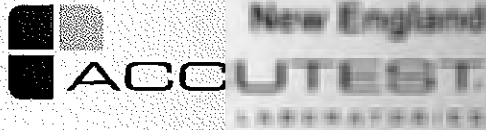
For samples that were diluted and nondetect, were undiluted results also reported?

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 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana,

Accutest Job Number: MC29766

Sampling Date: 04/14/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: 68



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
5/16/2014
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: MC29766

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
MC29766-1	04/14/14	13:35	DMMM04/15/14	AQ Ground Water	P93D-ROX-041414 ✓
MC29766-2	04/14/14	16:25	DMMM04/15/14	AQ Ground Water	P56-ROX-041414 ✓
MC29766-3	04/14/14	00:00	DMMM04/15/14	AQ Trip Blank Water	TB-ROX-041414-HCL ✓
MC29766-4	04/14/14	00:00	DMMM04/15/14	AQ Trip Blank Water	TB-ROX-041414-ST ✓



SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Shell Oil Job No MC29766
 Site: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Report Date 4/29/2014 9:27:25 AM

2 Sample(s) and 2 Trip Blank(s) were collected on 04/14/2014 and were received at Accutest on 04/15/2014 properly preserved, at 2.3 Deg. C and intact. These Samples received an Accutest job number of MC29766. 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:	MSV1130
--------	----	-----------	---------

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29830-IMS, MC29830-IMSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MC29766-2 for Tert Butyl Alcohol-D9: Outside control limits. Target analytes not associated with this internal standard.
- Blank Spike Recovery(s) for Acetone are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 1,2,3-Trichlorobenzene, 1,2,3-Trichloropropane, 2-Chloroethyl vinyl ether 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 are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 1,2,3-Trichlorobenzene are outside control limits for sample MC29830-IMSD. High RPD due to possible matrix interference and/or sample non-homogeneity.

Matrix	AQ	Batch ID:	MSV1133
--------	----	-----------	---------

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29804-IMS, MC29804-IMSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MC29804-IMS for Tert Butyl Alcohol-D9: Outside control limits. Target analytes not associated with this internal standard.

Extractables by GCMS By Method SW846 8270D

Matrix	AQ	Batch ID:	OP37623
--------	----	-----------	---------

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29400-8MS, MC29400-8MSD were used as the QC samples indicated.
- Sample(s) MC29766-1 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix	AQ	Batch ID:	OP37624
--------	----	-----------	---------

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29400-9MS, MC29400-9MSD were used as the QC samples indicated.
- Sample(s) MC29766-1 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:	OP37606
--------	----	-----------	---------

- 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) MC29713-2MS, MC29713-2MSD were used as the QC samples indicated.
- Continuing calibration check standard GYZ7542-ECC7541, signal #1 for 4-Bromofluorobenzene exceed criteria. Target recovery satisfactory.

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(MC29766).

Summary of Hits

Job Number: MC29766
 Account: Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Collected: 04/14/14



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

MC29766-1 P93D-ROX-041414

Benzene	2.2	0.50	0.32	ug/l	SW846 8260C
Chlorobenzene	0.69 J	1.0	0.43	ug/l	SW846 8260C
1,2-Dichloropropane	16.4	2.0	0.50	ug/l	SW846 8260C
Naphthalene	1.7 J	5.0	0.69	ug/l	SW846 8260C
Di-n-butyl phthalate	0.36 J	5.3	0.18	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate	0.50 JB	2.1	0.35	ug/l	SW846 8270D
Phenanthrene	0.030 JB	0.053	0.013	ug/l	SW846 8270D BY SIM

MC29766-2 P56-ROX-041414

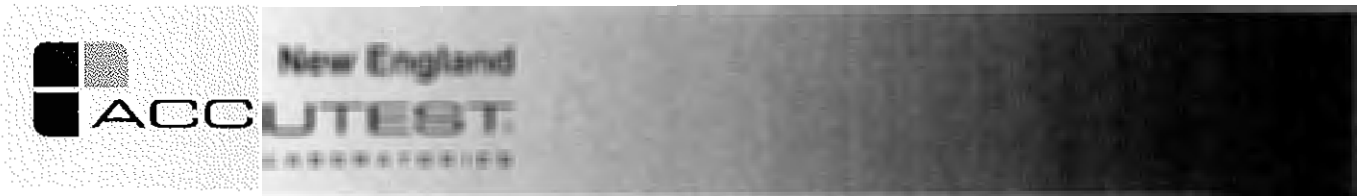
Benzene	128	0.50	0.32	ug/l	SW846 8260C
n-Butylbenzene	6.9	5.0	1.1	ng/l	SW846 8260C
sec-Butylbenzene	4.6 J	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene	1.4 J	5.0	0.39	ug/l	SW846 8260C
Ethylbenzene	608	10	3.8	ug/l	SW846 8260C
Isopropylbenzene	78.1	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene	3.4 J	5.0	0.37	ug/l	SW846 8260C
Naphthalene	83.6	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene	95.1	5.0	0.49	ug/l	SW846 8260C
Toluene	66.9	1.0	0.33	ug/l	SW846 8260C
1,2,4-Trimethylbenzene	205	5.0	0.32	ug/l	SW846 8260C
1,3,5-Trimethylbenzene	47.2	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene	742	1.0	0.93	ug/l	SW846 8260C
o-Xylene	15.6	1.0	0.36	ug/l	SW846 8260C
Xylene (total)	758	1.0	0.36	ug/l	SW846 8260C
3&4-Methylphenol	0.80 J	12	0.55	ug/l	SW846 8270D
Dibenzofuran	0.67 J	2.4	0.30	ug/l	SW846 8270D
Di-n-butyl phthalate	0.51 J	5.9	0.20	ug/l	SW846 8270D
Acenaphthene	0.51	0.12	0.081	ug/l	SW846 8270D BY SIM
Acenaphthylene	0.081 J	0.12	0.058	ug/l	SW846 8270D BY SIM
Fluorene	0.38	0.12	0.12	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene	22.3	0.24	0.059	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene	26.9	0.24	0.087	ug/l	SW846 8270D BY SIM
Phenanthrene	1.2	0.059	0.015	ug/l	SW846 8270D BY SIM

MC29766-3 TB-ROX-041414-HCL

No hits reported in this sample.

MC29766-4 TB-ROX-041414-ST

No hits reported in this sample.



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: P93D-ROX-041414	Date Sampled: 04/14/14
Lab Sample ID: MC29766-1	Date Received: 04/15/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30254.D	1	04/25/14	AMY	n/a	n/a	MSV1130
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	2.2	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	0.69	1.0	0.43	ug/l	J
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93D-ROX-041414	Date Sampled:	04/14/14
Lab Sample ID:	MC29766-1	Date Received:	04/15/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	16.4	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexauone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	1.7	5.0	0.69	ug/l	J
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID: P93D-ROX-041414		Date Sampled: 04/14/14
Lab Sample ID: MC29766-1		Date Received: 04/15/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260C		
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

4.1
4

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		70-130%
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	91%		70-130%

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

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

J = Indicates 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-041414	Date Sampled:	04/14/14
Lab Sample ID:	MC29766-1	Date Received:	04/15/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F72275.D	1	04/16/14	WK	04/15/14	OP37623	MSF3216
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.3	0.33	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.88	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.42	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.60	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.24	ug/l	
	3&4-Methylphenol	ND	11	0.50	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.57	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.3	0.32	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.39	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.68	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.50	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.56	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.4	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.33	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.59	ug/l	
111-91-1	his(2-Chloroethoxy)methane	ND	5.3	0.30	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.37	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.35	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.27	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.49	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.28	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.28	ug/l	
84-74-2	Di-n-butyl phthalate	0.36	5.3	0.18	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.3	0.30	ug/l	

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

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

Report of Analysis

Client Sample ID: P93D-ROX-041414	Date Sampled: 04/14/14
Lab Sample ID: MC29766-1	Date Received: 04/15/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.3	0.21	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.36	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.50 u	2.1	0.35	ug/l	JB u
118-74-1	Hexachlorobenzene	ND	5.3	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.3	0.32	ug/l	
78-59-1	Isophorone	ND	5.3	0.48	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.42	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.42	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.43	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.55	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	39%		15-110%
4165-62-2	Phenol-d5	25%		15-110%
118-79-6	2,4,6-Tribromophenol	75%		15-110%
4165-60-0	Nitrobenzene-d5	62%		30-130%
321-60-8	2-Fluorobiphenyl	67%		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	

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 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93D-ROX-041414	Date Sampled:	04/14/14
Lab Sample ID:	MC29766-1	Date Received:	04/15/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	188634.D	1	04/17/14	MR	04/15/14	OP37624	MSI3300
Run #2							

Run #	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	0.030 ^u	0.053	0.013	ug/l	JB 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	60%		30-130%
321-60-8	2-Fluorobiphenyl	61%		30-130%
1718-51-0	Terphenyl-d14	82%		30-130%

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 N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID: P93D-ROX-041414		Date Sampled: 04/14/14
Lab Sample ID: MC29766-1		Date Received: 04/15/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8011 SW846 8011		
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89250.D	1	04/16/14	SZ	04/15/14	OP37606	GYZ7542
Run #2							

Run #	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)	133%		36-173%
460-00-4	Bromofluorobenzene (S)	100%		36-173%

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

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

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Report of Analysis

Client Sample ID:	P56-ROX-041414	Date Sampled:	04/14/14
Lab Sample ID:	MC29766-2	Date Received:	04/15/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30255.D	1	04/25/14	AMY	n/a	n/a	MSV1130
Run #2	V30321.D	10	04/27/14	AMY	n/a	n/a	MSV1133

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	128	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	6.9	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	4.6	5.0	0.42	ug/l	J
98-06-6	tert-Butylbenzene	1.4	5.0	0.39	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ng/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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 RL = Reporting Limit
 E = Indicates value exceeds calibration range

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

Report of Analysis

Client Sample ID:	P56-ROX-041414	Date Sampled:	04/14/14
Lab Sample ID:	MC29766-2	Date Received:	04/15/14
Matrix:	AQ - Ground Water	Per cent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	608 ^a	10	3.8	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	78.1	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	3.4	5.0	0.37	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	83.6	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	95.1	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	66.9	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	205	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	47.2	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	742	1.0	0.93	ug/l	
95-47-6	o-Xylene	15.6	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	758	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P56-ROX-041414	Date Sampled:	04/14/14
Lab Sample ID:	MC29766-2	Date Received:	04/15/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	77%	72%	70-130%
2037-26-5	Toluene-D8	95%	91%	70-130%
460-00-4	4-Bromofluorobenzene	95%	93%	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:	P56-ROX-041414	Date Sampled:	04/14/14
Lab Sample ID:	MC29766-2	Date Received:	04/15/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F72276.D	1	04/16/14	WK	04/15/14	OP37623	MSF3216
Run #2							

Run #	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	12	2.9	ug/l	
95-57-8	2-Chlorophenol	ND	5.9	0.36	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	12	0.97	ug/l	
120-83-2	2,4-Dichlorophenol	ND	12	0.47	ug/l	
105-67-9	2,4-Dimethylphenol	ND	12	0.66	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	2.9	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	12	2.3	ug/l	
95-48-7	2-Methylphenol	ND	12	0.27	ug/l	
	3&4-Methylphenol	0.80	12	0.55	ug/l	J
88-75-5	2-Nitrophenol	ND	12	3.4	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	12	1.3	ug/l	
108-95-2	Phenol	ND	5.9	0.36	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	12	0.44	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	12	0.21	ug/l	
62-53-3	Aniline	ND	12	0.75	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.9	0.55	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.9	0.62	ug/l	
100-51-6	Benzyl Alcohol	ND	12	2.7	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.9	0.37	ug/l	
106-47-8	4-Chloroaniline	ND	12	0.66	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.9	0.34	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.9	0.41	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.9	0.39	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.9	0.30	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.9	0.28	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	12	0.54	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	12	0.35	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.9	0.31	ug/l	
132-64-9	Dibenzofuran	0.67	2.4	0.30	ug/l	J
84-74-2	Di-n-butyl phthalate	0.51	5.9	0.20	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.9	0.33	ug/l	

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 B = Indicates analyte found in associated method blank
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Report of Analysis

Client Sample ID:	P56-ROX-041414	Date Sampled:	04/14/14
Lab Sample ID:	MC29766-2	Date Received:	04/15/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.9	0.24	ug/l	
131-11-3	Dimethyl phthalate	ND	5.9	0.40	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.4	0.39	ug/l	
118-74-1	Hexachlorobenzene	ND	5.9	0.34	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	1.5	ug/l	
67-72-1	Hexachloroethane	ND	5.9	0.36	ug/l	
78-59-1	Isophorone	ND	5.9	0.53	ug/l	
88-74-4	2-Nitroaniline	ND	12	0.47	ug/l	
99-09-2	3-Nitroaniline	ND	12	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	12	2.5	ug/l	
98-95-3	Nitrobenzene	ND	5.9	0.46	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.9	1.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.9	0.47	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.9	0.23	ug/l	
110-86-1	Pyridine	ND	12	0.61	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	52%		15-110%
4165-62-2	Phenol-d5	33%		15-110%
118-79-6	2,4,6-Tribromophenol	89%		15-110%
4165-60-0	Nitrobenzene-d5	74%		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	

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

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

Report of Analysis

Page 1 of 1

Client Sample ID:	P56-ROX-041414	Date Sampled:	04/14/14
Lab Sample ID:	MC29766-2	Date Received:	04/15/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88635.D	1	04/17/14	MR	04/15/14	OP37624	MSI3300
Run #2							

Run #	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.51	0.12	0.081	ug/l	
208-96-8	Acenaphthylene	0.081	0.12	0.058	ug/l	J
120-12-7	Anthracene	ND	0.12	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.059	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.12	0.034	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.059	0.037	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.12	0.032	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.12	0.045	ug/l	
218-01-9	Chrysene	ND	0.12	0.028	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.12	0.038	ug/l	
206-44-0	Fluoranthene	ND	0.12	0.048	ug/l	
86-73-7	Fluorene	0.38	0.12	0.12	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.12	0.036	ug/l	
90-12-0	1-Methylnaphthalene	22.3	0.24	0.059	ug/l	
91-57-6	2-Methylnaphthalene	26.9	0.24	0.087	ug/l	
85-01-8	Phenanthrene	1.2	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	69%		30-130%
321-60-8	2-Fluorobiphenyl	67%		30-130%
1718-51-0	Terphenyl-d14	92%		30-130%

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

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

Report of Analysis

Client Sample ID: P56-ROX-041414	Date Sampled: 04/14/14
Lab Sample ID: MC29766-2	Date Received: 04/15/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89251.D	1	04/16/14	SZ	04/15/14	OP37606	GYZ7542
Run #2							

Run #	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)	133%		36-173%
460-00-4	Bromofluorobenzene (S)	113%		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

4.2
4

Report of Analysis

Client Sample ID:	TB-ROX-041414-HCL	Date Sampled:	04/14/14
Lab Sample ID:	MC29766-3	Date Received:	04/15/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30246.D	1	04/25/14	AMY	n/a	n/a	MSV1130
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

MDL = Method Detection Limit

J = Indicates 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-041414-HCL	Date Sampled:	04/14/14
Lab Sample ID:	MC29766-3	Date Received:	04/15/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ng/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID: TB-ROX-041414-HCL	Date Sampled: 04/14/14
Lab Sample ID: MC29766-3	Date Received: 04/15/14
Matrix: AQ - Trip Blank Water	Percent Solids: n/a
Method: SW846 8260C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

4.3
4

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dihromofluoromethane	93%		70-130%
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	90%		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-041414-ST	Date Sampled: 04/14/14
Lab Sample ID: MC29766-4	Date Received: 04/15/14
Matrix: AQ - Trip Blank Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89252.D	1	04/16/14	SZ	04/15/14	OP37606	GYZ7542
Run #2							

Run #	Initial Volume	Final Volume
Run #1	36.9 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0051	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)	140%		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

4.4
4

Misc. Forms



Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

LAB (LOCATION)

Shell Oil Products Chain Of Custody Record

URS

- XEROX
- CALISTO
- OTHER
- SPL

Please Check Appropriate Box:

<input checked="" type="checkbox"/> ENV. SERVICES	<input type="checkbox"/> MOTIVA RETAIL	<input type="checkbox"/> SHELL RETAIL
<input type="checkbox"/> MOTIVA SERVICE	<input type="checkbox"/> CONSULTANT	<input type="checkbox"/> LURES
<input type="checkbox"/> SHELL PIPELINE	<input type="checkbox"/> OTHER	

Print Bill To Contact Name: Bob Bilman

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

DATE: 4/14/14

PO #

SAP #

PAGE: 1 of 1

Lab Vendor #

Lab Vendor:

URS CORPORATION

1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110

Elizabeth Kunkel, Wendy Pennington, Bob Bilman

TEL: 314-429-0100 FAX: 314-429-0462

TURNAROUND TIME (EAT FROM A DAY): STANDARD (10 DAY) 5 DAYS 3 DAYS 2 DAYS 24 HOURS RESKITS NEEDED

Lab Use Only

DATE RECEIVED TO BEAR COMPANY (DATE ONLY)

ROXANA QUARTERLY GW / 21562973.03002

LABORATORY PROJECT NO

LABORATORY PROJECT NO: **mc29766**

REQUESTED ANALYSIS

LA - RWQCR REPORT FORMAT LIST AGENCY:

DELIVERABLES: LEVEL 1 LEVEL 2 LEVEL 3 LEVEL 4 OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT °C

SPECIAL INSTRUCTIONS OR NOTES:

- SHELL CONTRACT RATE APPLIES
- STATE ADJUSTMENT RATE APPLIES
- EDD NOT NEEDED
- RECEIPT VERIFICATION REQUESTED
- PROVIDE LEAD DISK

FIELD NOTES:	REQUESTED ANALYSIS										
	VOC 8280C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL							PID (ppm)
TEMPERATURE ON RECEIPT °C											0
Container PID Readings or Laboratory Notes											

LAB USE ONLY	Field Sample Identification		SAMPLING		MATRIX	PRESERVATIVE						NO. OF CONT.					
	DATE	TIME	DATE	TIME		ML	NHCL	H2SO4	HNO3	OTHER							
	-1	P93D-RDX-041414	4/14/14	1335	water	2			2	2	6	X	X	X			
	-2	P56-RDX-041414	4/14/14	1100		2			2	2	6	X	X	X			
	-3	TB-RDX-041414-HCI	4/14/14	1200		2			2		2	X					
	-4	TB-RDX-041414-ST	4/14/14	1200		2			2		2	X					

Received by (Signature): *Michelle Adair*

Received by (Signature): *Brund*

Method by (Signature): *Fr*

Method by (Signature):

FED EX

Date: 4/14/14

Date: 4-15-14

Date: 4-15-14

2.30C

5.1



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC29766 Client: URS Immediate Client Services Action Required: No
 Date / Time Received: 4/15/2014 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: Infrared 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

5.1
5

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC29766

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

5.2



Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
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MC29766-1 Collected: 14-APR-14 13:35 By: DMMM Received: 15-APR-14 By: P93D-ROX-041414

MC29766-1 SW846 8011	16-APR-14 11:25	SZ	15-APR-14	MT	V8011SL
MC29766-1 SW846 8270D	16-APR-14 17:05	WK	15-APR-14	MEW	AB8270SL +
MC29766-1 SW846 8270D BY SIM	17-APR-14 19:44	MR	15-APR-14	MEW	B8270SIMSL
MC29766-1 SW846 8260C	25-APR-14 19:13	AMY			V8260SL +

MC29766-2 Collected: 14-APR-14 16:25 By: DMMM Received: 15-APR-14 By: P56-ROX-041414

MC29766-2 SW846 8011	16-APR-14 11:50	SZ	15-APR-14	MT	V8011SL
MC29766-2 SW846 8270D	16-APR-14 17:29	WK	15-APR-14	MEW	AB8270SL +
MC29766-2 SW846 8270D BY SIM	17-APR-14 20:07	MR	15-APR-14	MEW	B8270SIMSL
MC29766-2 SW846 8260C	25-APR-14 19:39	AMY			V8260SL +
MC29766-2 SW846 8260C	27-APR-14 16:27	AMY			V8260SL +

MC29766-3 Collected: 14-APR-14 00:00 By: DMMM Received: 15-APR-14 By: TB-ROX-041414-HCL

MC29766-3 SW846 8260C	25-APR-14 15:44	AMY			V8260SL +
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MC29766-4 Collected: 14-APR-14 00:00 By: DMMM Received: 15-APR-14 By: TB-ROX-041414-ST

MC29766-4 SW846 8011	16-APR-14 12:15	SZ	15-APR-14	MT	V8011SL
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Accutest Internal Chain of Custody

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Received: 04/15/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29766-1.1	Walk In Ref #22	Thomas Abruzzise	04/15/14 18:52	Retrieve from Storage
MC29766-1.1	Thomas Abruzzise		04/30/14 21:28	Depleted
MC29766-1.3	VOC Ref #5	Amy Min Yang	04/25/14 15:05	Retrieve from Storage
MC29766-1.3	Amy Min Yang	GCMSV	04/25/14 15:05	Load on Instrument
MC29766-1.3	GCMSV	Amy Min Yang	04/28/14 09:33	Unload from Instrument
MC29766-1.3	Amy Min Yang	VOC Ref #5	04/28/14 09:33	Return to Storage
MC29766-1.6	VOC Ref #5	Marc Tahtamoni	04/15/14 21:11	Retrieve from Storage
MC29766-2.1	Walk In Ref #22	Thomas Abruzzise	04/15/14 18:52	Retrieve from Storage
MC29766-2.1	Thomas Abruzzise		04/30/14 21:28	Depleted
MC29766-2.2	Walk In Ref #22	Thomas Abruzzise	04/15/14 18:52	Retrieve from Storage
MC29766-2.2	Thomas Abruzzise	Walk In Ref #22	04/15/14 19:44	Return to Storage
MC29766-2.3	VOC Ref #5	Amy Min Yang	04/27/14 11:16	Retrieve from Storage
MC29766-2.3	Amy Min Yang	GCMSV	04/27/14 11:17	Load on Instrument
MC29766-2.3	GCMSV	Amy Min Yang	04/28/14 09:33	Unload from Instrument
MC29766-2.3	Amy Min Yang	VOC Ref #5	04/28/14 09:33	Return to Storage
MC29766-2.4	VOC Ref #5	Amy Min Yang	04/25/14 15:05	Retrieve from Storage
MC29766-2.4	Amy Miu Yang	GCMSV	04/25/14 15:05	Load on Instrument
MC29766-2.4	GCMSV	Amy Min Yang	04/28/14 09:33	Unload from Instrument
MC29766-2.4	Amy Min Yang	VOC Ref #5	04/28/14 09:33	Return to Storage
MC29766-2.6	VOC Ref #5	Marc Tahtamoni	04/15/14 21:11	Retrieve from Storage
MC29766-3.1	VOC Ref #5	Amy Min Yang	04/25/14 15:05	Retrieve from Storage
MC29766-3.1	Amy Min Yang	GCMSV	04/25/14 15:05	Load on Instrument
MC29766-3.1	GCMSV	Amy Min Yang	04/28/14 09:33	Unload from Instrument
MC29766-3.1	Amy Min Yang	VOC Ref #5	04/28/14 09:33	Return to Storage
MC29766-4.2	VOC Ref #5	Marc Tahtamoni	04/15/14 21:11	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: MC29766
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1130-MB	V30245.D	1	04/25/14	AMY	n/a	n/a	MSV1130

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29766-1, MC29766-2, MC29766-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

6.1.1



Method Blank Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1130-MB	V30245.D	1	04/25/14	AMY	n/a	n/a	MSV1130

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29766-1, MC29766-2, MC29766-3

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

6.1.1



Method Blank Summary

Page 3 of 3

Job Number: MC29766

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1130-MB	V30245.D	1	04/25/14	AMY	n/a	n/a	MSV1130

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29766-1, MC29766-2, MC29766-3

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	70-130%
2037-26-5	Toluene-D8	90%	70-130%
460-00-4	4-Bromofluorobenzene	90%	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: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1133-MB	V30310.D	1	04/27/14	AMY	n/a	n/a	MSV1133

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29766-2

6.1.2
6

CAS No.	Compound	Result	RL	MDL	Units	Q
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	92%	70-130%
2037-26-5	Toluene-D8	89%	70-130%
460-00-4	4-Bromofluorobenzene	89%	70-130%

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

Blank Spike Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1130-BS	V30242.D	1	04/25/14	AMY	n/a	n/a	MSV1130

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29766-1, MC29766-2, MC29766-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	67.5	135* a	70-130
107-02-8	Acrolein	250	288	115	70-130
107-13-1	Acrylonitrile	50	59.3	119	70-130
71-43-2	Benzene	50	50.1	100	70-130
108-86-1	Bromobenzene	50	53.2	106	70-130
74-97-5	Bromochloromethane	50	49.2	98	70-130
75-27-4	Bromodichloromethane	50	44.6	89	70-130
75-25-2	Bromoform	50	39.9	80	70-130
74-83-9	Bromomethane	50	41.6	83	70-130
78-93-3	2-Butanone (MEK)	50	52.5	105	70-130
104-51-8	n-Butylbenzene	50	51.2	102	70-130
135-98-8	sec-Butylbenzene	50	54.1	108	70-130
98-06-6	tert-Butylbenzene	50	48.9	98	70-130
75-15-0	Carbon disulfide	50	52.3	105	70-130
56-23-5	Carbon tetrachloride	50	44.3	89	70-130
108-90-7	Chlorobenzene	50	50.2	100	70-130
75-00-3	Chloroethane	50	53.4	107	70-130
110-75-8	2-Chloroethyl vinyl ether	50	43.4	87	70-130
67-66-3	Chloroform	50	44.7	89	70-130
74-87-3	Chloromethane	50	46.3	93	70-130
95-49-8	o-Chlorotoluene	50	50.1	100	70-130
106-43-4	p-Chlorotoluene	50	51.4	103	70-130
124-48-1	Dibromochloromethane	50	44.1	88	70-130
95-50-1	1,2-Dichlorobenzene	50	49.4	99	70-130
541-73-1	1,3-Dichlorobenzene	50	50.0	100	70-130
106-46-7	1,4-Dichlorobenzene	50	50.5	101	70-130
75-71-8	Dichlorodifluoromethane	50	43.2	86	70-130
75-34-3	1,1-Dichloroethane	50	52.7	105	70-130
107-06-2	1,2-Dichloroethane	50	42.9	86	70-130
75-35-4	1,1-Dichloroethene	50	56.2	112	70-130
156-59-2	cis-1,2-Dichloroethene	50	50.6	101	70-130
156-60-5	trans-1,2-Dichloroethene	50	53.7	107	70-130
78-87-5	1,2-Dichloropropane	50	55.0	110	70-130
142-28-9	1,3-Dichloropropane	50	53.1	106	70-130
594-20-7	2,2-Dichloropropane	50	38.4	77	70-130
563-58-6	1,1-Dichloropropene	50	47.5	95	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1130-BS	V30242.D	1	04/25/14	AMY	n/a	n/a	MSV1130

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29766-1, MC29766-2, MC29766-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	46.6	93	70-130
10061-02-6	trans-1,3-Dichloropropene	50	54.9	110	70-130
123-91-1	1,4-Dioxane	250	245	98	70-130
97-63-2	Ethyl methacrylate	50	49.9	100	77-137
100-41-4	Ethylbenzene	50	52.1	104	70-130
87-68-3	Hexachlorobutadiene	50	39.7	79	70-130
591-78-6	2-Hexanone	50	54.5	109	70-130
98-82-8	Isopropylbenzene	50	52.9	106	70-130
99-87-6	p-Isopropyltoluene	50	51.7	103	70-130
1634-04-4	Methyl Tert Bntyl Ether	50	50.6	101	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	51.5	103	70-130
74-95-3	Methylene bromide	50	48.6	97	70-130
75-09-2	Methylene chloride	50	56.4	113	70-130
91-20-3	Naphthalene	50	58.0	116	70-130
103-65-1	n-Propylbenzene	50	52.1	104	70-130
100-42-5	Styrene	50	55.2	110	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	50.3	101	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	61.7	123	70-130
127-18-4	Tetrachloroethene	50	49.4	99	70-130
108-88-3	Toluene	50	53.2	106	70-130
87-61-6	1,2,3-Trichlorobenzene	50	55.7	111	70-130
120-82-1	1,2,4-Trichlorobenzene	50	45.7	91	70-130
71-55-6	1,1,1-Trichloroethane	50	44.6	89	70-130
79-00-5	1,1,2-Trichloroethane	50	55.4	111	70-130
79-01-6	Trichloroethene	50	45.4	91	70-130
75-69-4	Trichlorofluoromethane	50	44.7	89	70-130
96-18-4	1,2,3-Trichloropropane	50	53.0	106	70-130
95-63-6	1,2,4-Trimethylbenzene	50	51.8	104	70-130
108-67-8	1,3,5-Trimethylbenzene	50	52.2	104	70-130
108-05-4	Vinyl Acetate	50	52.5	105	70-130
75-01-4	Vinyl chloride	50	50.5	101	70-130
	m,p-Xylene	100	106	106	70-130
95-47-6	o-Xylene	50	53.1	106	70-130
1330-20-7	Xylene (total)	150	159	106	70-130

* = Outside of Control Limits.

6.2.1
6

Blank Spike Summary

Job Number: MC29766
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1130-BS	V30242.D	1	04/25/14	AMY	n/a	n/a	MSV1130

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29766-1, MC29766-2, MC29766-3

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	81%	70-130%
2037-26-5	Toluene-D8	91%	70-130%
460-00-4	4-Bromofluorobenzene	92%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

6.2.1



Blank Spike Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1133-BS	V30306.D	1	04/27/14	AMY	n/a	n/a	MSV1133

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29766-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
100-41-4	Ethylbenzene	50	54.8	110%	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	81%	70-130%
2037-26-5	Toluene-D8	91%	70-130%
460-00-4	4-Bromofluorobenzene	89%	70-130%

6.2.2



* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29830-1MS	V30266.D	5	04/26/14	AMY	n/a	n/a	MSV1130
MC29830-1MSD	V30267.D	5	04/26/14	AMY	n/a	n/a	MSV1130
MC29830-1	V30247.D	1	04/25/14	AMY	n/a	n/a	MSV1130

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29766-1, MC29766-2, MC29766-3

CAS No.	Compound	MC29830-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	250	189	76	250	182	73	4	70-130/30
107-02-8	Acrolein	ND	1250	1380	110	1250	1260	101	9	70-130/30
107-13-1	Acrylonitrile	ND	250	281	112	250	263	105	7	70-130/30
71-43-2	Benzene	ND	250	271	108	250	257	103	5	70-130/30
108-86-1	Bromobenzene	ND	250	272	109	250	259	104	5	70-130/30
74-97-5	Bromochloromethane	ND	250	254	102	250	238	95	7	70-130/30
75-27-4	Bromodichloromethane	ND	250	219	88	250	209	84	5	70-130/30
75-25-2	Bromoform	ND	250	182	73	250	177	71	3	70-130/30
74-83-9	Bromomethane	ND	250	210	84	250	201	80	4	70-130/30
78-93-3	2-Butanone (MEK)	ND	250	221	88	250	207	83	7	70-130/30
104-51-8	n-Butylbenzene	ND	250	270	108	250	263	105	3	70-130/30
135-98-8	sec-Butylbenzene	ND	250	280	112	250	273	109	3	70-130/30
98-06-6	tert-Butylbenzene	ND	250	253	101	250	240	96	5	70-130/30
75-15-0	Carbon disulfide	ND	250	257	103	250	241	96	6	70-130/30
56-23-5	Carbon tetrachloride	ND	250	208	83	250	202	81	3	70-130/30
108-90-7	Chlorobenzene	ND	250	267	107	250	249	100	7	70-130/30
75-00-3	Chloroethane	ND	250	268	107	250	252	101	6	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND	250	ND	0* a	250	ND	0* a	nc	70-130/30
67-66-3	Chloroform	ND	250	237	95	250	219	88	8	70-130/30
74-87-3	Chloromethane	ND	250	241	96	250	228	91	6	70-130/30
95-49-8	o-Chlorotoluene	ND	250	268	107	250	255	102	5	70-130/30
106-43-4	p-Chlorotoluene	ND	250	270	108	250	259	104	4	70-130/30
124-48-1	Dibromochloromethane	ND	250	209	84	250	197	79	6	70-130/30
95-50-1	1,2-Dichlorobenzene	ND	250	240	96	250	242	97	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND	250	253	101	250	248	99	2	70-130/30
106-46-7	1,4-Dichlorobenzene	ND	250	253	101	250	251	100	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND	250	184	74	250	184	74	0	70-130/30
75-34-3	1,1-Dichloroethane	ND	250	269	108	250	253	101	6	70-130/30
107-06-2	1,2-Dichloroethane	ND	250	211	84	250	198	79	6	70-130/30
75-35-4	1,1-Dichloroethene	ND	250	278	111	250	259	104	7	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND	250	272	109	250	253	101	7	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	250	273	109	250	250	100	9	70-130/30
78-87-5	1,2-Dichloropropane	ND	250	300	120	250	282	113	6	70-130/30
142-28-9	1,3-Dichloropropane	ND	250	275	110	250	259	104	6	70-130/30
594-20-7	2,2-Dichloropropane	ND	250	187	75	250	176	70	6	70-130/30
563-58-6	1,1-Dichloropropene	ND	250	243	97	250	227	91	7	70-130/30

* = Outside of Control Limits.



Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29830-1MS	V30266.D	5	04/26/14	AMY	n/a	n/a	MSV1130
MC29830-1MSD	V30267.D	5	04/26/14	AMY	n/a	n/a	MSV1130
MC29830-1	V30247.D	1	04/25/14	AMY	n/a	n/a	MSV1130

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29766-1, MC29766-2, MC29766-3

CAS No.	Compound	MC29830-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND	250	219	88	250	204	82	7	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND	250	270	108	250	256	102	5	70-130/30
123-91-1	1,4-Dioxane	ND	1250	1170	94	1250	1140	91	3	70-130/30
97-63-2	Ethyl methacrylate	ND	250	247	99	250	235	94	5	72-139/30
100-41-4	Ethylbenzene	ND	250	277	111	250	261	104	6	70-130/30
87-68-3	Hexachlorobutadiene	ND	250	200	80	250	204	82	2	70-130/30
591-78-6	2-Hexanone	ND	250	227	91	250	212	85	7	70-130/30
98-82-8	Isopropylbenzene	ND	250	275	110	250	265	106	4	70-130/30
99-87-6	p-Isopropyltoluene	ND	250	266	106	250	258	103	3	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	250	239	96	250	230	92	4	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	250	252	101	250	242	97	4	70-130/30
74-95-3	Methylene bromide	ND	250	242	97	250	231	92	5	70-130/30
75-09-2	Methylene chloride	ND	250	280	112	250	261	104	7	70-130/30
91-20-3	Naphthalene	ND	250	209	84	250	271	108	26	70-130/30
103-65-1	n-Propylbenzene	ND	250	279	112	250	267	107	4	70-130/30
100-42-5	Styrene	ND	250	284	114	250	273	109	4	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND	250	246	98	250	236	94	4	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	307	123	250	309	124	1	70-130/30
127-18-4	Tetrachloroethene	ND	250	249	100	250	235	94	6	70-130/30
108-88-3	Toluene	ND	250	287	115	250	269	108	6	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND	250	156	62* a	250	244	98	44* b	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND	250	175	70	250	212	85	19	70-130/30
71-55-6	1,1,1-Trichloroethane	ND	250	224	90	250	213	85	5	70-130/30
79-00-5	1,1,2-Trichloroethane	ND	250	284	114	250	272	109	4	70-130/30
79-01-6	Trichloroethene	ND	250	236	94	250	222	89	6	70-130/30
75-69-4	Trichlorofluoromethane	ND	250	222	89	250	208	83	7	70-130/30
96-18-4	1,2,3-Trichloropropane	ND	250	330	132* a	250	325	130	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND	250	272	109	250	261	104	4	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND	250	274	110	250	261	104	5	70-130/30
108-05-4	Vinyl Acetate	ND	250	262	105	250	245	98	7	70-130/30
75-01-4	Vinyl chloride	ND	250	249	100	250	236	94	5	70-130/30
	m,p-Xylene	ND	500	570	114	500	537	107	6	70-130/30
95-47-6	o-Xylene	ND	250	280	112	250	267	107	5	70-130/30
1330-20-7	Xylene (total)	ND	750	850	113	750	804	107	6	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29766

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29830-1MS	V30266.D	5	04/26/14	AMY	n/a	n/a	MSV1130
MC29830-1MSD	V30267.D	5	04/26/14	AMY	n/a	n/a	MSV1130
MC29830-1	V30247.D	1	04/25/14	AMY	n/a	n/a	MSV1130

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29766-1, MC29766-2, MC29766-3

6.3.1
6

CAS No.	Surrogate Recoveries	MS	MSD	MC29830-1	Limits
1868-53-7	Dibromofluoromethane	82%	80%	98%	70-130%
2037-26-5	Toluene-D8	92%	92%	90%	70-130%
460-00-4	4-Bromofluorobenzene	92%	91%	89%	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: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29804-1MS	V30331.D	1	04/27/14	AMY	n/a	n/a	MSV1133
MC29804-1MSD	V30332.D	1	04/27/14	AMY	n/a	n/a	MSV1133
MC29804-1	V30315.D	1	04/27/14	AMY	n/a	n/a	MSV1133

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29766-2

6.3.2
6

CAS No.	Compound	MC29804-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
100-41-4	Ethylbenzene	ND	50	53.2	106	50	51.7	103	3	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC29804-1	Limits
1868-53-7	Dibromofluoromethane	80%	79%	99%	70-130%
2037-26-5	Toluene-D8	91%	90%	90%	70-130%
460-00-4	4-Bromofluorobenzene	92%	91%	88%	70-130%

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSV1130-CC1058	Injection Date:	04/25/14
Lab File ID:	V30241.D	Injection Time:	13:27
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1	IS 2	IS 3	IS 4	IS 5
	AREA	RT	AREA	RT	AREA
Check Std	461273	6.56	648103	7.74	316203
Upper Limit ^a	922546	7.06	1296206	8.24	632406
Lower Limit ^b	230637	6.06	324052	7.24	158102

Lab	IS 1	IS 2	IS 3	IS 4	IS 5
Sample ID	AREA	RT	AREA	RT	AREA
MSV1130-BS	444317	6.55	639985	7.74	299299
MSV1130-MB	328609	6.56	512973	7.74	247472
MC29766-3	322473	6.56	529348	7.74	238121
MC29830-1	296465	6.56	471192	7.74	216912
ZZZZZZ	275802	6.56	430664	7.74	217868
ZZZZZZ	339878	6.56	518739	7.75	257346
ZZZZZZ	260880	6.56	406405	7.75	201844
ZZZZZZ	266477	6.56	396057	7.74	202707
ZZZZZZ	272415	6.56	400413	7.75	206157
ZZZZZZ	314847	6.57	484515	7.75	223243
MC29766-1	268474	6.57	402625	7.75	205536
MC29766-2	428024	6.56	631954	7.74	314708
ZZZZZZ	424077	6.56	607539	7.75	291786
ZZZZZZ	324712	6.56	517707	7.75	253987
ZZZZZZ	410948	6.56	604526	7.74	299604
ZZZZZZ	387775	6.56	581653	7.74	274685
ZZZZZZ	449739	6.56	650252	7.75	301698
MC29830-1MS	464893	6.57	691197	7.75	321414
MC29830-1MSD	452854	6.56	665138	7.75	309964

- 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
6

Volatile Internal Standard Area Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSV1133-CC1058	Injection Date:	04/27/14
Lab File ID:	V30306.D	Injection Time:	09:54
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1	IS 2	IS 3	IS 4	IS 5
	AREA	RT	AREA	RT	AREA
Check Std	444998	6.56	644319	7.74	298836
Upper Limit ^a	889996	7.06	1288638	8.24	597672
Lower Limit ^b	222499	6.06	322160	7.24	149418

Lab Sample ID	IS 1	IS 2	IS 3	IS 4	IS 5
	AREA	RT	AREA	RT	AREA
MSV1133-BS	444998	6.56	644319	7.74	298836
MSV1133-MB	325507	6.55	501650	7.74	239873
ZZZZZZ	333731	6.56	523534	7.74	254076
ZZZZZZ	312734	6.55	498012	7.74	241675
ZZZZZZ	292719	6.55	467434	7.74	225762
ZZZZZZ	304852	6.56	477575	7.74	229894
MC29804-1	289764	6.55	456400	7.74	222526
ZZZZZZ	298826	6.56	472102	7.74	241494
ZZZZZZ	299723	6.56	492345	7.74	237146
ZZZZZZ	376963	6.55	556536	7.74	282352
ZZZZZZ	468706	6.56	707169	7.74	351930
MC29766-2	466561	6.55	654800	7.74	295508
ZZZZZZ	483012	6.55	729901	7.74	348623
ZZZZZZ	495269	6.55	780550	7.73	337890
MC29804-1MS	466834	6.55	672984	7.73	309801
MC29804-1MSD	457428	6.54	664297	7.73	303825

- 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.
 (h) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
 (c) Outside control limits. Target analytes not associated with this internal standard.

6.4.2
6

Volatile Surrogate Recovery Summary

Job Number: MC29766

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29766-1	V30254.D	102	92	91
MC29766-2	V30321.D	72	91	93
MC29766-2	V30255.D	77	95	95
MC29766-3	V30246.D	93	84	90
MC29804-1MS	V30331.D	80	91	92
MC29804-1MSD	V30332.D	79	90	91
MC29830-1MS	V30266.D	82	92	92
MC29830-1MSD	V30267.D	80	92	91
MSV1130-BS	V30242.D	81	91	92
MSV1130-MB	V30245.D	93	90	90
MSV1133-BS	V30306.D	81	91	89
MSV1133-MB	V30310.D	92	89	89

Surrogate Compounds

Recovery Limits

S1 = Dibromofluoromethane

70-130%

S2 = Toluene-D8

70-130%

S3 = 4-Bromofluorobenzene

70-130%

6.5.1

6

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

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Method Blank Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37623-MB	F72270.D	1	04/16/14	WK	04/15/14	OP37623	MSF3216

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29766-1, MC29766-2

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.17	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.66	2.0	0.33	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

7.1.1
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Method Blank Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37623-MB	F72270.D	1	04/16/14	WK	04/15/14	OP37623	MSF3216

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29766-1, MC29766-2

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ng/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries	Limits	
367-12-4	2-Fluorophenol	46%	15-110%
4165-62-2	Phenol-d5	30%	15-110%
118-79-6	2,4,6-Trihromophenol	82%	15-110%
4165-60-0	Nitrobenzene-d5	73%	30-130%
321-60-8	2-Fluorobiphenyl	77%	30-130%
1718-51-0	Terphenyl-d14	96%	30-130%

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

7.1.1
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Method Blank Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37624-MB	I88629.D	1	04/17/14	MR	04/15/14	OP37624	MSI3300

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29766-1, MC29766-2

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.032	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	ug/l	
85-01-8	Phenanthrene	0.019	0.050	0.013	ug/l	J
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries	Limits	
367-12-4	2-Fluorophenol	37%	15-110%
4165-62-2	Phenol-d5	25%	15-110%
118-79-6	2,4,6-Tribromophenol	83%	15-110%
4165-60-0	Nitrobenzene-d5	71%	30-130%
321-60-8	2-Fluorobiphenyl	67%	30-130%
1718-51-0	Terphenyl-d14	96%	30-130%

7.1.2
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Blank Spike Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37623-BS	F72271.D	1	04/16/14	WK	04/15/14	OP37623	MSF3216

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29766-1, MC29766-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	16.4	33	30-130
95-57-8	2-Chlorophenol	50	36.2	72	30-130
59-50-7	4-Chloro-3-methyl phenol	50	38.2	76	30-130
120-83-2	2,4-Dichlorophenol	50	38.5	77	30-130
105-67-9	2,4-Dimethylphenol	50	35.2	70	30-130
51-28-5	2,4-Dinitrophenol	50	33.5	67	30-130
534-52-1	4,6-Dinitro-o-cresol	50	41.7	83	30-130
95-48-7	2-Methylphenol	50	33.0	66	30-130
	3&4-Methylphenol	100	60.9	61	30-130
88-75-5	2-Nitrophenol	50	39.4	79	30-130
100-02-7	4-Nitrophenol	50	16.8	34	30-130
87-86-5	Pentachlorophenol	50	38.8	78	30-130
108-95-2	Phenol	50	17.1	34	30-130
95-95-4	2,4,5-Trichlorophenol	50	41.7	83	30-130
88-06-2	2,4,6-Trichlorophenol	50	41.3	83	30-130
62-53-3	Aniline	50	30.3	61	40-140
101-55-3	4-Bromophenyl phenyl ether	50	51.0	102	40-140
85-68-7	Butyl benzyl phthalate	50	54.7	109	40-140
100-51-6	Benzyl Alcohol	50	36.9	74	40-140
91-58-7	2-Chloronaphthalene	50	48.1	96	40-140
106-47-8	4-Chloroaniline	50	41.7	83	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	49.4	99	40-140
111-44-4	bis(2-Chloroethyl)ether	50	48.7	97	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	56.0	112	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	49.8	100	40-140
122-66-7	1,2-Diphenylhydrazine	50	52.0	104	40-140
121-14-2	2,4-Dinitrotoluene	50	52.2	104	40-140
606-20-2	2,6-Dinitrotoluene	50	51.8	104	40-140
91-94-1	3,3'-Dichlorobenzidine	50	46.5	93	40-140
132-64-9	Dibenzofuran	50	47.0	94	40-140
84-74-2	Di-n-butyl phthalate	50	52.7	105	40-140
117-84-0	Di-n-octyl phthalate	50	57.4	115	40-140
84-66-2	Diethyl phthalate	50	53.8	108	40-140
131-11-3	Dimethyl phthalate	50	54.0	108	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	59.0	118	40-140
118-74-1	Hexachlorobenzene	50	49.3	99	40-140

* = Outside of Control Limits.

7.2.1
7

Blank Spike Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37623-BS	F72271.D	1	04/16/14	WK	04/15/14	OP37623	MSF3216

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29766-1, MC29766-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	20.8	42	40-140
67-72-1	Hexachloroethane	50	22.1	44	40-140
78-59-1	Isophorone	50	44.6	89	40-140
88-74-4	2-Nitroaniline	50	52.6	105	40-140
99-09-2	3-Nitroaniline	50	50.7	101	40-140
100-01-6	4-Nitroaniline	50	51.9	104	40-140
98-95-3	Nitrobenzene	50	45.8	92	40-140
62-75-9	n-Nitrosodimethylamine	50	29.2	58	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	50.6	101	40-140
86-30-6	N-Nitrosodiphenylamine	50	49.6	99	40-140
110-86-1	Pyridine	50	24.7	49	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	48%	15-110%
4165-62-2	Phenol-d5	32%	15-110%
118-79-6	2,4,6-Tribromophenol	84%	15-110%
4165-60-0	Nitrobenzene-d5	80%	30-130%
321-60-8	2-Fluorobiphenyl	79%	30-130%
1718-51-0	Terphenyl-d14	92%	30-130%

* = Outside of Control Limits.

7.2.1



Blank Spike Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37624-BS	188647.D	1	04/18/14	MR	04/15/14	OP37624	MSI3301

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29766-1, MC29766-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	42.5	85	40-140
208-96-8	Acenaphthylene	50	39.9	80	40-140
120-12-7	Anthracene	50	43.8	88	40-140
56-55-3	Benzo(a)anthracene	50	49.0	98	40-140
50-32-8	Benzo(a)pyrene	50	46.4	93	40-140
205-99-2	Benzo(b)fluoranthene	50	48.7	97	40-140
191-24-2	Benzo(g,h,i)perylene	50	54.0	108	40-140
207-08-9	Benzo(k)fluoranthene	50	48.6	97	40-140
218-01-9	Chrysene	50	47.9	96	40-140
53-70-3	Dibenzo(a,h)anthracene	50	56.6	113	40-140
206-44-0	Fluoranthene	50	49.1	98	40-140
86-73-7	Fluorene	50	46.7	93	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	54.8	110	40-140
90-12-0	1-Methylnaphthalene	50	39.2	78	40-140
91-57-6	2-Methylnaphthalene	50	37.9	76	40-140
85-01-8	Phenanthrene	50	44.8	90	40-140
129-00-0	Pyrene	50	47.7	95	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	38%	15-110%
4165-62-2	Phenol-d5	26%	15-110%
118-79-6	2,4,6-Tribromophenol	88%	15-110%
4165-60-0	Nitrobenzene-d5	73%	30-130%
321-60-8	2-Fluorobiphenyl	69%	30-130%
1718-51-0	Terphenyl-d14	92%	30-130%

* = Outside of Control Limits.

7.2.2
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37623-MS	F72272.D	1	04/16/14	WK	04/15/14	OP37623	MSF3216
OP37623-MSD	F72273.D	1	04/16/14	WK	04/15/14	OP37623	MSF3216
MC29400-8	F72274.D	1	04/16/14	WK	04/15/14	OP37623	MSF3216

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29766-1, MC29766-2

CAS No.	Compound	MC29400-8 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND	50	16.4	33	50	16.8	34	2	30-130/20
95-57-8	2-Chlorophenol	ND	50	36.6	73	50	39.2	78	7	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND	50	39.3	79	50	41.3	83	5	30-130/20
120-83-2	2,4-Dichlorophenol	ND	50	39.5	79	50	41.3	83	4	30-130/20
105-67-9	2,4-Dimethylphenol	ND	50	35.7	71	50	37.6	75	5	30-130/20
51-28-5	2,4-Dinitrophenol	ND	50	37.3	75	50	37.1	74	1	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND	50	44.7	89	50	44.5	89	0	30-130/20
95-48-7	2-Methylphenol	ND	50	33.3	67	50	35.0	70	5	30-130/20
	3&4-Methylphenol	ND	100	63.2	63	100	65.6	66	4	30-130/20
88-75-5	2-Nitrophenol	ND	50	40.9	82	50	43.1	86	5	30-130/20
100-02-7	4-Nitrophenol	ND	50	17.6	35	50	17.1	34	3	30-130/20
87-86-5	Pentachlorophenol	ND	50	39.8	80	50	40.4	81	1	30-130/20
108-95-2	Phenol	ND	50	16.6	33	50	18.0	36	8	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND	50	44.0	88	50	45.7	91	4	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND	50	44.0	88	50	44.6	89	1	30-130/20
62-53-3	Aniline	ND	50	31.2	62	50	33.4	67	7	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND	50	53.7	107	50	55.1	110	3	40-140/20
85-68-7	Butyl benzyl phthalate	ND	50	56.7	113	50	59.7	119	5	40-140/20
100-51-6	Benzyl Alcohol	ND	50	38.8	78	50	41.2	82	6	40-140/20
91-58-7	2-Chloronaphthalene	ND	50	50.3	101	50	51.6	103	3	40-140/20
106-47-8	4-Chloroaniline	ND	50	44.3	89	50	46.5	93	5	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND	50	52.4	105	50	55.0	110	5	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND	50	49.3	99	50	52.8	106	7	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND	50	57.5	115	50	61.0	122	6	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND	50	50.5	101	50	52.6	105	4	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND	50	54.8	110	50	56.2	112	3	40-140/20
121-14-2	2,4-Dinitrotoluene	ND	50	55.1	110	50	56.3	113	2	40-140/20
606-20-2	2,6-Dinitrotoluene	ND	50	55.2	110	50	56.1	112	2	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND	50	49.2	98	50	51.3	103	4	40-140/20
132-64-9	Dibenzofuran	ND	50	48.0	96	50	49.8	100	4	40-140/20
84-74-2	Di-n-butyl phthalate	ND	50	55.0	110	50	55.6	111	1	40-140/20
117-84-0	Di-n-octyl phthalate	ND	50	58.2	116	50	62.4	125	7	40-140/20
84-66-2	Diethyl phthalate	ND	50	56.0	112	50	56.5	113	1	40-140/20
131-11-3	Dimethyl phthalate	ND	50	56.7	113	50	57.0	114	1	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND	50	59.3	119	50	63.0	126	6	40-140/20
118-74-1	Hexachlorobenzene	ND	50	53.8	108	50	53.5	107	1	40-140/20

* = Outside of Control Limits.

7.3.1



Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37623-MS	F72272.D	1	04/16/14	WK	04/15/14	OP37623	MSF3216
OP37623-MSD	F72273.D	1	04/16/14	WK	04/15/14	OP37623	MSF3216
MC29400-8	F72274.D	1	04/16/14	WK	04/15/14	OP37623	MSF3216

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29766-1, MC29766-2

CAS No.	Compound	MC29400-8 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND	50	21.3	43	50	21.5	43	1	40-140/20
67-72-1	Hexachloroethane	ND	50	21.4	43	50	21.0	42	2	40-140/20
78-59-1	Isophorone	ND	50	46.7	93	50	49.3	99	5	40-140/20
88-74-4	2-Nitroaniline	ND	50	55.1	110	50	56.7	113	3	40-140/20
99-09-2	3-Nitroaniline	ND	50	53.0	106	50	54.7	109	3	40-140/20
100-01-6	4-Nitroaniline	ND	50	53.9	108	50	54.9	110	2	40-140/20
98-95-3	Nitrobenzene	ND	50	47.7	95	50	49.8	100	4	40-140/20
62-75-9	n-Nitrosodimethylamine	ND	50	29.8	60	50	32.1	64	7	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND	50	52.4	105	50	55.8	112	6	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND	50	51.8	104	50	52.0	104	0	40-140/20
110-86-1	Pyridine	ND	50	25.2	50	50	27.2	54	8	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29400-8	Limits
367-12-4	2-Fluorophenol	49%	51%	49%	15-110%
4165-62-2	Phenol-d5	33%	34%	31%	15-110%
118-79-6	2,4,6-Tribromophenol	91%	90%	84%	15-110%
4165-60-0	Nitrobenzene-d5	83%	86%	78%	30-130%
321-60-8	2-Fluorobiphenyl	81%	83%	81%	30-130%
1718-51-0	Terphenyl-d14	96%	99%	95%	30-130%

* = Outside of Control Limits.

7.3.1



Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37624-MS	I88631.D	1	04/17/14	MR	04/15/14	OP37624	MSI3300
OP37624-MSD	I88632.D	1	04/17/14	MR	04/15/14	OP37624	MSI3300
MC29400-9	I88633.D	1	04/17/14	MR	04/15/14	OP37624	MSI3300

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29766-1, MC29766-2

CAS No.	Compound	MC29400-9 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND	50	44.0	88	50	44.8	90	2	40-140/20
208-96-8	Acenaphthylene	ND	50	42.9	86	50	43.8	88	2	40-140/20
120-12-7	Anthracene	ND	50	46.7	93	50	48.1	96	3	40-140/20
56-55-3	Benzo(a)anthracene	ND	50	51.5	103	50	52.3	105	2	40-140/20
50-32-8	Benzo(a)pyrene	ND	50	49.0	98	50	49.7	99	1	40-140/20
205-99-2	Benzo(b)fluoranthene	ND	50	52.0	104	50	52.5	105	1	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND	50	56.3	113	50	57.1	114	1	40-140/20
207-08-9	Benzo(k)fluoranthene	ND	50	52.4	105	50	52.8	106	1	40-140/20
218-01-9	Chrysene	ND	50	49.4	99	50	50.5	101	2	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND	50	59.2	118	50	60.0	120	1	40-140/20
206-44-0	Fluoranthene	ND	50	51.3	103	50	51.4	103	0	40-140/20
86-73-7	Fluorene	ND	50	47.6	95	50	49.7	99	4	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND	50	57.1	114	50	58.1	116	2	40-140/20
90-12-0	1-Methylnaphthalene	ND	50	40.5	81	50	41.0	82	1	40-140/20
91-57-6	2-Methylnaphthalene	ND	50	39.3	79	50	39.3	79	0	40-140/20
85-01-8	Phenanthrene	0.018	J	50	47.0	94	48.9	98	4	40-140/20
129-00-0	Pyrene	ND	50	50.5	101	50	51.5	103	2	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29400-9	Limits
367-12-4	2-Fluorophenol	40%	41%	39%	15-110%
4165-62-2	Phenol-d5	27%	28%	26%	15-110%
118-79-6	2,4,6-Tribromophenol	91%	92%	84%	15-110%
4165-60-0	Nitrobenzene-d5	76%	78%	74%	30-130%
321-60-8	2-Fluorobiphenyl	71%	74%	71%	30-130%
1718-51-0	Terphenyl-d14	96%	97%	95%	30-130%

* = Outside of Control Limits.

7.3.2
7

Semivolatile Internal Standard Area Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSF3216-CC3181	Injection Date:	04/16/14
Lab File ID:	F72269.D	Injection Time:	14:43
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	532860	4.21	1942999	5.26	1142898	6.77	1958306	8.07	2047693	10.64	1964039	12.33
Upper Limit ^a	1065720	4.71	3885998	5.76	2285796	7.27	3916612	8.57	4095386	11.14	3928078	12.83
Lower Limit ^b	266430	3.71	971500	4.76	571449	6.27	979153	7.57	1023847	10.14	982020	11.83

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37623-MB	430408	4.21	1544327	5.26	905478	6.77	1547462	8.07	1700085	10.64	1602197	12.33
OP37623-BS	399927	4.21	1451318	5.26	851046	6.77	1482694	8.07	1598771	10.64	1515750	12.33
OP37623-MS	453764	4.21	1628066	5.26	956526	6.77	1630540	8.07	1768304	10.64	1724429	12.33
OP37623-MSD	518830	4.21	1874514	5.26	1108702	6.77	1906164	8.07	1953512	10.65	1850083	12.33
MC29400-8	519605	4.21	1847270	5.26	1087088	6.77	1834740	8.07	1968709	10.64	1848156	12.33
MC29766-1	513356	4.21	1865665	5.25	1088301	6.77	1860334	8.07	2031244	10.64	1961573	12.33
MC29766-2	462482	4.21	1650839	5.26	985442	6.77	1678039	8.07	1862777	10.64	1784045	12.33
ZZZZZZ	473156	4.21	1687534	5.26	996939	6.77	1668717	8.07	1760650	10.64	1643548	12.33
ZZZZZZ	514408	4.21	1846921	5.25	1067837	6.77	1816621	8.07	1937232	10.64	1821908	12.33
ZZZZZZ	519766	4.21	1868159	5.25	1089802	6.77	1846276	8.07	1939409	10.64	1815337	12.33
ZZZZZZ	505250	4.21	1844517	5.25	1065250	6.77	1818859	8.07	1934319	10.64	1812412	12.33
ZZZZZZ	514207	4.21	1814889	5.25	1090067	6.77	1811297	8.07	1921826	10.64	1888500	12.33
ZZZZZZ	532564	4.21	1926562	5.25	1136033	6.77	1934895	8.07	2077383	10.64	2007288	12.33
ZZZZZZ	520805	4.21	1877449	5.25	1121284	6.78	1876584	8.07	2049082	10.64	2168167	12.34
ZZZZZZ	455031	4.21	1656459	5.26	975525	6.77	1648671	8.07	1782208	10.64	1826052	12.33
ZZZZZZ	464837	4.21	1681675	5.26	978944	6.77	1669751	8.07	1781607	10.64	1824242	12.33
ZZZZZZ	507071	4.21	1781983	5.26	1142059	6.77	1791218	8.07	1929940	10.64	1912833	12.33
ZZZZZZ	469836	4.21	1690415	5.26	986548	6.77	1681861	8.07	1766372	10.64	1741389	12.32
ZZZZZZ	505498	4.21	1833625	5.26	1083125	6.77	1850211	8.07	1995004	10.64	2004572	12.33
ZZZZZZ	570696	4.21	2029894	5.25	1190550	6.77	1989575	8.07	2097587	10.64	2133505	12.33
ZZZZZZ	883567	4.21	3051673	5.26	1706789	6.77	2598714	8.07	2461234	10.64	2455977	12.34
ZZZZZZ	831709	4.21	2848401	5.26	1591127	6.77	2491649	8.07	2296711	10.64	2232661	12.33
ZZZZZZ	876883	4.21	2990179	5.26	1656607	6.78	2609477	8.07	2369140	10.64	2448554	12.33
ZZZZZZ	861105	4.21	2998352	5.26	1641799	6.78	2512454	8.07	2316266	10.64	2466420	12.33

- 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: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSI3300-CC3238	Injection Date:	04/17/14
Lab File ID:	I88614.D	Injection Time:	11:45
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	323300	3.99	765375	5.03	458505	6.57	795160	7.93	592197	10.71	1485036	12.19
Upper Limit ^a	646600	4.49	1530750	5.53	917010	7.07	1590320	8.43	1184394	11.21	2970072	12.69
Lower Limit ^b	161650	3.49	382688	4.53	229253	6.07	397580	7.43	296099	10.21	742518	11.69

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37631-MB	269931	3.99	632438	5.03	368169	6.56	629728	7.93	466200	10.71	1147383	12.19
OP37631-BS	269009	3.99	631650	5.03	367219	6.57	619155	7.94	470148	10.72	1163769	12.19
ZZZZZZ	247237	3.99	577041	5.03	335553	6.56	565754	7.93	426113	10.71	1076763	12.19
ZZZZZZ	226189	3.99	529442	5.03	302730	6.56	512764	7.93	378520	10.71	962859	12.19
ZZZZZZ	216390	3.99	490106	5.03	293614	6.56	501367	7.93	374019	10.71	941174	12.18
ZZZZZZ	212892	3.99	493968	5.03	289792	6.56	495352	7.93	370009	10.71	922042	12.19
ZZZZZZ	195187	3.99	455368	5.03	264475	6.56	445897	7.93	324906	10.71	816007	12.18
ZZZZZZ	198104	3.99	463015	5.03	266573	6.56	447415	7.93	336335	10.71	842332	12.18
ZZZZZZ	183093	3.99	431540	5.03	246876	6.56	420323	7.93	309975	10.71	776510	12.18
ZZZZZZ	197354	3.99	463985	5.03	266451	6.56	449047	7.93	337355	10.71	842712	12.18
ZZZZZZ	207675	3.96	485562	5.03	279376	6.56	470572	7.93	350723	10.71	881988	12.18
ZZZZZZ	221253	3.99	517671	5.03	297316	6.56	506167	7.93	373336	10.71	939781	12.18
ZZZZZZ	222641	3.99	501216	5.03	301440	6.56	510781	7.93	381911	10.71	956052	12.18
ZZZZZZ	178254	3.99	416258	5.03	239024	6.56	407758	7.93	299775	10.71	751202	12.18
OP37624-MB	180097	3.99	417917	5.03	242533	6.56	407468	7.93	299030	10.71	748898	12.18
OP37624-MS	234050	3.99	538513	5.03	317283	6.57	529394	7.94	395838	10.71	964046	12.19
OP37624-MSD	206917	3.99	480533	5.03	279975	6.57	458081	7.93	350692	10.71	863530	12.19
MC29400-9	168840	3.99	394123	5.03	224897 ^c	6.56	379485 ^c	7.93	279980 ^c	10.71	699051 ^c	12.18
MC29766-1	178943	3.99	415593	5.03	236568	6.56	403380	7.93	297521	10.71	744775	12.18
MC29766-2	181904	3.99	416993	5.03	249277	6.56	424450	7.93	307570	10.71	776138	12.18

- 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) Outside control limits due to possible matrix interference.

7.4.2



Semivolatile Internal Standard Area Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSI3301-CC3238	Injection Date:	04/18/14
Lab File ID:	I88641.D	Injection Time:	07:58
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	345916	3.98	792664	5.02	477419	6.55	825706	7.92	608810	10.70	1516563	12.17
Upper Limit ^a	691832	4.48	1585328	5.52	954838	7.05	1651412	8.42	1217620	11.20	3033126	12.67
Lower Limit ^b	172958	3.48	396332	4.52	238710	6.05	412853	7.42	304405	10.20	758282	11.67

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37629-MB	326421	3.98	763872	5.02	438190	6.55	737398	7.92	520941	10.69	1295046	12.17
OP37629-BS	327825	3.98	775397	5.02	444380	6.55	732674	7.92	539783	10.70	1287455	12.17
OP37629-MS	318804	3.98	757894	5.02	440271	6.55	727839	7.92	538662	10.70	1287882	12.17
OP37629-MSD	326742	3.98	772639	5.02	444261	6.55	738837	7.92	527940	10.70	1264835	12.17
MC29772-1	299539	3.98	699066	5.02	411195	6.55	699486	7.92	512404	10.69	1240695	12.17
OP37624-BS	250797	3.98	593235	5.02	349254	6.55	585441	7.93	442308	10.70	1075633	12.17
ZZZZZZ	299816	3.98	709860	5.02	411652	6.55	695191	7.92	488687	10.69	1180223	12.17
ZZZZZZ	313913	3.98	744870	5.02	432305	6.55	726195	7.92	517483	10.69	1267261	12.17
ZZZZZZ	315049	3.98	749501	5.02	435626	6.55	731019	7.92	516004	10.69	1263425	12.17
ZZZZZZ	308746	3.98	730286	5.02	422823	6.55	711246	7.93	502158	10.69	1219468	12.17
ZZZZZZ	280916	3.98	658173	5.02	378501	6.55	638295	7.92	447581	10.69	1093784	12.17
ZZZZZZ	306022	3.98	727810	5.02	413158	6.55	686460	7.92	457002	10.69	1106490	12.17
ZZZZZZ	289458	3.98	684909	5.02	396563	6.55	663316	7.92	439837	10.69	1075612	12.17
ZZZZZZ	298407	3.98	703941	5.02	404863	6.55	660483	7.92	463893	10.69	1078739	12.17

- 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.

7.4.3



Semivolatile Surrogate Recovery Summary

Job Number: MC29766

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29766-1	F72275.D	39	25	75	62	67	82
MC29766-2	F72276.D	52	33	89	74	74	91
OP37623-BS	F72271.D	48	32	84	80	79	92
OP37623-MB	F72270.D	46	30	82	73	77	96
OP37623-MS	F72272.D	49	33	91	83	81	96
OP37623-MSD	F72273.D	51	34	90	86	83	99

Surrogate Compounds Recovery Limits

S1 = 2-Fluorophenol 15-110%

S2 = Phenol-d5 15-110%

S3 = 2,4,6-Tribromophenol 15-110%

S4 = Nitrobenzene-d5 30-130%

S5 = 2-Fluorobiphenyl 30-130%

S6 = Terphenyl-d14 30-130%

7.5.1
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Semivolatile Surrogate Recovery Summary

Job Number: MC29766

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29766-1	I88634.D	60	61	82
MC29766-2	I88635.D	69	67	92
OP37624-BS	I88647.D	73	69	92
OP37624-MB	I88629.D	71	67	96
OP37624-MS	I88631.D	76	71	96
OP37624-MSD	I88632.D	78	74	97

Surrogate Compounds Recovery Limits

S1 = Nitrobenzene-d5 30-130%
S2 = 2-Fluorobiphenyl 30-130%
S3 = Terphenyl-d14 30-130%

7.5.2



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: MC29766
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37606-MB	YZ89225.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541

The QC reported here applies to the following samples:

Method: SW846 8011

MC29766-1, MC29766-2, MC29766-4

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)	74%	36-173%
460-00-4	Bromofluorobenzene (S)	59%	36-173%

8.1.1
8

Blank Spike Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37606-BS	YZ89226.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541

The QC reported here applies to the following samples:

Method: SW846 8011

MC29766-1, MC29766-2, MC29766-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.049	69	60-140
106-93-4	1,2-Dibromoethane	0.071	0.046	65	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	52%	36-173%
460-00-4	Bromofluorobenzene (S)	50%	36-173%

8.2.1
8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37606-MS	YZ89227.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
OP37606-MSD	YZ89228.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541
MC29713-2	YZ89229.D	1	04/15/14	SZ	04/14/14	OP37606	GYZ7541

The QC reported here applies to the following samples:

Method: SW846 8011

MC29766-1, MC29766-2, MC29766-4

CAS No.	Compound	MC29713-2 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.0685	0.061	89	0.0675	0.063	93	3	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.0685	0.045	66	0.0675	0.054	80	18	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC29713-2	Limits
460-00-4	Bromofluorobenzene (S)	67%	88%	62%	36-173%
460-00-4	Bromofluorobenzene (S)	63%	73%	54%	36-173%

8.3.1



* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC29766

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29766-1	YZ89250.D	133	100
MC29766-2	YZ89251.D	133	113
MC29766-4	YZ89252.D	140	106
OP37606-BS	YZ89226.D	52	50
OP37606-MB	YZ89225.D	74	59
OP37606-MS	YZ89227.D	67	63
OP37606-MSD	YZ89228.D	88	73

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: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7541-ICC7541	Injection Date:	04/15/14
Lab File ID:	YZ89221.D	Injection Time:	10:38
Instrument ID:	GCYZ	Method:	SW846 8011

S1^a S1^b
 RT RT

Check Std	4.08	4.76
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Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
OP37606-MB	YZ89225.D	04/15/14	13:15	4.08	4.76
OP37606-BS	YZ89226.D	04/15/14	13:42	4.08	4.76
OP37606-MS	YZ89227.D	04/15/14	14:10	4.08	4.76
OP37606-MSD	YZ89228.D	04/15/14	14:38	4.08	4.76
MC29713-2	YZ89229.D	04/15/14	15:05	4.08	4.76
ZZZZZZ	YZ89230.D	04/15/14	15:33	4.08	4.76
ZZZZZZ	YZ89231.D	04/15/14	16:00	4.08	4.76
ZZZZZZ	YZ89232.D	04/15/14	16:28	4.08	4.76
ZZZZZZ	YZ89233.D	04/15/14	16:56	4.08	4.76
ZZZZZZ	YZ89234.D	04/15/14	17:25	4.08	4.76

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: MC29766
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7542-CC7541	Injection Date:	04/16/14
Lab File ID:	YZ89249.D	Injection Time:	10:38
Instrument ID:	GYZ	Method:	SW846 8011

S1^a S1^b
 RT RT

Check Std	4.08	4.76
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Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
MC29766-1	YZ89250.D	04/16/14	11:25	4.08	4.75
MC29766-2	YZ89251.D	04/16/14	11:50	4.07	4.75
MC29766-4	YZ89252.D	04/16/14	12:15	4.07	4.75
GYZ7542-ECC754	YZ89253.D	04/16/14	13:05	4.07	4.76

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 – 2nd Quarter 2014 Data Review

Laboratory SDG: MC29805

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 5/19/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2013

Sample Identification	Sample Identification
T12-ROX-041514	P74-ROX-041514-EB
P74-ROX-041514	P59-ROX-041514
P57-ROX-041514	P58-ROX-041514
TB-ROX-041514-HCL	TB-ROX-041514-ST

1.0 Data Package Completeness

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

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated SVOCs and PAHs were detected in the method blank; VOCs, SVOCs, and PAHs were also detected in the equipment blank. VOC and SVOC LCS recoveries were outside evaluation criteria. The VOC surrogate recovery for dibromofluoromethane was outside evaluation criteria in P58-ROX-041514-Run#1. The internal standard area recoveries for tert butyl alcohol-d₉ and 1,4-difluorobenzene were outside criteria in several samples. Several samples were diluted due to high levels of VOC target analytes. Professional judgment was used to qualify 1,2,4-trimethylbenzene in samples P57-ROX-041514 and P58-ROX-041514 due to an exceedance of the calibration range of the instrument. These issues are addressed further in the appropriate sections below. Additionally, continuing calibration verification for acetone and 2-hexanone exceeded 40 percent difference (%D), and continuing calibration verification for 1,2-dibromo-3-chloropropane exceeded criteria.

The cooler receipt form indicated that two of two coolers were received by the laboratory at temperatures of 0.6°C and 1.5°C, which are outside the 4°C ± 2°C 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
P74-ROX-041514-EB	VOCs	Benzene	0.36 µg/L
P74-ROX-041514-EB	SVOCs	3&4-Methylphenol	6.1 µg/L
P74-ROX-041514-EB	SVOCs	Phenol	24.3 µg/L
P74-ROX-041514-EB	SVOCs	Di-n-butyl phthalate	0.37 µg/L
P74-ROX-041514-EB	PAHs	1-Methylnaphthalene	0.70 µg/L
P74-ROX-041514-EB	PAHs	2-Methylnaphthalene	1.3 µg/L
P74-ROX-041514-EB	PAHs	Phenanthrene	0.12 µg/L
OP37647-MB	SVOCs	Di-n-butyl phthalate	0.83 µg/L
OP37647-MB	SVOCs	bis(2-Ethylhexyl)phthalate	1.4 µg/L
OP37648-MB	PAHs	Phenanthrene	0.031 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. P74-ROX-041514-EB is a quality control sample and is not qualified. Please see Section 12.0 of this review for additional qualifications regarding samples associated with the equipment blank, and phenanthrene in method blank OP37648-MB.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
T12-ROX-041514	SVOCs	Di-n-butyl phthalate	-	U
P74-ROX-041514	SVOCs	Di-n-butyl phthalate	-	U
P57-ROX-041514	SVOCs	Di-n-butyl phthalate	-	U
P58-ROX-041514	SVOCs	Di-n-butyl phthalate	-	U
P58-ROX-041514	SVOCs	bis(2-Ethylhexyl)phthalate	-	U

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV1133-BS	VOCs	Acetone	150	70-130
MSV1133-BS	VOCs	2-Hexanone	146	70-130
MSV1134-BS	VOCs	Acetone	68	70-130
MSV1134-BS	VOCs	1,2,3-Trichloropropane	136	70-130
OP37647-BS	SVOCs	2,4-Dimethylphenol	25	30-130
OP37647-BS	SVOCs	4-Nitrophenol	26	30-130
OP37647-BS	SVOCs	Phenol	23	30-130
OP37647-BS	SVOCs	Hexachlorocyclopentadiene	27	40-140
OP37647-BS	SVOCs	n-Nitrosodimethylamine	25	40-140
OP37647-BS	SVOCs	n-Nitroso-di-n-propylamine	37	40-140
OP37647-BS	SVOCs	Pyridine	38	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. P74-ROX-041514-EB is a quality control sample and is not qualified.

Sample ID	Parameter	Analyte	Qualification
T12-ROX-041514	VOCs	Acetone	UJ
P74-ROX-041514	VOCs	Acetone	J
P59-ROX-041514	VOCs	Acetone	UJ
P57-ROX-041514	VOCs	Acetone	UJ
P58-ROX-041514	VOCs	Acetone	UJ
T12-ROX-041514	SVOCs	2,4-Dimethylphenol	UJ
T12-ROX-041514	SVOCs	4-Nitrophenol	UJ
T12-ROX-041514	SVOCs	Hexachlorocyclopentadiene	UJ
T12-ROX-041514	SVOCs	n-Nitrosodimethylamine	UJ
T12-ROX-041514	SVOCs	n-Nitroso-di-n-propylamine	UJ
T12-ROX-041514	SVOCs	Pyridine	UJ
P74-ROX-041514	SVOCs	2,4-Dimethylphenol	UJ
P74-ROX-041514	SVOCs	4-Nitrophenol	UJ
P74-ROX-041514	SVOCs	Phenol	UJ
P74-ROX-041514	SVOCs	Hexachlorocyclopentadiene	UJ
P74-ROX-041514	SVOCs	n-Nitrosodimethylamine	UJ
P74-ROX-041514	SVOCs	n-Nitroso-di-n-propylamine	UJ
P74-ROX-041514	SVOCs	Pyridine	UJ
P59-ROX-041514	SVOCs	2,4-Dimethylphenol	UJ
P59-ROX-041514	SVOCs	4-Nitrophenol	UJ
P59-ROX-041514	SVOCs	Phenol	J
P59-ROX-041514	SVOCs	Hexachlorocyclopentadiene	UJ
P59-ROX-041514	SVOCs	n-Nitrosodimethylamine	UJ
P59-ROX-041514	SVOCs	n-Nitroso-di-n-propylamine	UJ
P59-ROX-041514	SVOCs	Pyridine	UJ
P57-ROX-041514	SVOCs	2,4-Dimethylphenol	UJ
P57-ROX-041514	SVOCs	4-Nitrophenol	UJ
P57-ROX-041514	SVOCs	Hexachlorocyclopentadiene	UJ
P57-ROX-041514	SVOCs	n-Nitrosodimethylamine	UJ
P57-ROX-041514	SVOCs	n-Nitroso-di-n-propylamine	UJ
P57-ROX-041514	SVOCs	Pyridine	UJ
P58-ROX-041514	SVOCs	2,4-Dimethylphenol	UJ
P58-ROX-041514	SVOCs	4-Nitrophenol	UJ
P58-ROX-041514	SVOCs	Phenol	J
P58-ROX-041514	SVOCs	Hexachlorocyclopentadiene	UJ
P58-ROX-041514	SVOCs	n-Nitrosodimethylamine	J
P58-ROX-041514	SVOCs	n-Nitroso-di-n-propylamine	UJ
P58-ROX-041514	SVOCs	Pyridine	UJ

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
P58-ROX-041514-Run#1	VOCs	Dibromofluoromethane	66	70-130

Analytical data that required qualification based on surrogate data are included in the table below.

Sample ID	Parameter	Analyte	Qualification
P58-ROX-041514	VOCs	All non-detects	UJ
P58-ROX-041514	VOCs	2-Butanone (MEK)	J
P58-ROX-041514	VOCs	n-Butylbenzene	J
P58-ROX-041514	VOCs	sec-Butylbenzene	J
P58-ROX-041514	VOCs	tert-Butylbenzene	J
P58-ROX-041514	VOCs	Chlorobenzene	J
P58-ROX-041514	VOCs	Isopropylbenzene	J
P58-ROX-041514	VOCs	p-Isopropyltoluene	J
P58-ROX-041514	VOCs	Naphthalene	J
P58-ROX-041514	VOCs	n-Propylbenzene	J
P58-ROX-041514	VOCs	Toluene	J
P58-ROX-041514	VOCs	1,3,5-Trimethylbenzene	J
P58-ROX-041514	VOCs	m,p-Xylene	J
P58-ROX-041514	VOCs	o-Xylene	J
P58-ROX-041514	VOCs	Xylene (total)	J

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

No

Sample ID	Parameter	Analyte	IS Area Recovery	IS Criteria
T12-ROX-041514	VOCs	Tert butyl alcohol-d ₉	299785	33048-132190
P58-ROX-041514	VOCs	1,4-Difluorobenzene	1376465	322566-1290264
P59-ROX-041514	VOCs	Tert butyl alcohol-d ₉	235599	32645-130580
P57-ROX-041514	VOCs	Tert butyl alcohol-d ₉	141764	32645-130580
P58-ROX-041514	VOCs	Tert butyl alcohol-d ₉	148040	32645-130580

Sample P58-ROX-041514 was previously qualified in Section 6.0 of this Review due to surrogate recoveries outside evaluation criteria; no further qualification of sample P58-ROX-041514 was required. There were no target analytes associated with tert butyl alcohol-d₉; 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?

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?

Yes, professional judgment was also used to qualify as estimated, however not reject, data that was associated with equipment blank P74-ROX-041514-EB, and phenanthrene data in method blank OP37648-MB, due to comparable historical detections.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
T12-ROX-041514	SVOCs	Phenol	-	J
P74-ROX-041514	PAHs	1-Methylnaphthalene	-	J
P74-ROX-041514	PAHs	2-Methylnaphthalene	-	J
P59-ROX-041514	SVOCs	3&4-Methylphenol	-	J
P57-ROX-041514	SVOCs	Phenol	-	J
P57-ROX-041514	PAHs	Phenanthrene	-	J
P58-ROX-041514	SVOCs	3&4-Methylphenol	-	J
P74-ROX-041514	PAHs	Phenanthrene	-	J

Additionally, the concentration of 1,2,4-trimethylbenzene exceeded the calibration range of the instrument in samples P57-ROX-041514 and P58-ROX-041514. Qualifications due to 1,2,4-trimethylbenzene exceeding calibration range are summarized in the table below.

Sample ID	Parameter	Analyte	Qualification	Comment
P57-ROX-041514	VOCs	1,2,4-Trimethylbenzene	J	Professional Judgment
P58-ROX-041514	VOCs	1,2,4-Trimethylbenzene	J	Professional Judgment



New England
ACCUTEST
LABORATORIES

05/19/14

Technical Report for

Shell Oil

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana,

Accutest Job Number: MC29805

Sampling Date: 04/15/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: 112



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
5/19/2014
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: MC29805

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
MC29805-1	04/15/14	09:40	DMMM04/16/14	AQ	Ground Water	T12-ROX-041514 ✓
MC29805-2	04/15/14	10:00	DMMM04/16/14	AQ	Equipment Blank	P74-ROX-041514-EB ✓
MC29805-3	04/15/14	10:55	DMMM04/16/14	AQ	Ground Water	P74-ROX-041514 ✓
MC29805-4	04/15/14	13:00	DMMM04/16/14	AQ	Ground Water	P59-ROX-041514 ✓
MC29805-5	04/15/14	13:55	DMMM04/16/14	AQ	Ground Water	P57-ROX-041514 ✓
MC29805-6	04/15/14	14:40	DMMM04/16/14	AQ	Ground Water	P58-ROX-041514 ✓
MC29805-7	04/15/14	00:00	DMMM04/16/14	AQ	Trip Blank Water	TB-ROX-041514-HCL ✓
MC29805-8	04/15/14	00:00	DMMM04/16/14	AQ	Trip Blank Water	TB-ROX-041514-ST ✓



SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Shell Oil

Job No MC29805

Site: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central

Report Date 4/30/2014 5:19:35 PM

6 Sample(s) and 2 Trip Blank(s) were collected on 04/15/2014 and were received at Accutest on 04/16/2014 properly preserved, at 0.6 Deg. C and intact. These Samples received an Accutest job number of MC29805. 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: MSV1133
--------	----	-------------------

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29804-1MS, MC29804-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for 2-Hexanone, Acetone are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 2-Chloroethyl vinyl ether, Dichlorodifluoromethane 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(s) for MSD for 1,2,3-Trichlorobenzene are outside control limits for sample MC29804-1MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- Continuing calibration check standard MSV1133-CC1058 for acetone, 2-hexanone exceed 40% Difference (response bias high). Associated samples are non-detect for these compounds
- MC29805-1 for Tert Butyl Alcohol-D9: Outside control limits. Target analytes not associated with this internal standard.

Matrix	AQ	Batch ID: MSV1134
--------	----	-------------------

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29804-4MS, MC29804-4MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC29805-5, MC29805-6 have compounds reported with "E" qualifiers indicating estimated value exceeding calibration range. Estimated value. Concentration exceeds linear calibration range.
- Blank Spike Recovery(s) for Acetone are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 1,2,3-Trichlorobenzene, 2-Chloroethyl vinyl ether are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 1,1,2,2-Tetrachloroethane, 1,2,3-Trichloropropane, 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 1,2,3-Trichlorobenzene are outside control limits for sample MC29804-4MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- MSV1134-BS for 1,2,3-Trichloropropane: Outside control limits. Associated samples are non-detect for this compound.
- MC29805-6 for Dibromofluoromethane: Outside control limits due to possible matrix interference. Confirmed by reanalysis.
- MC29805-6 has internal standards outside control limits due to possible matrix interference. Confirmed by reanalysis.
- MC29805-4, 5 for Tert Butyl Alcohol-D9: Outside control limits. Target analytes not associated with this internal standard.

Matrix	AQ	Batch ID: MSV1136
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- All samples were analyzed within the recommended method holding time.

Volatiles by GCMS By Method SW846 8260C

Matrix AQ	Batch ID: MSV1136
------------------	--------------------------

- ☛ Sample(s) MC30021-1MS, MC30021-1MSD were used as the QC samples indicated.
- ☛ All method blanks for this batch meet method specific criteria.

Extractables by GCMS By Method SW846 8270D

Matrix AQ	Batch ID: OP37647
------------------	--------------------------

- ☛ All samples were extracted within the recommended method holding time.
- ☛ All samples were analyzed within the recommended method holding time.
- ☛ Sample(s) MC29400-14MS, MC29400-14MSD were used as the QC samples indicated.
- ☛ Sample(s) MC29805-1, MC29805-2, MC29805-3, MC29805-5, MC29805-6 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- ☛ Blank Spike Recovery(s) for 2,4-Dimethylphenol, 4-Nitrophenol, Hexachlorocyclopentadiene, N-Nitroso-di-n-propylamine, n-Nitrosodimethylamine, Phenol, Pyridine are outside control limits. Blank Spike meets program technical requirements.
- ☛ Matrix Spike Recovery(s) for 2,4-Dimethylphenol, 4-Nitrophenol, n-Nitrosodimethylamine are outside control limits. Blank Spike meets program technical requirements.
- ☛ RPD(s) for MSD for 2,4-Dimethylphenol are outside control limits for sample OP37647-MSD. 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: OP37648
------------------	--------------------------

- ☛ All samples were extracted within the recommended method holding time.
- ☛ All samples were analyzed within the recommended method holding time.
- ☛ Sample(s) MC29400-17MS, MC29400-17MSD were used as the QC samples indicated.
- ☛ Sample(s) MC29805-2, MC29805-3 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: OP37671
------------------	--------------------------

- ☛ 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) MC29400-22MS, MC29400-22MSD were used as the QC samples indicated.
- ☛ Continuing calibration check standard GBB3222-CC3222 for 1,2-Dibromo-3-chloropropane exceed criteria (response bias high). Associated samples are non-detect for this compound.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC29805).

Summary of Hits

Job Number: MC29805
 Account: Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Collected: 04/15/14



Lab Sample ID	Client Sample ID	Result/ Analyte	Qual	RL	MDL	Units	Method
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MC29805-1 T12-ROX-041514

Benzene	2070	25	16	ug/l	SW846 8260C
2-Butanone (MEK)	17.0	5.0	2.3	ug/l	SW846 8260C
n-Butylbenzene	6.2	5.0	1.1	ug/l	SW846 8260C
sec-Butylbenzene	2.4 J	5.0	0.42	ug/l	SW846 8260C
Ethylbenzene	376	50	19	ug/l	SW846 8260C
Isopropylbenzene	30.6	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene	1.8 J	5.0	0.37	ug/l	SW846 8260C
Naphthalene	120	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene	53.4	5.0	0.49	ug/l	SW846 8260C
Toluene	406	50	17	ug/l	SW846 8260C
1,2,4-Trimethylbenzene	220 J	250	16	ug/l	SW846 8260C
1,3,5-Trimethylbenzene	33.9	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene	841	50	47	ug/l	SW846 8260C
o-Xylene	40.1	1.0	0.36	ng/l	SW846 8260C
Xylene (total)	864	50	18	ug/l	SW846 8260C
Phenol	67.2 J	5.6	0.34	ug/l	SW846 8270D
Dibenzofuran	0.31 J	2.2	0.29	ug/l	SW846 8270D
Di-n-butyl phthalate	0.34 JB U	5.6	0.19	ug/l	SW846 8270D
Acenaphthene	0.37	0.11	0.077	ug/l	SW846 8270D BY SIM
Anthracene	0.12	0.11	0.10	ug/l	SW846 8270D BY SIM
Fluorene	0.30	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene	18.9	0.22	0.055	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene	28.3	0.22	0.082	ug/l	SW846 8270D BY SIM
Phenanthrene	0.78	0.056	0.014	ug/l	SW846 8270D BY SIM
Pyrene	0.050 J	0.11	0.043	ng/l	SW846 8270D BY SIM

MC29805-2 P74-ROX-041514-EB

Benzene	0.36 J	0.50	0.32	ug/l	SW846 8260C
3&4-Methylphenol	6.1 J	11	0.51	ug/l	SW846 8270D
Phenol	24.3	5.4	0.33	ug/l	SW846 8270D
Di-n-butyl phthalate	0.37 JB	5.4	0.19	ug/l	SW846 8270D
1-Methylnaphthalene	0.70	0.22	0.054	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene	1.3	0.22	0.081	ug/l	SW846 8270D BY SIM
Phenanthrene	0.12 B	0.054	0.014	ug/l	SW846 8270D BY SIM

MC29805-3 P74-ROX-041514

Acetone	39.8 J	10	2.5	ug/l	SW846 8260C
Benzene	34.9	0.50	0.32	ug/l	SW846 8260C
n-Butylbenzene	1.3 J	5.0	1.1	ug/l	SW846 8260C
Ethylbenzene	4.3	1.0	0.38	ug/l	SW846 8260C
Naphthalene	0.74 J	5.0	0.69	ug/l	SW846 8260C

Summary of Hits

Job Number: MC29805
 Account: Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Collected: 04/15/14



Lab Sample ID	Client Sample ID	Result/ Analyte	Qual	RL	MDL	Units	Method
		Toluene	0.78 J	1.0	0.33	ug/l	SW846 8260C
		1,2,4-Trimethylbenzene	8.3	5.0	0.32	ug/l	SW846 8260C
		1,3,5-Trimethylbenzene	3.9 J	5.0	0.38	ug/l	SW846 8260C
		m,p-Xylene	19.3	1.0	0.93	ug/l	SW846 8260C
		o-Xylene	1.5	1.0	0.36	ug/l	SW846 8260C
		Xylene (total)	20.8	1.0	0.36	ug/l	SW846 8260C
		Di-n-butyl phthalate	1.4 JB 4	5.9	0.20	ug/l	SW846 8270D
		1-Methylnaphthalene	1.7	0.24	0.059	ug/l	SW846 8270D BY SIM
		2-Methylnaphthalene	2.2	0.24	0.087	ug/l	SW846 8270D BY SIM
		Phenanthrene	0.054 JB 4	0.059	0.015	ug/l	SW846 8270D BY SIM

MC29805-4 P59-ROX-041514

Benzene	14800	25	16	ug/l	SW846 8260C
2-Butanone (MEK)	25.3	5.0	2.3	ug/l	SW846 8260C
n-Butylbenzene	18.1	5.0	1.1	ug/l	SW846 8260C
sec-Butylbenzene	3.5 J	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene	1.4 J	5.0	0.39	ug/l	SW846 8260C
1,1-Dichloroethane	2.3	1.0	0.36	ug/l	SW846 8260C
Ethylbenzene	1690	50	19	ug/l	SW846 8260C
2-Hexanone	54.0	5.0	1.6	ug/l	SW846 8260C
Isopropylbenzene	49.5	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene	2.9 J	5.0	0.37	ug/l	SW846 8260C
Naphthalene	196	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene	79.8	5.0	0.49	ug/l	SW846 8260C
Toluene	746	50	17	ug/l	SW846 8260C
1,2,3-Trichlorobenzene	2.7 J	5.0	0.68	ug/l	SW846 8260C
1,2,4-Trimethylbenzene	385	250	16	ug/l	SW846 8260C
1,3,5-Trimethylbenzene	214	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene	4830	50	47	ug/l	SW846 8260C
o-Xylene	902	50	18	ug/l	SW846 8260C
Xylene (total)	5730	50	18	ug/l	SW846 8260C
3&4-Methylphenol	18.6 J	11	0.49	ug/l	SW846 8270D
Phenol	130 J	5.3	0.32	ug/l	SW846 8270D
Acenaphthene	1.3	0.11	0.073	ug/l	SW846 8270D BY SIM
Anthracene	0.18	0.11	0.097	ng/l	SW846 8270D BY SIM
Benzo(a)anthracene	0.060	0.053	0.021	ug/l	SW846 8270D BY SIM
Benzo(a)pyrene	0.042 J	0.11	0.030	ug/l	SW846 8270D BY SIM
Benzo(b)fluoranthene	0.044 J	0.053	0.033	ug/l	SW846 8270D BY SIM
Benzo(g,h,i)perylene	0.035 J	0.11	0.028	ug/l	SW846 8270D BY SIM
Chrysene	0.10 J	0.11	0.025	ug/l	SW846 8270D BY SIM
Fluoranthene	0.15	0.11	0.043	ug/l	SW846 8270D BY SIM
Fluorene	0.66	0.11	0.10	ng/l	SW846 8270D BY SIM
1-Methylnaphthalene	23.3	0.21	0.053	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene	31.7	0.21	0.078	ug/l	SW846 8270D BY SIM

Summary of Hits

Job Number: MC29805
 Account: Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Collected: 04/15/14



Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
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Phenanthrene		1.6	0.053	0.013	ug/l	SW846 8270D BY SIM
Pyrene		0.30	0.11	0.040	ug/l	SW846 8270D BY SIM

MC29805-5 P57-ROX-041514

Benzene		384000	500	320	ug/l	SW846 8260C
2-Butanone (MEK)		5.5	5.0	2.3	ug/l	SW846 8260C
n-Butylbenzene		15.1	5.0	1.1	ug/l	SW846 8260C
sec-Butylbenzene		13.1	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene		14.7	5.0	0.39	ug/l	SW846 8260C
Ethylbenzene		1080	1000	380	ug/l	SW846 8260C
2-Hexanone		6.2	5.0	1.6	ug/l	SW846 8260C
Isopropylbenzene		49.2	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene		11.4	5.0	0.37	ug/l	SW846 8260C
Methyl Tert Butyl Ether		56.3	1.0	0.51	ug/l	SW846 8260C
Naphthalene		272	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene		58.5	5.0	0.49	ug/l	SW846 8260C
Toluene		24.8	1.0	0.33	ug/l	SW846 8260C
1,2,3-Trichlorobenzene		1.5 J	5.0	0.68	ug/l	SW846 8260C
1,2,4-Trimethylbenzene ^a		503 E J	5.0	0.32	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		114	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene		296	1.0	0.93	ug/l	SW846 8260C
o-Xylene		14.3	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		311	1.0	0.36	ug/l	SW846 8260C
Phenol		106 J	5.6	0.34	ug/l	SW846 8270D
Dibenzofuran		0.70 J	2.2	0.29	ug/l	SW846 8270D
Di-n-butyl phthalate		0.58 JB u	5.6	0.19	ug/l	SW846 8270D
Acenaphthene		0.36	0.11	0.077	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.074 J	0.11	0.055	ug/l	SW846 8270D BY SIM
Fluorene		0.61	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		23.8	0.22	0.055	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		32.0	0.22	0.082	ug/l	SW846 8270D BY SIM
Phenanthrene		0.45 J	0.056	0.014	ug/l	SW846 8270D BY SIM

MC29805-6 P58-ROX-041514

Benzene		782000	2500	1600	ug/l	SW846 8260C
2-Butanone (MEK)		5.6	5.0	2.3	ug/l	SW846 8260C
n-Butylbenzene		21.6	5.0	1.1	ug/l	SW846 8260C
sec-Butylbenzene		18.5	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene		39.6	5.0	0.39	ug/l	SW846 8260C
Chlorobenzene		1.3	1.0	0.43	ug/l	SW846 8260C
Ethylbenzene		891 J	1000	380	ug/l	SW846 8260C
Isopropylbenzene		77.7 J	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene		11.6 J	5.0	0.37	ug/l	SW846 8260C

Summary of Hits

Job Number: MC29805
 Account: Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Collected: 04/15/14

Lab Sample ID	Client Sample ID	Result/ Analyte	Qual	RL	MDL	Units	Method
Naphthalene		277	HH	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene		104	HH	5.0	0.49	ug/l	SW846 8260C
Toluene		127	HH	1.0	0.33	ug/l	SW846 8260C
1,2,4-Trimethylbenzene ^a		530 E	HH	5.0	0.32	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		99.2	HH	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene		552	HH	1.0	0.93	ug/l	SW846 8260C
o-Xylene		90.8	HH	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		643	HH	1.0	0.36	ug/l	SW846 8260C
2-Chlorophenol		4.3 J	HH	5.3	0.33	ug/l	SW846 8270D
4-Chloro-3-methyl phenol		4.4 J	HH	11	0.87	ug/l	SW846 8270D
3&4-Methylphenol		13.6	HH	11	0.49	ug/l	SW846 8270D
Phenol		123	HH	5.3	0.32	ug/l	SW846 8270D
Aniline		2.8 J	HH	11	0.67	ug/l	SW846 8270D
Butyl benzyl phthalate		0.91 J	HH	5.3	0.56	ug/l	SW846 8270D
Benzyl Alcohol		5.1 J	HH	11	2.4	ug/l	SW846 8270D
bis(2-Chloroethyl)ether		1.5 J	HH	5.3	0.37	ug/l	SW846 8270D
Dibenzofuran		2.3	HH	2.1	0.27	ug/l	SW846 8270D
Di-n-butyl phthalate		1.3 JB U	HH	5.3	0.18	ug/l	SW846 8270D
Di-n-octyl pbthalate		0.72 J	HH	5.3	0.30	ug/l	SW846 8270D
Diethyl phthalate		0.77 J	HH	5.3	0.21	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.99 JB U	HH	2.1	0.35	ug/l	SW846 8270D
Hexachlorobenzene		0.88 J	HH	5.3	0.30	ug/l	SW846 8270D
n-Nitrosodimethylamine		2.1 J J	HH	5.3	1.1	ug/l	SW846 8270D
Acenaphthene		1.1	HH	0.11	0.073	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.72	HH	0.11	0.052	ug/l	SW846 8270D BY SIM
Anthracene		0.71	HH	0.11	0.097	ug/l	SW846 8270D BY SIM
Benzo(a)anthracene		0.82	HH	0.053	0.021	ug/l	SW846 8270D BY SIM
Benzo(a)pyrene		0.63	HH	0.11	0.030	ug/l	SW846 8270D BY SIM
Benzo(b)fluoranthene		0.72	HH	0.053	0.033	ug/l	SW846 8270D BY SIM
Benzo(g,h,i)perylene		0.71	HH	0.11	0.028	ug/l	SW846 8270D BY SIM
Benzo(k)fluoranthene		0.71	HH	0.11	0.041	ug/l	SW846 8270D BY SIM
Chrysene		0.73	HH	0.11	0.025	ug/l	SW846 8270D BY SIM
Dibenzo(a,h)anthracene		0.75	HH	0.11	0.034	ug/l	SW846 8270D BY SIM
Fluoranthene		0.79	HH	0.11	0.043	ug/l	SW846 8270D BY SIM
Fluorene		1.7	HH	0.11	0.10	ug/l	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		0.72	HH	0.11	0.032	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		28.4	HH	0.21	0.053	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		38.1	HH	0.21	0.078	ug/l	SW846 8270D BY SIM
Phenanthrene		1.3	HH	0.053	0.013	ug/l	SW846 8270D BY SIM
Pyrene		0.85	HH	0.11	0.040	ug/l	SW846 8270D BY SIM

MC29805-7 TB-ROX-041514-HCL

No hits reported in this sample.

Summary of Hits

Job Number: MC29805

Account: Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Collected: 04/15/14

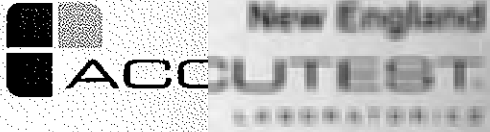


Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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MC29805-8 TB-ROX-041514-ST

No hits reported in this sample.

(a) Estimated value. Concentration exceeds linear calibration range.



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	T12-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-1	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30329.D	1	04/27/14	AMY	n/a	n/a	MSV1133
Run #2	V30356.D	50	04/28/14	AMY	n/a	n/a	MSV1134

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	UJ
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	2070 ^a	25	16	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	17.0	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	6.2	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	2.4	5.0	0.42	ug/l	J
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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

Report of Analysis

Client Sample ID:	T12-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-1	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	376 ^a	50	19	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	30.6	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	1.8	5.0	0.37	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	120	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	53.4	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	406 ^a	50	17	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	220 ^a	250	16	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	33.9	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	841 ^a	50	47	ug/l	
95-47-6	o-Xylene	40.1	1.0	0.36	ng/l	
1330-20-7	Xylene (total)	864 ^a	50	18	ug/l	

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

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

Report of Analysis

Client Sample ID:	T12-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-1	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	77%	89%	70-130%
2037-26-5	Toluene-D8	86%	88%	70-130%
460-00-4	4-Bromofluorobenzene	94%	89%	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	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	T12-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-1	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38309.D	1	04/21/14	WK	04/17/14	OP37647	MSR1412
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	WJ
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	WJ
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	67.2	5.6	0.34	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.71	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.59	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.62	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	0.31	2.2	0.29	ug/l	J
84-74-2	Di-n-butyl phthalate	0.34 W	5.6	0.19	ug/l	W JB
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

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

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

Report of Analysis

Client Sample ID:	T12-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-1	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	WJ
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	WJ
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	WJ
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	WJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		15-110%
4165-62-2	Phenol-d5	29%		15-110%
118-79-6	2,4,6-Tribromophenol	93%		15-110%
4165-60-0	Nitrobenzene-d5	69%		30-130%
321-60-8	2-Fluorobiphenyl	75%		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: T12-ROX-041514	Date Sampled: 04/15/14
Lab Sample ID: MC29805-1	Date Received: 04/16/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D BY SIM SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88668.D	1	04/21/14	MR	04/17/14	OP37648	MSI3302
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.37	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.055	ug/l	
120-12-7	Anthracene	0.12	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	0.30	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	18.9	0.22	0.055	ug/l	
91-57-6	2-Methylnaphthalene	28.3	0.22	0.082	ug/l	
85-01-8	Phenanthrene	0.78	0.056	0.014	ug/l	
129-00-0	Pyrene	0.050	0.11	0.043	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	68%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	91%		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

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Report of Analysis

Client Sample ID:	T12-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-1	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB55411.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222
Run #2							

Run #	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)	70%		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

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Report of Analysis

Client Sample ID:	P74-ROX-041514-EB	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-2	Date Received:	04/16/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30314.D	1	04/27/14	AMY	n/a	n/a	MSV1133
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	0.36	0.50	0.32	ug/l	J
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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

Report of Analysis

Client Sample ID:	P74-ROX-041514-EB	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-2	Date Received:	04/16/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P74-ROX-041514-EB	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-2	Date Received:	04/16/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		70-130%
2037-26-5	Toluene-D8	90%		70-130%
460-00-4	4-Bromofluorobenzene	89%		70-130%

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

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

Report of Analysis

Client Sample ID:	P74-ROX-041514-EB	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-2	Date Received:	04/16/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38310.D	1	04/21/14	WK	04/17/14	OP37647	MSR1412
Run #2							

Run #	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.90	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.61	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ng/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ng/l	
	3&4-Methylphenol	6.1	11	0.51	ug/l	J
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	24.3	5.4	0.33	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.40	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.51	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.58	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.61	ng/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.38	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.36	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.27	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidie	ND	5.4	0.29	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.28	ug/l	
84-74-2	Di-n-butyl phthalate	0.37	5.4	0.19	ug/l	JB
117-84-0	Di-n-octyl phthalate	ND	5.4	0.31	ug/l	

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 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P74-ROX-041514-EB	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-2	Date Received:	04/16/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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	5.4	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.37	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.36	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.33	ug/l	
78-59-1	Isophorone	ND	5.4	0.49	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.43	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.44	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	39%		15-110%
4165-62-2	Phenol-d5	27%		15-110%
118-79-6	2,4,6-Tribromophenol	93%		15-110%
4165-60-0	Nitrobenzene-d5	64%		30-130%
321-60-8	2-Fluorobiphenyl	76%		30-130%
1718-51-0	Terphenyl-d14	73%		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

Page 1 of 1

Client Sample ID: P74-ROX-041514-EB	Date Sampled: 04/15/14
Lab Sample ID: MC29805-2	Date Received: 04/16/14
Matrix: AQ - Equipment Blank	Percent Solids: n/a
Method: SW846 8270D BY SIM SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88669.D	1	04/21/14	MR	04/17/14	OP37648	MSI3302
Run #2							

Run #	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	0.70	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	1.3	0.22	0.081	ug/l	
85-01-8	Phenanthrene	0.12	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	63%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	74%		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-041514-EB	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-2	Date Received:	04/16/14
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB55412.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222
Run #2							

Run #	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)	77%		36-173%
460-00-4	Bromofluorobenzene (S)	82%		36-173%

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

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Report of Analysis

Client Sample ID:	P74-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-3	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30351.D	1	04/28/14	AMY	n/a	n/a	MSV1134
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	39.8	10	2.5	ug/l	J
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	34.9	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	1.3	5.0	1.1	ug/l	J
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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J = Indicates 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-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-3	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	4.3	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	0.74	5.0	0.69	ug/l	J
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	0.78	1.0	0.33	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	8.3	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	3.9	5.0	0.38	ug/l	J
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	19.3	1.0	0.93	ug/l	
95-47-6	o-Xylene	1.5	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	20.8	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID:	P74-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-3	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

4.3
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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	86%		70-130%

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

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

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

Report of Analysis

Client Sample ID:	P74-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-3	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38311.D	1	04/21/14	WK	04/17/14	OP37647	MSR1412
Run #2							

Run #	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	12	2.9	ug/l	
95-57-8	2-Chlorophenol	ND	5.9	0.36	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	12	0.97	ug/l	
120-83-2	2,4-Dichlorophenol	ND	12	0.47	ug/l	
105-67-9	2,4-Dimethylphenol	ND	12	0.66	ug/l	WJ
51-28-5	2,4-Dinitrophenol	ND	24	2.9	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	12	2.3	ug/l	
95-48-7	2-Methylphenol	ND	12	0.27	ug/l	
	3&4-Methylphenol	ND	12	0.55	ug/l	
88-75-5	2-Nitrophenol	ND	12	3.4	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.63	ug/l	WJ
87-86-5	Pentachlorophenol	ND	12	1.3	ug/l	
108-95-2	Phenol	ND	5.9	0.36	ug/l	WJ
95-95-4	2,4,5-Trichlorophenol	ND	12	0.44	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	12	0.21	ug/l	
62-53-3	Aniline	ND	12	0.75	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.9	0.55	ug/l	
85-68-7	Bntyl benzyl phthalate	ND	5.9	0.62	ug/l	
100-51-6	Benzyl Alcohol	ND	12	2.7	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.9	0.37	ug/l	
106-47-8	4-Chloroaniline	ND	12	0.66	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.9	0.34	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.9	0.41	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.9	0.39	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.9	0.30	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.9	0.28	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	12	0.54	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	12	0.35	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.9	0.31	ug/l	
132-64-9	Dibenzofuran	ND	2.4	0.30	ug/l	
84-74-2	Di-n-butyl phthalate	1.4 W	5.9	0.20	ug/l	W JB
117-84-0	Di-n-octyl phthalate	ND	5.9	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P74-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-3	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.9	0.24	ug/l	
131-11-3	Dimethyl phthalate	ND	5.9	0.40	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.4	0.39	ug/l	
118-74-1	Hexachlorobenzene	ND	5.9	0.34	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	1.5	ug/l	WJ
67-72-1	Hexachloroethane	ND	5.9	0.36	ug/l	
78-59-1	Isophorone	ND	5.9	0.53	ug/l	
88-74-4	2-Nitroaniline	ND	12	0.47	ug/l	
99-09-2	3-Nitroaniline	ND	12	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	12	2.5	ug/l	
98-95-3	Nitrobenzene	ND	5.9	0.46	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.9	1.2	ug/l	WJ
621-64-7	N-Nitroso-di-n-propylamine	ND	5.9	0.47	ug/l	WJ
86-30-6	N-Nitrosodiphenylamine	ND	5.9	0.23	ug/l	
110-86-1	Pyridine	ND	12	0.61	ug/l	WJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	47%		15-110%
4165-62-2	Phenol-d5	29%		15-110%
118-79-6	2,4,6-Tribromophenol	88%		15-110%
4165-60-0	Nitrobenzene-d5	68%		30-130%
321-60-8	2-Fluorobiphenyl	70%		30-130%
1718-51-0	Terphenyl-d14	68%		30-130%

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

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

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

Report of Analysis

Client Sample ID: P74-ROX-041514	Date Sampled: 04/15/14
Lab Sample ID: MC29805-3	Date Received: 04/16/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D BY SIM SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88670.D	1	04/21/14	MR	04/17/14	OP37648	MSI3302
Run #2							

Run #	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.12	0.081	ug/l	
208-96-8	Acenaphthylene	ND	0.12	0.058	ug/l	
120-12-7	Anthracene	ND	0.12	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.059	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.12	0.034	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.059	0.037	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.12	0.032	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.12	0.045	ug/l	
218-01-9	Chrysene	ND	0.12	0.028	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.12	0.038	ug/l	
206-44-0	Fluoranthene	ND	0.12	0.048	ug/l	
86-73-7	Fluorene	ND	0.12	0.12	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.12	0.036	ug/l	
90-12-0	1-Methylnaphthalene	1.7	0.24	0.059	ug/l	J
91-57-6	2-Methyluaphthalene	2.2	0.24	0.087	ug/l	J
85-01-8	Phenanthrene	0.057 u	0.059	0.015	ug/l	u JB
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	68%		30-130%
321-60-8	2-Fluorobiphenyl	62%		30-130%
1718-51-0	Terphenyl-d14	68%		30-130%

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

4.3
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Report of Analysis

Client Sample ID:	P74-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-3	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB55413.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222
Run #2							

Run #	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)	82%		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

4.3
4

Report of Analysis

Client Sample ID:	P59-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-4	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30357.D	1	04/28/14	AMY	n/a	n/a	MSV1134
Run #2	V30412.D	50	04/29/14	AMY	n/a	n/a	MSV1136

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	WJ
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	14800 ^a	25	16	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	25.3	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	18.1	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	3.5	5.0	0.42	ug/l	J
98-06-6	tert-Butylbenzene	1.4	5.0	0.39	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	2.3	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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 E = Indicates value exceeds calibration range

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

Report of Analysis

Client Sample ID:	P59-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-4	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	1690 ^a	50	19	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	54.0	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	49.5	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	2.9	5.0	0.37	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	196	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	79.8	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	746 ^a	50	17	ug/l	
87-61-6	1,2,3-Trichlorobenzene	2.7	5.0	0.68	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	385 ^a	250	16	ug/l	
108-67-8	1,3,5-Trimethylbenzene	214	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	4830 ^a	50	47	ug/l	
95-47-6	o-Xylene	902 ^a	50	18	ug/l	
1330-20-7	Xylene (total)	5730 ^a	50	18	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: P59-ROX-041514	Date Sampled: 04/15/14
Lab Sample ID: MC29805-4	Date Received: 04/16/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

4.4
4

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	79%	86%	70-130%
2037-26-5	Toluene-D8	80%	91%	70-130%
460-00-4	4-Bromofluorobenzene	96%	92%	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-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-4	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38312.D	1	04/22/14	WK	04/17/14	OP37647	MSR1412
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.6	ug/l	
95-57-8	2-Chlorophenol	ND	5.3	0.33	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.87	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.42	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.59	ug/l	WS
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.0	ug/l	
95-48-7	2-Methylphenol	ND	11	0.24	ug/l	
	3&4-Methylphenol	18.6	11	0.49	ug/l	J
88-75-5	2-Nitrophenol	ND	11	3.0	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.56	ug/l	WS
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	130	5.3	0.32	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND	11	0.39	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.18	ug/l	
62-53-3	Aniline	ND	11	0.67	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.50	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.56	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.4	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.33	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.59	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.30	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.37	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.35	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.25	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.48	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.28	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	0.18	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	0.30	ug/l	

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

J = Indicates 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-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-4	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.3	0.21	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.36	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.35	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	WJ
67-72-1	Hexachloroethane	ND	5.3	0.32	ug/l	
78-59-1	Isophorone	ND	5.3	0.47	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.42	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.41	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	1.1	ug/l	WJ
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.42	ug/l	WJ
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.20	ug/l	
110-86-1	Pyridine	ND	11	0.54	ug/l	WJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	49%		15-110%
4165-62-2	Phenol-d5	28%		15-110%
118-79-6	2,4,6-Tribromophenol	100%		15-110%
4165-60-0	Nitrobenzene-d5	87%		30-130%
321-60-8	2-Fluorobiphenyl	60%		30-130%
1718-51-0	Terphenyl-d14	104%		30-130%

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

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

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

Report of Analysis

Client Sample ID:	P59-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-4	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88671.D	1	04/21/14	MR	04/17/14	OP37648	MSI3302
Run #2							

Run #	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	1.3	0.11	0.073	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.052	ug/l	
120-12-7	Anthracene	0.18	0.11	0.097	ug/l	
56-55-3	Benzo(a)anthracene	0.060	0.053	0.021	ug/l	
50-32-8	Benzo(a)pyrene	0.042	0.11	0.030	ug/l	J
205-99-2	Benzo(b)fluoranthene	0.044	0.053	0.033	ug/l	J
191-24-2	Benzo(g,h,i)perylene	0.035	0.11	0.028	ug/l	J
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.041	ug/l	
218-01-9	Chrysene	0.10	0.11	0.025	ug/l	J
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.034	ug/l	
206-44-0	Fluoranthene	0.15	0.11	0.043	ug/l	
86-73-7	Fluorene	0.66	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	23.3	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	31.7	0.21	0.078	ug/l	
85-01-8	Phenanthrene	1.6	0.053	0.013	ug/l	
129-00-0	Pyrene	0.30	0.11	0.040	ug/l	

CAS No.	Surr ogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	87%		30-130%
321-60-8	2-Fluorobiphenyl	50%		30-130%
1718-51-0	Terphenyl-d14	110%		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-041514		Date Sampled: 04/15/14
Lab Sample ID: MC29805-4		Date Received: 04/16/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8011 SW846 8011		
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB55414.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222
Run #2							

Run #	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)	99%		36-173%		

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

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Report of Analysis

Client Sample ID:	P57-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-5	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30358.D	1	04/28/14	AMY	n/a	n/a	MSV1134
Run #2	V30410.D	1000	04/29/14	AMY	n/a	n/a	MSV1136

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	WJ
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	384000 ^a	500	320	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	5.5	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	15.1	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	13.1	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	14.7	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P57-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-5	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	1080 ^a	1000	380	ug/l	
87-68-3	Hexachlorobntadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	6.2	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	49.2	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	11.4	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	56.3	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	272	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	58.5	5.0	0.49	ng/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	24.8	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	1.5	5.0	0.68	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ng/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Tricloro fluoromethaue	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene ^b	503	5.0	0.32	ug/l	J E
108-67-8	1,3,5-Trimethylbenzene	114	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	296	1.0	0.93	ug/l	
95-47-6	o-Xylene	14.3	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	311	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID:	P57-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-5	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	72%	94%	70-130%
2037-26-5	Toluene-D8	75%	89%	70-130%
460-00-4	4-Bromofluorobenzene	93%	89%	70-130%

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

- (a) Result is from Run# 2
- (b) Estimated value. Concentration exceeds linear calibration range.

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

Report of Analysis

Client Sample ID:	P57-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-5	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38313.D	1	04/22/14	WK	04/17/14	OP37647	MSR1412
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	WJ
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	WJ
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	106	5.6	0.34	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.71	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.59	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.62	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	0.70	2.2	0.29	ug/l	J
84-74-2	Di-n-butyl phthalate	0.58 W	5.6	0.19	ug/l	W JB
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

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

4.5
4

Report of Analysis

Client Sample ID:	P57-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-5	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	UJ
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	UJ
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	39%		15-110%
4165-62-2	Phenol-d5	26%		15-110%
118-79-6	2,4,6-Tribromophenol	89%		15-110%
4165-60-0	Nitrobenzene-d5	64%		30-130%
321-60-8	2-Fluorobiphenyl	76%		30-130%
1718-51-0	Terphenyl-d14	87%		30-130%

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

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

Report of Analysis

Client Sample ID:	P57-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-5	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88672.D	1	04/21/14	MR	04/17/14	OP37648	MS13302
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.36	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	0.074	0.11	0.055	ug/l	J
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	0.61	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	23.8	0.22	0.055	ug/l	
91-57-6	2-Methylnaphthalene	32.0	0.22	0.082	ug/l	
85-01-8	Phenanthrene	0.45	0.056	0.014	ug/l	J
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	66%		30-130%
321-60-8	2-Fluorobiphenyl	67%		30-130%
1718-51-0	Terphenyl-d14	85%		30-130%

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

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Report of Analysis

Client Sample ID: P57-ROX-041514		Date Sampled: 04/15/14
Lab Sample ID: MC29805-5		Date Received: 04/16/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8011 SW846 8011		
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB55415.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222
Run #2							

Run #	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)	62%		36-173%		
460-00-4	Bromofluorobenzene (S)	83%		36-173%		

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

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Report of Analysis

Client Sample ID:	P58-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-6	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30359.D	1	04/28/14	AMY	n/a	n/a	MSV1134
Run #2	V30411.D	1000	04/29/14	AMY	n/a	n/a	MSV1136
Run #3	V30413.D	5000	04/29/14	AMY	n/a	n/a	MSV1136

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml
Run #3	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	WJ
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	↓
71-43-2	Benzene	782000 ^a	2500	1600	ug/l	WJ
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	WJ
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	↓
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	↓
75-25-2	Bromoform	ND	1.0	0.61	ug/l	↓
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	↓
78-93-3	2-Butanone (MEK)	5.6	5.0	2.3	ug/l	J
104-51-8	n-Butylbenzene	21.6	5.0	1.1	ng/l	J
135-98-8	sec-Butylbenzene	18.5	5.0	0.42	ug/l	J
98-06-6	tert-Butylbenzene	39.6	5.0	0.39	ng/l	J
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	WJ
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	WJ
108-90-7	Chlorobenzene	1.3	1.0	0.43	ug/l	J
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	WJ
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	↓
67-66-3	Chloroform	ND	1.0	0.41	ug/l	WJ
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	WJ
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	WJ
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	WJ
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	WJ
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	WJ
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	WJ
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	WJ
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	WJ
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	WJ
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	WJ
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	WJ

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

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Report of Analysis

Client Sample ID:	P58-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-6	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

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VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	WJ
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	↓
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	↓
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	↓
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	↓
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	↓
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	↓
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	↓
123-91-1	1,4-Dioxane	ND	25	11	ug/l	↓
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	↓
100-41-4	Ethylbenzene	891 ^b	1000	380	ug/l	WJ
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	WJ
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	WJ
98-82-8	Isopropylbenzene	77.7	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	11.6	5.0	0.37	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	WJ
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	↓
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	↓
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	↓
91-20-3	Naphthalene	277	5.0	0.69	ug/l	J
103-65-1	n-Propylbenzene	104	5.0	0.49	ug/l	J
100-42-5	Styrene	ND	5.0	0.85	ug/l	WJ
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	↓
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	↓
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	↓
108-88-3	Toluene	127	1.0	0.33	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	WJ
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	↓
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	↓
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	↓
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	↓
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	↓
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	↓
95-63-6	1,2,4-Trimethylbenzene ^c	530	5.0	0.32	ug/l	J E
108-67-8	1,3,5-Trimethylbenzene	99.2	5.0	0.38	ug/l	J
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	WJ
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	WJ
	m,p-Xylene	552	1.0	0.93	ug/l	J
95-47-6	o-Xylene	90.8	1.0	0.36	ug/l	J
1330-20-7	Xylene (total)	643	1.0	0.36	ug/l	J

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

Report of Analysis

Client Sample ID:	P58-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-6	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	66% d	96%	100%	70-130%
2037-26-5	Toluene-D8	78%	87%	89%	70-130%
460-00-4	4-Bromofluorobenzene	90%	92%	90%	70-130%

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

- (a) Result is from Run# 3
- (b) Result is from Run# 2
- (c) Estimated value. Concentration exceeds linear calibration range.
- (d) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

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

Report of Analysis

Client Sample ID:	P58-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-6	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38314.D	1	04/22/14	WK	04/17/14	OP37647	MSR1412
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.6	ug/l	
95-57-8	2-Chlorophenol	4.3	5.3	0.33	ug/l	J
59-50-7	4-Chloro-3-methyl phenol	4.4	11	0.87	ug/l	J
120-83-2	2,4-Dichlorophenol	ND	11	0.42	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.59	ug/l	WJ
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.0	ug/l	
95-48-7	2-Methylphenol	ND	11	0.24	ug/l	
	3&4-Methylphenol	13.6	11	0.49	ug/l	J
88-75-5	2-Nitrophenol	ND	11	3.0	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.56	ug/l	WJ
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	123	5.3	0.32	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND	11	0.39	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.18	ug/l	
62-53-3	Aniline	2.8	11	0.67	ug/l	J
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.50	ug/l	
85-68-7	Butyl benzyl phthalate	0.91	5.3	0.56	ug/l	J
100-51-6	Benzyl Alcohol	5.1	11	2.4	ug/l	J
91-58-7	2-Chloronaphthalene	ND	5.3	0.33	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.59	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.30	ug/l	
111-44-4	bis(2-Chloroethyl)ether	1.5	5.3	0.37	ug/l	J
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.35	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.25	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.48	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.28	ug/l	
132-64-9	Dibenzofuran	2.3	2.1	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	1.3	5.3	0.18	ug/l	W JB
117-84-0	Di-n-octyl phthalate	0.72	5.3	0.30	ug/l	J

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

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

Report of Analysis

Client Sample ID:	P58-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-6	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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	0.77	5.3	0.21	ug/l	J
131-11-3	Dimethyl phthalate	ND	5.3	0.36	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.99 u	2.1	0.35	ug/l	u JB
118-74-1	Hexachlorobenzene	0.88	5.3	0.30	ug/l	J
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	uJ
67-72-1	Hexachloroethane	ND	5.3	0.32	ug/l	
78-59-1	Isophorone	ND	5.3	0.47	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.42	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.41	ug/l	
62-75-9	n-Nitrosodimethylamine	2.1	5.3	1.1	ug/l	JJ
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.42	ug/l	uJ
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.20	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	33%		15-110%
4165-62-2	Phenol-d5	20%		15-110%
118-79-6	2,4,6-Tribromophenol	61%		15-110%
4165-60-0	Nitrobenzene-d5	47%		30-130%
321-60-8	2-Fluorobiphenyl	47%		30-130%
1718-51-0	Terphenyl-d14	63%		30-130%

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

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

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

Report of Analysis

Client Sample ID:	P58-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-6	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88673.D	1	04/21/14	MR	04/17/14	OP37648	MSI3302
Run #2							

Run #	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	1.1	0.11	0.073	ug/l	
208-96-8	Acenaphthylene	0.72	0.11	0.052	ug/l	
120-12-7	Anthracene	0.71	0.11	0.097	ug/l	
56-55-3	Benzo(a)anthracene	0.82	0.053	0.021	ug/l	
50-32-8	Benzo(a)pyrene	0.63	0.11	0.030	ug/l	
205-99-2	Benzo(b)fluoranthene	0.72	0.053	0.033	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.71	0.11	0.028	ug/l	
207-08-9	Benzo(k)fluoranthene	0.71	0.11	0.041	ng/l	
218-01-9	Chrysene	0.73	0.11	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.75	0.11	0.034	ug/l	
206-44-0	Fluoranthene	0.79	0.11	0.043	ug/l	
86-73-7	Fluorene	1.7	0.11	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.72	0.11	0.032	ug/l	
90-12-0	1-Methylnaphthalene	28.4	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	38.1	0.21	0.078	ug/l	
85-01-8	Phenanthrene	1.3	0.053	0.013	ug/l	
129-00-0	Pyrene	0.85	0.11	0.040	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	45%		30-130%
321-60-8	2-Fluorobiphenyl	43%		30-130%
1718-51-0	Terphenyl-d14	63%		30-130%

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

4.6
 4

Report of Analysis

Client Sample ID:	P58-ROX-041514	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-6	Date Received:	04/16/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB55417.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222
Run #2							

Run #	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)	63%		36-173%		
460-00-4	Bromofluorobenzene (S)	66%		36-173%		

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

4.6
4

Report of Analysis

Client Sample ID:	TB-ROX-041514-HCL	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-7	Date Received:	04/16/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30312.D	1	04/27/14	AMY	n/a	n/a	MSV1133
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ng/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

4.7
4

Report of Analysis

Client Sample ID:	TB-ROX-041514-HCL	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-7	Date Received:	04/16/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB-ROX-041514-HCL	Date Sampled:	04/15/14
Lab Sample ID:	MC29805-7	Date Received:	04/16/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

4.7
4

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		70-130%
2037-26-5	Toluene-D8	90%		70-130%
460-00-4	4-Bromofluorobenzene	89%		70-130%

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

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

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

Report of Analysis

Client Sample ID:	TB-ROX-041514-ST		Date Sampled:	04/15/14
Lab Sample ID:	MC29805-8		Date Received:	04/16/14
Matrix:	AQ - Trip Blank Water		Percent Solids:	n/a
Method:	SW846 8011 SW846 8011		Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB55418.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222
Run #2							

Run #	Initial Volume	Final Volume
Run #1	37.0 ml	2.0 ml
Run #2		

VOA Special List

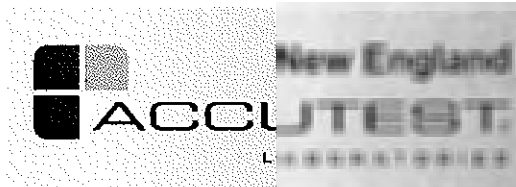
CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0051	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	83%		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

4.8
4



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)
 XEROX
 CALSHELL
 OTHER
 SPL

Please Check Appropriate Box:
 ENV. SERVICES
 MOTIVA RETAIL
 SHELL RETAIL
 MOTIVA S&CM
 CONSULTANT
 LUBES
 SHELL PIPELINE
 OTHER

Print Bill To Contact Name:
 Bob Bilman
 PO #

INCIDENT # (ENV SERVICES) 9 7 2 1 6 6 4 0
 CHECK IF NO INCIDENT # APPLIES
 DATE: 4/15/14
 PAGE: 1 of 1

LAB VENDOR #
 URS CORPORATION
 ADDRESS:
 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110
 PROJECT CONTACT (Name & Phone #):
 Elizabeth Kunkel, Wendy Pennington, Bob Bilman
 TEL: 314-428-0100 FAX: 314-428-0462
 E-MAIL: elizabeth.kunkel@urs.com
 WAREHOUSE TIME (HOW LONG TO ARRIVE):
 STANDARD (10 DAY) 5 DAYS 3 DAYS 2 DAYS 24 HOURS REQUITS NEEDED: CD, DEDEND
 LA - SWQCS REPORT FORMAT USE AGENCY:
 DELIVERABLES: LEVEL 1 LEVEL 2 LEVEL 3 LEVEL 4 OTHER (SPECIFY) F00
 TEMPERATURE ON RECEIPT °C: _____
 SPECIAL INSTRUCTIONS OR NOTES:
 * Please include "J" values on Reports
 * Please provide sample receipt upon login.

BILL ADDRESS: ROXANA AND CITY
 900 South Central Ave, ROXANA, IL
 STATE: IL
 ZIP: 62451
 CONSULTANT PROJECT NO:
 Roxana Quarterly GW / 21562973.03002
 LAB USE ONLY
 WORKER NAME(S):
 D. Minkley, M. Mansker, L. Pottrow mc29805

TEMPERATURE ON RECEIPT °C: _____
 SPECIAL INSTRUCTIONS OR NOTES:
 SHELL CONTRACT RATE APPLIES
 STATE INSURANCE RATE APPLIES
 EDD NOT NEEDED
 RECEIPT VERIFICATION REQUESTED
 PREKIDE LEED DPMK

LAB USE ONLY	Field Sample Identification	SAMPLING		MATAK	PRESERVATIVE					NO. OF CONT.	VOC 8260C SLATICS	VOC 8014 SL	SVOC 8270D SLATICS	PAH 8270LL	PID (ppm)	FIELD NOTES:
		DATE	TIME		HCL	PHOS	NO3OH	NONE	OTHER							
-1	T12-ROX-041514	4/15/14	0740	water	2		2	2	6	X	X	X	X			
-2	P74-ROX-041514-EB		000							X	X	X	X			
-3	P74-ROX-041514		055							X	X	X	X			
-4	PER-ROX-041514		1300							X	X	X	X			
-5	P57-ROX-041514		1335							X	X	X	X			
-6	P53-ROX-041514		1440							X	X	X	X			
-7	TB-ROX-041514-HCL		8000		2				2	X					19A, 5F4	
-8	TB-ROX-041514-ST		8000						2	X						

Released by: (Signature)
 [Signature]
 Date: 4/15/14
 Time: 1730

Received by: (Signature)
 [Signature]
 Date: 4-16-14
 Time: 930

Released by: (Signature)
 Received by: (Signature)
 Date: _____
 Time: _____

0.166 Receptor
 0.16-1.5 °C

5.1



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC29805 Client: URS Immediate Client Services Action Required: No
 Date / Time Received: 4/16/2014 Delivery Method: _____ Client Service Action Required at Login: No
 Project: 900 SOUTH CENTRAL No. Coolers: 2 Airbill #'s: _____

<u>Cooler Security</u>		<u>Y</u>	<u>or</u>	<u>N</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Custody Seals Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Cooler Temperature</u>		<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Cooler temp verification:	<u>infrared gun</u>			
3. Cooler media:	<u>Ice (bag)</u>			

<u>Quality Control Preservation</u>				<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		
2. Trip Blank listed on COC:	<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		
3. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		
4. VOCs headspace free:	<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		

<u>Sample Integrity - Documentation</u>		<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	

<u>Sample Integrity - Condition</u>		<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. All containers accounted for:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
3. Condition of sample:	<u>Intact</u>			

<u>Sample Integrity - Instructions</u>				<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		
2. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>		
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		
4. Compositing instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>

Comments

5.1
5

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC29805

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

5.2



Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
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MC29805-1 Collected: 15-APR-14 09:40 By: DMMM Received: 16-APR-14 By:
T12-ROX-041514

MC29805-1	SW846 8270D BY SIM	21-APR-14 11:53	MR	17-APR-14	PA	B8270SIMSL
MC29805-1	SW846 8011	21-APR-14 19:13	SZ	18-APR-14	MT	V8011SL
MC29805-1	SW846 8270D	21-APR-14 22:48	WK	17-APR-14	PA	AB8270SL+
MC29805-1	SW846 8260C	27-APR-14 19:58	AMY			V8260SL+
MC29805-1	SW846 8260C	28-APR-14 16:19	AMY			V8260SL+

MC29805-2 Collected: 15-APR-14 10:00 By: DMMM Received: 16-APR-14 By:
P74-ROX-041514-EB

MC29805-2	SW846 8270D BY SIM	21-APR-14 12:16	MR	17-APR-14	PA	B8270SIMSL
MC29805-2	SW846 8011	21-APR-14 19:38	SZ	18-APR-14	MT	V8011SL
MC29805-2	SW846 8270D	21-APR-14 23:16	WK	17-APR-14	PA	AB8270SL+
MC29805-2	SW846 8260C	27-APR-14 13:23	AMY			V8260SL+

MC29805-3 Collected: 15-APR-14 10:55 By: DMMM Received: 16-APR-14 By:
P74-ROX-041514

MC29805-3	SW846 8270D BY SIM	21-APR-14 12:38	MR	17-APR-14	PA	B8270SIMSL
MC29805-3	SW846 8011	21-APR-14 20:03	SZ	18-APR-14	MT	V8011SL
MC29805-3	SW846 8270D	21-APR-14 23:43	WK	17-APR-14	PA	AB8270SL+
MC29805-3	SW846 8260C	28-APR-14 14:07	AMY			V8260SL+

MC29805-4 Collected: 15-APR-14 13:00 By: DMMM Received: 16-APR-14 By:
P59-ROX-041514

MC29805-4	SW846 8270D BY SIM	21-APR-14 13:02	MR	17-APR-14	PA	B8270SIMSL
MC29805-4	SW846 8011	21-APR-14 20:29	SZ	18-APR-14	MT	V8011SL
MC29805-4	SW846 8270D	22-APR-14 00:10	WK	17-APR-14	PA	AB8270SL+
MC29805-4	SW846 8260C	28-APR-14 16:45	AMY			V8260SL+
MC29805-4	SW846 8260C	29-APR-14 16:42	AMY			V8260SL+

MC29805-5 Collected: 15-APR-14 13:55 By: DMMM Received: 16-APR-14 By:
P57-ROX-041514

MC29805-5	SW846 8270D BY SIM	21-APR-14 13:24	MR	17-APR-14	PA	B8270SIMSL
MC29805-5	SW846 8011	21-APR-14 20:56	SZ	18-APR-14	MT	V8011SL
MC29805-5	SW846 8270D	22-APR-14 00:37	WK	17-APR-14	PA	AB8270SL+

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC29805

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

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Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
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MC29805-5	SW846 8260C	28-APR-14 17:12	AMY			V8260SL+
MC29805-5	SW846 8260C	29-APR-14 15:50	AMY			V8260SL+

MC29805-6 Collected: 15-APR-14 14:40 By: DMMM Received: 16-APR-14 By: P58-ROX-041514

MC29805-6	SW846 8270D BY SIM	21-APR-14 13:47	MR	17-APR-14	PA	B8270SIMSL
MC29805-6	SW846 8011	21-APR-14 21:54	SZ	18-APR-14	MT	V8011SL
MC29805-6	SW846 8270D	22-APR-14 01:05	WK	17-APR-14	PA	AB8270SL+
MC29805-6	SW846 8260C	28-APR-14 17:38	AMY			V8260SL+
MC29805-6	SW846 8260C	29-APR-14 16:16	AMY			V8260SL+
MC29805-6	SW846 8260C	29-APR-14 17:09	AMY			V8260SL+

MC29805-7 Collected: 15-APR-14 00:00 By: DMMM Received: 16-APR-14 By: TB-ROX-041514-HCL

MC29805-7	SW846 8260C	27-APR-14 12:30	AMY			V8260SL+
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MC29805-8 Collected: 15-APR-14 00:00 By: DMMM Received: 16-APR-14 By: TB-ROX-041514-ST

MC29805-8	SW846 8011	21-APR-14 22:24	SZ	18-APR-14	MT	V8011SL
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Accutest Internal Chain of Custody

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Received: 04/16/14

Sample Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29805-1.1	Walk In Ref #22	Alireza Zeighami	04/17/14 07:51	Retrieve from Storage
MC29805-1.1	Alireza Zeighami		04/17/14 15:24	Depleted
MC29805-1.3	VOC Ref #5	Amy Min Yang	04/28/14 12:10	Retrieve from Storage
MC29805-1.3	Amy Min Yang	GCMSV	04/28/14 12:10	Load on Instrument
MC29805-1.3	GCMSV	Amy Min Yang	04/29/14 14:49	Unload from Instrument
MC29805-1.3	Amy Min Yang	VOC Ref #5	04/29/14 14:49	Return to Storage
MC29805-1.4	VOC Ref #5	Amy Min Yang	04/27/14 11:16	Retrieve from Storage
MC29805-1.4	Amy Min Yang	GCMSV	04/27/14 11:17	Load on Instrument
MC29805-1.4	GCMSV	Amy Min Yang	04/28/14 09:33	Unload from Instrument
MC29805-1.4	Amy Min Yang	VOC Ref #5	04/28/14 09:33	Return to Storage
MC29805-1.6	VOC Ref #5	Marc Tahtamoni	04/18/14 18:53	Retrieve from Storage
MC29805-2.2	Walk In Ref #22	Alireza Zeighami	04/17/14 07:51	Retrieve from Storage
MC29805-2.2	Alireza Zeighami		04/17/14 15:24	Depleted
MC29805-2.4	VOC Ref #5	Amy Min Yang	04/27/14 11:16	Retrieve from Storage
MC29805-2.4	Amy Min Yang	GCMSV	04/27/14 11:17	Load on Instrument
MC29805-2.4	GCMSV	Amy Min Yang	04/28/14 09:33	Unload from Instrument
MC29805-2.4	Amy Min Yang	VOC Ref #5	04/28/14 09:33	Return to Storage
MC29805-2.5	VOC Ref #5	Marc Tahtamoni	04/18/14 18:53	Retrieve from Storage
MC29805-3.1	Walk In Ref #22	Alireza Zeighami	04/17/14 07:51	Retrieve from Storage
MC29805-3.1	Alireza Zeighami		04/17/14 15:24	Depleted
MC29805-3.3	VOC Ref #5	Amy Min Yang	04/27/14 11:16	Retrieve from Storage
MC29805-3.3	Amy Min Yang	GCMSV	04/27/14 11:17	Load on Instrument
MC29805-3.3	GCMSV	Amy Min Yang	04/28/14 09:33	Unload from Instrument
MC29805-3.3	Amy Min Yang	VOC Ref #5	04/28/14 09:33	Return to Storage
MC29805-3.4	VOC Ref #5	Amy Min Yang	04/28/14 12:10	Retrieve from Storage
MC29805-3.4	Amy Min Yang	GCMSV	04/28/14 12:10	Load on Instrument
MC29805-3.4	GCMSV	Amy Min Yang	04/29/14 14:49	Unload from Instrument
MC29805-3.4	Amy Min Yang	VOC Ref #5	04/29/14 14:49	Return to Storage
MC29805-3.6	VOC Ref #5	Marc Tahtamoni	04/18/14 18:53	Retrieve from Storage
MC29805-4.2	Walk In Ref #22	Alireza Zeighami	04/17/14 07:51	Retrieve from Storage
MC29805-4.2	Alireza Zeighami		04/17/14 15:24	Depleted
MC29805-4.3	VOC Ref #5	Amy Min Yang	04/28/14 12:10	Retrieve from Storage



Accutest Internal Chain of Custody

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Received: 04/16/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29805-4.3	Amy Min Yang	GCMSV	04/28/14 12:10	Load on Instrument
MC29805-4.3	GCMSV	Amy Min Yang	04/29/14 14:49	Unload from Instrument
MC29805-4.3	Amy Min Yang	VOC Ref #5	04/29/14 14:49	Return to Storage
MC29805-4.4	VOC Ref #5	Amy Min Yang	04/29/14 14:53	Retrieve from Storage
MC29805-4.4	Amy Min Yang	GCMSV	04/29/14 14:53	Load on Instrument
MC29805-4.4	GCMSV	Amy Min Yang	04/30/14 08:58	Unload from Instrument
MC29805-4.4	Amy Min Yang	VOC Ref #5	04/30/14 08:58	Return to Storage
MC29805-4.6	VOC Ref #5	Marc Tahtamoni	04/18/14 18:53	Retrieve from Storage
MC29805-5.2	Walk In Ref #22	Alireza Zeighami	04/17/14 07:51	Retrieve from Storage
MC29805-5.2	Alireza Zeighami		04/17/14 15:24	Depleted
MC29805-5.3	VOC Ref #5	Amy Min Yang	04/29/14 14:53	Retrieve from Storage
MC29805-5.3	Amy Min Yang	GCMSV	04/29/14 14:53	Load on Instrument
MC29805-5.3	GCMSV	Amy Min Yang	04/30/14 08:58	Unload from Instrument
MC29805-5.3	Amy Min Yang	VOC Ref #5	04/30/14 08:58	Return to Storage
MC29805-5.4	VOC Ref #5	Amy Min Yang	04/28/14 12:10	Retrieve from Storage
MC29805-5.4	Amy Min Yang	GCMSV	04/28/14 12:10	Load on Instrument
MC29805-5.4	GCMSV	Amy Min Yang	04/29/14 14:49	Unload from Instrument
MC29805-5.4	Amy Min Yang	VOC Ref #5	04/29/14 14:49	Return to Storage
MC29805-5.5	VOC Ref #5	Marc Tahtamoni	04/18/14 18:53	Retrieve from Storage
MC29805-6.1	Walk In Ref #22	Alireza Zeighami	04/17/14 07:51	Retrieve from Storage
MC29805-6.1	Alireza Zeighami		04/17/14 15:24	Depleted
MC29805-6.3	VOC Ref #5	Amy Min Yang	04/28/14 12:10	Retrieve from Storage
MC29805-6.3	Amy Min Yang	GCMSV	04/28/14 12:10	Load on Instrument
MC29805-6.3	GCMSV	Amy Min Yang	04/29/14 14:49	Unload from Instrmnt
MC29805-6.3	Amy Min Yang	VOC Ref #5	04/29/14 14:49	Return to Storage
MC29805-6.4	VOC Ref #5	Amy Min Yang	04/29/14 14:53	Retrieve from Storage
MC29805-6.4	Amy Min Yang	GCMSV	04/29/14 14:53	Load on Instrument
MC29805-6.4	GCMSV	Amy Min Yang	04/30/14 08:58	Unload from Instrument
MC29805-6.4	Amy Min Yang	VOC Ref #5	04/30/14 08:58	Return to Storage
MC29805-6.5	VOC Ref #5	Marc Tahtamoni	04/18/14 18:53	Retrieve from Storage
MC29805-7.1	VOC Ref #5	Amy Min Yang	04/27/14 11:16	Retrieve from Storage
MC29805-7.1	Amy Min Yang	GCMSV	04/27/14 11:17	Load on Instrument
MC29805-7.1	GCMSV	Amy Min Yang	04/28/14 09:33	Unload from Instrument



Accutest Internal Chain of Custody

Job Number: MC29805
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
Received: 04/16/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29805-7.1	Amy Min Yang	VOC Ref #5	04/28/14 09:33	Return to Storage
MC29805-8.1	VOC Ref #5	Marc Tahtamoni	04/18/14 18:53	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: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1133-MB	V30310.D	1	04/27/14	AMY	n/a	n/a	MSV1133

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-1, MC29805-2, MC29805-7

6.1.1
6

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ng/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1133-MB	V30310.D	1	04/27/14	AMY	n/a	n/a	MSV1133

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-1, MC29805-2, MC29805-7

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ng/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ng/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ng/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

6.1.1



Method Blank Summary

Job Number: MC29805
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1133-MB	V30310.D	1	04/27/14	AMY	n/a	n/a	MSV1133

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-1, MC29805-2, MC29805-7

6.1.1



CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	92% 70-130%
2037-26-5	Toluene-D8	89% 70-130%
460-00-4	4-Bromofluorobenzene	89% 70-130%

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

Method Blank Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1134-MB	V30342.D	1	04/28/14	AMY	n/a	n/a	MSV1134

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-1, MC29805-3, MC29805-4, MC29805-5, MC29805-6

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

6.1.2



Method Blank Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1134-MB	V30342.D	1	04/28/14	AMY	n/a	n/a	MSV1134

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-1, MC29805-3, MC29805-4, MC29805-5, MC29805-6

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ng/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

6.1.2



Method Blank Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1134-MB	V30342.D	1	04/28/14	AMY	n/a	n/a	MSV1134

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-1, MC29805-3, MC29805-4, MC29805-5, MC29805-6

6.1.2
6

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	70-130%
2037-26-5	Toluene-D8	90%	70-130%
460-00-4	4-Bromofluorobenzene	91%	70-130%

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

Method Blank Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1136-MB	V30408.D	1	04/29/14	AMY	n/a	n/a	MSV1136

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-4, MC29805-5, MC29805-6

6.1.3
6

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.32	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	92% 70-130%
2037-26-5	Toluene-D8	92% 70-130%
460-00-4	4-Bromofluorobenzene	91% 70-130%

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

Blank Spike Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1133-BS	V30306.D	1	04/27/14	AMY	n/a	n/a	MSV1133

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-1, MC29805-2, MC29805-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	74.9	150* a	70-130
107-02-8	Acrolein	250	262	105	70-130
107-13-1	Acrylonitrile	50	50.9	102	70-130
71-43-2	Benzene	50	52.8	106	70-130
108-86-1	Bromobenzene	50	52.1	104	70-130
74-97-5	Bromochloromethane	50	48.6	97	70-130
75-27-4	Bromodichloromethane	50	44.2	88	70-130
75-25-2	Bromoform	50	38.2	76	70-130
74-83-9	Bromomethane	50	41.8	84	70-130
78-93-3	2-Butanone (MEK)	50	63.0	126	70-130
104-51-8	n-Butylbenzene	50	56.8	114	70-130
135-98-8	sec-Butylbenzene	50	57.6	115	70-130
98-06-6	tert-Butylbenzene	50	49.8	100	70-130
75-15-0	Carbon disulfide	50	52.4	105	70-130
56-23-5	Carbon tetrachloride	50	44.7	89	70-130
108-90-7	Chlorobenzene	50	52.1	104	70-130
75-00-3	Chloroethane	50	53.2	106	70-130
110-75-8	2-Chloroethyl vinyl ether	50	39.3	79	70-130
67-66-3	Chloroform	50	45.0	90	70-130
74-87-3	Chloromethane	50	46.6	93	70-130
95-49-8	o-Chlorotoluene	50	52.2	104	70-130
106-43-4	p-Chlorotoluene	50	52.7	105	70-130
124-48-1	Dibromochloromethane	50	41.6	83	70-130
95-50-1	1,2-Dichlorobenzene	50	48.7	97	70-130
541-73-1	1,3-Dichlorobenzene	50	51.0	102	70-130
106-46-7	1,4-Dichlorobenzene	50	50.8	102	70-130
75-71-8	Dichlorodifluoromethane	50	40.0	80	70-130
75-34-3	1,1-Dichloroethane	50	51.1	102	70-130
107-06-2	1,2-Dichloroethane	50	40.4	81	70-130
75-35-4	1,1-Dichloroethene	50	55.2	110	70-130
156-59-2	cis-1,2-Dichloroethene	50	52.3	105	70-130
156-60-5	trans-1,2-Dichloroethene	50	52.3	105	70-130
78-87-5	1,2-Dichloropropane	50	57.5	115	70-130
142-28-9	1,3-Dichloropropane	50	52.3	105	70-130
594-20-7	2,2-Dichloropropane	50	46.5	93	70-130
563-58-6	1,1-Dichloropropene	50	49.3	99	70-130

* = Outside of Control Limits.

6.2.1
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Blank Spike Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1133-BS	V30306.D	1	04/27/14	AMY	n/a	n/a	MSV1133

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-1, MC29805-2, MC29805-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	45.2	90	70-130
10061-02-6	trans-1,3-Dichloropropene	50	54.2	108	70-130
123-91-1	1,4-Dioxane	250	230	92	70-130
97-63-2	Ethyl methacrylate	50	46.8	94	77-137
100-41-4	Ethylbenzene	50	54.8	110	70-130
87-68-3	Hexachlorobutadiene	50	43.7	87	70-130
591-78-6	2-Hexanone	50	73.2	146* a	70-130
98-82-8	Isopropylbenzene	50	55.4	111	70-130
99-87-6	p-Isopropyltoluene	50	54.9	110	70-130
1634-04-4	Methyl Tert Butyl Ether	50	45.5	91	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	52.7	105	70-130
74-95-3	Methylene bromide	50	47.8	96	70-130
75-09-2	Methylene chloride	50	53.2	106	70-130
91-20-3	Naphthalene	50	46.8	94	70-130
103-65-1	n-Propylbenzene	50	55.5	111	70-130
100-42-5	Styrene	50	56.3	113	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	50.3	101	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	60.3	121	70-130
127-18-4	Tetrachloroethene	50	51.7	103	70-130
108-88-3	Toluene	50	56.0	112	70-130
87-61-6	1,2,3-Trichlorobenzene	50	48.1	96	70-130
120-82-1	1,2,4-Trichlorobenzene	50	43.1	86	70-130
71-55-6	1,1,1-Trichloroethane	50	45.8	92	70-130
79-00-5	1,1,2-Trichloroethane	50	55.1	110	70-130
79-01-6	Trichloroethene	50	47.6	95	70-130
75-69-4	Trichlorofluoromethane	50	44.8	90	70-130
96-18-4	1,2,3-Trichloropropane	50	52.8	106	70-130
95-63-6	1,2,4-Trimethylbenzene	50	53.1	106	70-130
108-67-8	1,3,5-Trimethylbenzene	50	54.8	110	70-130
108-05-4	Vinyl Acetate	50	48.7	97	70-130
75-01-4	Vinyl chloride	50	50.0	100	70-130
	m,p-Xylene	100	113	113	70-130
95-47-6	o-Xylene	50	55.5	111	70-130
1330-20-7	Xylene (total)	150	168	112	70-130

* = Outside of Control Limits.

6.2.1

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Blank Spike Summary

Job Number: MC29805
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1133-BS	V30306.D	1	04/27/14	AMY	n/a	n/a	MSV1133

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-1, MC29805-2, MC29805-7

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	81%	70-130%
2037-26-5	Toluene-D8	91%	70-130%
460-00-4	4-Bromofluorobenzene	89%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1134-BS	V30339.D	1	04/28/14	AMY	n/a	n/a	MSV1134

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-1, MC29805-3, MC29805-4, MC29805-5, MC29805-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	33.8	68* a	70-130
107-02-8	Acrolein	250	281	112	70-130
107-13-1	Acrylonitrile	50	54.3	109	70-130
71-43-2	Benzene	50	52.2	104	70-130
108-86-1	Bromobenzene	50	53.8	108	70-130
74-97-5	Bromochloromethane	50	50.8	102	70-130
75-27-4	Bromodichloromethane	50	46.4	93	70-130
75-25-2	Bromoform	50	40.6	81	70-130
74-83-9	Bromomethane	50	43.4	87	70-130
78-93-3	2-Butanone (MEK)	50	45.4	91	70-130
104-51-8	n-Butylbenzene	50	55.4	111	70-130
135-98-8	sec-Butylbenzene	50	56.6	113	70-130
98-06-6	tert-Butylbenzene	50	51.1	102	70-130
75-15-0	Carbon disulfide	50	51.7	103	70-130
56-23-5	Carbon tetrachloride	50	45.9	92	70-130
108-90-7	Chlorobenzene	50	52.7	105	70-130
75-00-3	Chloroethane	50	54.1	108	70-130
110-75-8	2-Chloroethyl vinyl ether	50	38.1	76	70-130
67-66-3	Chloroform	50	47.4	95	70-130
74-87-3	Chloromethane	50	44.8	90	70-130
95-49-8	o-Chlorotoluene	50	53.2	106	70-130
106-43-4	p-Chlorotoluene	50	53.6	107	70-130
124-48-1	Dibromochloromethane	50	44.1	88	70-130
95-50-1	1,2-Dichlorobenzene	50	50.3	101	70-130
541-73-1	1,3-Dichlorobenzene	50	51.9	104	70-130
106-46-7	1,4-Dichlorobenzene	50	52.1	104	70-130
75-71-8	Dichlorodifluoromethane	50	36.4	73	70-130
75-34-3	1,1-Dichloroethane	50	52.4	105	70-130
107-06-2	1,2-Dichloroethane	50	43.3	87	70-130
75-35-4	1,1-Dichloroethene	50	55.0	110	70-130
156-59-2	cis-1,2-Dichloroethene	50	52.8	106	70-130
156-60-5	trans-1,2-Dichloroethene	50	52.3	105	70-130
78-87-5	1,2-Dichloropropane	50	57.2	114	70-130
142-28-9	1,3-Dichloropropane	50	54.6	109	70-130
594-20-7	2,2-Dichloropropane	50	48.0	96	70-130
563-58-6	1,1-Dichloropropene	50	49.0	98	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1134-BS	V30339.D	1	04/28/14	AMY	n/a	n/a	MSV1134

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-1, MC29805-3, MC29805-4, MC29805-5, MC29805-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	46.8	94	70-130
10061-02-6	trans-1,3-Dichloropropene	50	56.9	114	70-130
123-91-1	1,4-Dioxane	250	232	93	70-130
97-63-2	Ethyl methacrylate	50	48.8	98	77-137
100-41-4	Ethylbenzene	50	55.0	110	70-130
87-68-3	Hexachlorobutadiene	50	41.9	84	70-130
591-78-6	2-Hexanone	50	42.6	85	70-130
98-82-8	Isopropylbenzene	50	54.7	109	70-130
99-87-6	p-Isopropyltoluene	50	54.6	109	70-130
1634-04-4	Methyl Tert Butyl Ether	50	46.9	94	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	49.0	98	70-130
74-95-3	Methylene bromide	50	49.5	99	70-130
75-09-2	Methylene chloride	50	53.6	107	70-130
91-20-3	Naphthalene	50	51.8	104	70-130
103-65-1	n-Propylbenzene	50	55.7	111	70-130
100-42-5	Styrene	50	57.0	114	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	51.2	102	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	62.0	124	70-130
127-18-4	Tetrachloroethene	50	51.9	104	70-130
108-88-3	Toluene	50	55.8	112	70-130
87-61-6	1,2,3-Trichlorobenzene	50	52.4	105	70-130
120-82-1	1,2,4-Trichlorobenzene	50	44.8	90	70-130
71-55-6	1,1,1-Trichloroethane	50	47.2	94	70-130
79-00-5	1,1,2-Trichloroethane	50	56.0	112	70-130
79-01-6	Trichloroethene	50	47.7	95	70-130
75-69-4	Trichlorofluoromethane	50	45.1	90	70-130
96-18-4	1,2,3-Trichloropropane	50	68.2	136* b	70-130
95-63-6	1,2,4-Trimethylbenzene	50	53.9	108	70-130
108-67-8	1,3,5-Trimethylbenzene	50	55.0	110	70-130
108-05-4	Vinyl Acetate	50	50.3	101	70-130
75-01-4	Vinyl chloride	50	49.7	99	70-130
	m,p-Xylene	100	113	113	70-130
95-47-6	o-Xylene	50	55.1	110	70-130
1330-20-7	Xylene (total)	150	168	112	70-130

* = Outside of Control Limits.

6.2.2

Blank Spike Summary

Job Number: MC29805

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1134-BS	V30339.D	1	04/28/14	AMY	n/a	n/a	MSV1134

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-1, MC29805-3, MC29805-4, MC29805-5, MC29805-6

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	84%	70-130%
2037-26-5	Toluene-D8	91%	70-130%
460-00-4	4-Bromofluorobenzene	91%	70-130%

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

* = Outside of Control Limits.

6.2.2
6

Blank Spike Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1136-BS	V30405.D	1	04/29/14	AMY	n/a	n/a	MSV1136

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-4, MC29805-5, MC29805-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	49.7	99	70-130
100-41-4	Ethylbenzene	50	53.2	106	70-130
108-88-3	Toluene	50	54.8	110	70-130
95-63-6	1,2,4-Trimethylbenzene	50	51.1	102	70-130
	m,p-Xylene	100	107	107	70-130
95-47-6	o-Xylene	50	52.9	106	70-130
1330-20-7	Xylene (total)	150	160	107	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	83%	70-130%
2037-26-5	Toluene-D8	93%	70-130%
460-00-4	4-Bromofluorobenzene	91%	70-130%

* = Outside of Control Limits.

6.2.3



Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29804-1MS	V30331.D	1	04/27/14	AMY	n/a	n/a	MSV1133
MC29804-1MSD	V30332.D	1	04/27/14	AMY	n/a	n/a	MSV1133
MC29804-1	V30315.D	1	04/27/14	AMY	n/a	n/a	MSV1133

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-1, MC29805-2, MC29805-7

CAS No.	Compound	MC29804-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	50	51.8	104	50	52.9	106	2	70-130/30
107-02-8	Acrolein	ND	250	241	96	250	247	99	2	70-130/30
107-13-1	Acrylonitrile	ND	50	52.6	105	50	51.7	103	2	70-130/30
71-43-2	Benzene	0.90	50	52.6	103	50	51.1	100	3	70-130/30
108-86-1	Bromobenzene	ND	50	51.1	102	50	50.9	102	0	70-130/30
74-97-5	Bromochloromethane	ND	50	47.9	96	50	47.1	94	2	70-130/30
75-27-4	Bromodichloromethane	ND	50	42.1	84	50	41.5	83	1	70-130/30
75-25-2	Bromoform	ND	50	36.8	74	50	36.2	72	2	70-130/30
74-83-9	Bromomethane	ND	50	40.4	81	50	40.3	81	0	70-130/30
78-93-3	2-Butanone (MEK)	ND	50	41.1	82	50	39.0	78	5	70-130/30
104-51-8	n-Butylbenzene	ND	50	51.0	102	50	51.6	103	1	70-130/30
135-98-8	sec-Butylbenzene	ND	50	54.4	109	50	54.8	110	1	70-130/30
98-06-6	tert-Butylbenzene	ND	50	48.4	97	50	48.3	97	0	70-130/30
75-15-0	Carbon disulfide	ND	50	50.2	100	50	49.4	99	2	70-130/30
56-23-5	Carbon tetrachloride	ND	50	42.7	85	50	42.1	84	1	70-130/30
108-90-7	Chlorobenzene	ND	50	50.7	101	50	49.9	100	2	70-130/30
75-00-3	Chloroethane	ND	50	51.0	102	50	51.8	104	2	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND	50	ND	0* a	50	ND	0* a	nc	70-130/30
67-66-3	Chloroform	ND	50	44.1	88	50	42.8	86	3	70-130/30
74-87-3	Chloromethane	ND	50	46.5	93	50	43.8	88	6	70-130/30
95-49-8	o-Chlorotoluene	ND	50	50.2	100	50	50.1	100	0	70-130/30
106-43-4	p-Chlorotoluene	ND	50	50.6	101	50	50.3	101	1	70-130/30
124-48-1	Dibromochloromethane	ND	50	41.1	82	50	40.7	81	1	70-130/30
95-50-1	1,2-Dichlorobenzene	ND	50	45.8	92	50	47.3	95	3	70-130/30
541-73-1	1,3-Dichlorobenzene	ND	50	48.5	97	50	49.2	98	1	70-130/30
106-46-7	1,4-Dichlorobenzene	ND	50	48.2	96	50	49.2	98	2	70-130/30
75-71-8	Dichlorodifluoromethane	ND	50	34.2	68* a	50	35.0	70	2	70-130/30
75-34-3	1,1-Dichloroethane	ND	50	50.3	101	50	49.2	98	2	70-130/30
107-06-2	1,2-Dichloroethane	ND	50	40.4	81	50	39.2	78	3	70-130/30
75-35-4	1,1-Dichloroethene	ND	50	54.0	108	50	54.0	108	0	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND	50	50.5	101	50	49.5	99	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	50	51.2	102	50	49.5	99	3	70-130/30
78-87-5	1,2-Dichloropropane	ND	50	56.8	114	50	55.7	111	2	70-130/30
142-28-9	1,3-Dichloropropane	ND	50	52.3	105	50	52.3	105	0	70-130/30
594-20-7	2,2-Dichloropropane	ND	50	34.9	70	50	34.6	69* a	1	70-130/30
563-58-6	1,1-Dichloropropene	ND	50	48.0	96	50	46.0	92	4	70-130/30

* = Outside of Control Limits.

6.3.1


Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29804-1MS	V30331.D	1	04/27/14	AMY	n/a	n/a	MSV1133
MC29804-1MSD	V30332.D	1	04/27/14	AMY	n/a	n/a	MSV1133
MC29804-1	V30315.D	1	04/27/14	AMY	n/a	n/a	MSV1133

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-1, MC29805-2, MC29805-7

CAS No.	Compound	MC29804-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND	50	41.4	83	50	40.2	80	3	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND	50	51.6	103	50	50.7	101	2	70-130/30
123-91-1	1,4-Dioxane	ND	250	203	81	250	227	91	11	70-130/30
97-63-2	Ethyl methacrylate	ND	50	47.8	96	50	47.2	94	1	72-139/30
100-41-4	Ethylbenzene	ND	50	53.2	106	50	51.7	103	3	70-130/30
87-68-3	Hexachlorobutadiene	ND	50	37.4	75	50	40.6	81	8	70-130/30
591-78-6	2-Hexanone	ND	50	43.0	86	50	42.2	84	2	70-130/30
98-82-8	Isopropylbenzene	ND	50	53.7	107	50	53.7	107	0	70-130/30
99-87-6	p-Isopropyltoluene	ND	50	51.7	103	50	51.8	104	0	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	50	46.1	92	50	46.2	92	0	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	50	48.7	97	50	48.5	97	0	70-130/30
74-95-3	Methylene bromide	ND	50	47.0	94	50	45.7	91	3	70-130/30
75-09-2	Methylene chloride	ND	50	51.6	103	50	50.9	102	1	70-130/30
91-20-3	Naphthalene	ND	50	40.6	81	50	51.5	103	24	70-130/30
103-65-1	n-Propylbenzene	ND	50	53.3	107	50	52.5	105	2	70-130/30
100-42-5	Styrene	ND	50	54.7	109	50	53.5	107	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND	50	48.8	98	50	48.5	97	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	59.3	119	50	60.5	121	2	70-130/30
127-18-4	Tetrachloroethene	ND	50	49.7	99	50	48.4	97	3	70-130/30
108-88-3	Toluene	ND	50	54.0	108	50	53.0	106	2	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND	50	31.2	62* a	50	46.8	94	40* b	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND	50	34.6	69* a	50	41.8	84	19	70-130/30
71-55-6	1,1,1-Trichloroethane	ND	50	44.3	89	50	44.1	88	0	70-130/30
79-00-5	1,1,2-Trichloroethane	ND	50	54.7	109	50	53.9	108	1	70-130/30
79-01-6	Trichloroethene	ND	50	45.3	91	50	44.6	89	2	70-130/30
75-69-4	Trichlorofluoromethane	ND	50	42.2	84	50	41.9	84	1	70-130/30
96-18-4	1,2,3-Trichloropropane	ND	50	62.2	124	50	63.3	127	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND	50	51.4	103	50	51.1	102	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND	50	52.0	104	50	52.1	104	0	70-130/30
108-05-4	Vinyl Acetate	ND	50	45.5	91	50	45.0	90	1	70-130/30
75-01-4	Vinyl chloride	ND	50	48.8	98	50	48.5	97	1	70-130/30
	m,p-Xylene	ND	100	110	110	100	107	107	3	70-130/30
95-47-6	o-Xylene	ND	50	53.8	108	50	53.1	106	1	70-130/30
1330-20-7	Xylene (total)	ND	150	163	109	150	160	107	2	70-130/30

* = Outside of Control Limits.

6.3.1



Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29805

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29804-1MS	V30331.D	1	04/27/14	AMY	n/a	n/a	MSV1133
MC29804-1MSD	V30332.D	1	04/27/14	AMY	n/a	n/a	MSV1133
MC29804-1	V30315.D	1	04/27/14	AMY	n/a	n/a	MSV1133

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-1, MC29805-2, MC29805-7

6.3.1



CAS No.	Surrogate Recoveries	MS	MSD	MC29804-1	Limits
1868-53-7	Dibromofluoromethane	80%	79%	99%	70-130%
2037-26-5	Toluene-D8	91%	90%	90%	70-130%
460-00-4	4-Bromofluorobenzene	92%	91%	88%	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: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29804-4MS	V30353.D	5	04/28/14	AMY	n/a	n/a	MSV1134
MC29804-4MSD	V30354.D	5	04/28/14	AMY	n/a	n/a	MSV1134
MC29804-4	V30343.D	1	04/28/14	AMY	n/a	n/a	MSV1134

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-1, MC29805-3, MC29805-4, MC29805-5, MC29805-6

CAS No.	Compound	MC29804-4 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	250	189	76	250	198	79	5	70-130/30
107-02-8	Acrolein	ND	1250	1250	100	1250	1350	108	8	70-130/30
107-13-1	Acrylonitrile	ND	250	292	117	250	304	122	4	70-130/30
71-43-2	Benzene	ND	250	276	110	250	291	116	5	70-130/30
108-86-1	Bromobenzene	ND	250	263	105	250	287	115	9	70-130/30
74-97-5	Bromochloromethane	ND	250	267	107	250	275	110	3	70-130/30
75-27-4	Bromodichloromethane	ND	250	250	100	250	261	104	4	70-130/30
75-25-2	Bromoform	ND	250	218	87	250	220	88	1	70-130/30
74-83-9	Bromomethane	ND	250	213	85	250	225	90	5	70-130/30
78-93-3	2-Butanone (MEK)	ND	250	230	92	250	241	96	5	70-130/30
104-51-8	n-Butylbenzene	ND	250	275	110	250	300	120	9	70-130/30
135-98-8	sec-Butylbenzene	ND	250	280	112	250	313	125	11	70-130/30
98-06-6	tert-Butylbenzene	ND	250	253	101	250	282	113	11	70-130/30
75-15-0	Carbon disulfide	ND	250	267	107	250	285	114	7	70-130/30
56-23-5	Carbon tetrachloride	ND	250	255	102	250	267	107	5	70-130/30
108-90-7	Chlorobenzene	ND	250	269	108	250	284	114	5	70-130/30
75-00-3	Chloroethane	ND	250	265	106	250	278	111	5	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND	250	ND	0* ^a	250	ND	0* ^a	nc	70-130/30
67-66-3	Chloroform	ND	250	255	102	250	261	104	2	70-130/30
74-87-3	Chloromethane	ND	250	234	94	250	235	94	0	70-130/30
95-49-8	o-Chlorotoluene	ND	250	261	104	250	284	114	8	70-130/30
106-43-4	p-Chlorotoluene	ND	250	270	108	250	287	115	6	70-130/30
124-48-1	Dibromochloromethane	ND	250	233	93	250	249	100	7	70-130/30
95-50-1	1,2-Dichlorobenzene	ND	250	244	98	250	271	108	10	70-130/30
541-73-1	1,3-Dichlorobenzene	ND	250	253	101	250	276	110	9	70-130/30
106-46-7	1,4-Dichlorobenzene	ND	250	259	104	250	278	111	7	70-130/30
75-71-8	Dichlorodifluoromethane	ND	250	187	75	250	193	77	3	70-130/30
75-34-3	1,1-Dichloroethane	ND	250	276	110	250	287	115	4	70-130/30
107-06-2	1,2-Dichloroethane	ND	250	245	98	250	254	102	4	70-130/30
75-35-4	1,1-Dichloroethene	ND	250	284	114	250	304	122	7	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND	250	271	108	250	284	114	5	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	250	276	110	250	286	114	4	70-130/30
78-87-5	1,2-Dichloropropane	ND	250	305	122	250	321	128	5	70-130/30
142-28-9	1,3-Dichloropropane	ND	250	284	114	250	302	121	6	70-130/30
594-20-7	2,2-Dichloropropane	ND	250	237	95	250	249	100	5	70-130/30
563-58-6	1,1-Dichloropropene	ND	250	261	104	250	277	111	6	70-130/30

* = Outside of Control Limits.

6.3.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29804-4MS	V30353.D	5	04/28/14	AMY	n/a	n/a	MSV1134
MC29804-4MSD	V30354.D	5	04/28/14	AMY	n/a	n/a	MSV1134
MC29804-4	V30343.D	1	04/28/14	AMY	n/a	n/a	MSV1134

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-1, MC29805-3, MC29805-4, MC29805-5, MC29805-6

CAS No.	Compound	MC29804-4 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND	250	229	92	250	242	97	6	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND	250	294	118	250	307	123	4	70-130/30
123-91-1	1,4-Dioxane	ND	1250	1280	102	1250	1400	112	9	70-130/30
97-63-2	Ethyl methacrylate	ND	250	258	103	250	267	107	3	72-139/30
100-41-4	Ethylbenzene	ND	250	282	113	250	297	119	5	70-130/30
87-68-3	Hexachlorobutadiene	ND	250	204	82	250	237	95	15	70-130/30
591-78-6	2-Hexanone	ND	250	231	92	250	246	98	6	70-130/30
98-82-8	Isopropylbenzene	ND	250	269	108	250	298	119	10	70-130/30
99-87-6	p-Isopropyltoluene	ND	250	266	106	250	297	119	11	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	250	247	99	250	260	104	5	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	250	265	106	250	279	112	5	70-130/30
74-95-3	Methylene bromide	ND	250	272	109	250	281	112	3	70-130/30
75-09-2	Methylene chloride	ND	250	281	112	250	296	118	5	70-130/30
91-20-3	Naphthalene	ND	250	246	98	250	312	125	24	70-130/30
103-65-1	n-Propylbenzene	ND	250	275	110	250	296	118	7	70-130/30
100-42-5	Styrene	ND	250	293	117	250	308	123	5	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND	250	270	108	250	291	116	7	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	313	125	250	350	140* ^a	11	70-130/30
127-18-4	Tetrachloroethene	ND	250	266	106	250	279	112	5	70-130/30
108-88-3	Toluene	ND	250	291	116	250	301	120	3	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND	250	166	66* ^a	250	281	112	51* ^b	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND	250	179	72	250	240	96	29	70-130/30
71-55-6	1,1,1-Trichloroethane	ND	250	253	101	250	264	106	4	70-130/30
79-00-5	1,1,2-Trichloroethane	ND	250	308	123	250	311	124	1	70-130/30
79-01-6	Trichloroethene	ND	250	249	100	250	264	106	6	70-130/30
75-69-4	Trichlorofluoromethane	ND	250	237	95	250	246	98	4	70-130/30
96-18-4	1,2,3-Trichloropropane	ND	250	283	113	250	372	149* ^a	27	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND	250	266	106	250	293	117	10	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND	250	270	108	250	295	118	9	70-130/30
108-05-4	Vinyl Acetate	ND	250	265	106	250	278	111	5	70-130/30
75-01-4	Vinyl chloride	ND	250	242	97	250	258	103	6	70-130/30
	m,p-Xylene	ND	500	572	114	500	608	122	6	70-130/30
95-47-6	o-Xylene	ND	250	280	112	250	304	122	8	70-130/30
1330-20-7	Xylene (total)	ND	750	853	114	750	912	122	7	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29804-4MS	V30353.D	5	04/28/14	AMY	n/a	n/a	MSV1134
MC29804-4MSD	V30354.D	5	04/28/14	AMY	n/a	n/a	MSV1134
MC29804-4	V30343.D	1	04/28/14	AMY	n/a	n/a	MSV1134

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-1, MC29805-3, MC29805-4, MC29805-5, MC29805-6

6.3.2
6

CAS No.	Surrogate Recoveries	MS	MSD	MC29804-4	Limits
1868-53-7	Dibromofluoromethane	86%	84%	100%	70-130%
2037-26-5	Toluene-D8	93%	91%	89%	70-130%
460-00-4	4-Bromofluorobenzene	90%	91%	91%	70-130%

- (a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
- (b) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC30021-1MS	V30420.D	5	04/29/14	AMY	n/a	n/a	MSV1136
MC30021-1MSD	V30421.D	5	04/29/14	AMY	n/a	n/a	MSV1136
MC30021-1	V30426.D	1	04/29/14	AMY	n/a	n/a	MSV1136

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29805-4, MC29805-5, MC29805-6

CAS No.	Compound	MC30021-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	250	285	114	250	267	107	7	70-130/30
100-41-4	Ethylbenzene	ND	250	295	118	250	283	113	4	70-130/30
108-88-3	Toluene	ND	250	309	124	250	289	116	7	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND	250	312	125	250	278	111	12	70-130/30
	m,p-Xylene	ND	500	608	122	500	580	116	5	70-130/30
95-47-6	o-Xylene	ND	250	304	122	250	290	116	5	70-130/30
1330-20-7	Xylene (total)	ND	750	912	122	750	870	116	5	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC30021-1	Limits
1868-53-7	Dibromofluoromethane	79%	78%	90%	70-130%
2037-26-5	Toluene-D8	92%	92%	90%	70-130%
460-00-4	4-Bromofluorobenzene	92%	92%	90%	70-130%

* = Outside of Control Limits.

6.3.3

Volatile Internal Standard Area Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSV1133-CC1058	Injection Date:	04/27/14
Lab File ID:	V30306.D	Injection Time:	09:54
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1	IS 2	IS 3	IS 4	IS 5
	AREA	RT	AREA	RT	AREA
Check Std	444998	6.56	644319	7.74	298836
Upper Limit ^a	889996	7.06	1288638	8.24	597672
Lower Limit ^b	222499	6.06	322160	7.24	149418

Lab Sample ID	IS 1	IS 2	IS 3	IS 4	IS 5
	AREA	RT	AREA	RT	AREA
MSV1133-BS	444998	6.56	644319	7.74	298836
MSV1133-MB	325507	6.55	501650	7.74	239873
ZZZZZZ	333731	6.56	523534	7.74	254076
MC29805-7	312734	6.55	498012	7.74	241675
ZZZZZZ	292719	6.55	467434	7.74	225762
MC29805-2	304852	6.56	477575	7.74	229894
MC29804-1	289764	6.55	456400	7.74	222526
ZZZZZZ	298826	6.56	472102	7.74	241494
ZZZZZZ	299723	6.56	492345	7.74	237146
ZZZZZZ	376963	6.55	556536	7.74	282352
ZZZZZZ	468706	6.56	707169	7.74	351930
ZZZZZZ	466561	6.55	654800	7.74	295508
ZZZZZZ	483012	6.55	729901	7.74	348623
MC29805-1	495269	6.55	780550	7.73	337890
MC29804-1MS	466834	6.55	672984	7.73	309801
MC29804-1MSD	457428	6.54	664297	7.73	303825

- 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
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Volatile Internal Standard Area Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSV1134-CC1058	Injection Date:	04/28/14
Lab File ID:	V30338.D	Injection Time:	08:24
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
	AREA		AREA		AREA		AREA		AREA	
Check Std	451145	6.55	645132	7.73	304199	11.08	308400	13.29	65290	3.50
Upper Limit ^a	902290	7.05	1290264	8.23	608398	11.58	616800	13.79	130580	4.00
Lower Limit ^b	225573	6.05	322566	7.23	152100	10.58	154200	12.79	32645	3.00

Lab Sample ID	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
	AREA		AREA		AREA		AREA		AREA	
MSV1134-BS	427928	6.55	631318	7.73	294068	11.07	298098	13.29	63821	3.50
MSV1134-MB	293873	6.55	464130	7.73	232355	11.07	209249	13.29	51229	3.49
MC29804-4	298946	6.55	477952	7.73	234283	11.08	210254	13.29	48069	3.50
ZZZZZZ	276705	6.55	444177	7.73	220792	11.07	199927	13.29	48241	3.49
ZZZZZZ	334791	6.54	429888	7.73	218507	11.07	201133	13.29	55334	3.49
ZZZZZZ	259658	6.55	421448	7.73	210502	11.07	196070	13.29	46646	3.49
ZZZZZZ	249672	6.55	402272	7.73	207214	11.08	189836	13.29	46277	3.50
ZZZZZZ	235362	6.55	380660	7.73	201348	11.08	184015	13.29	42749	3.50
ZZZZZZ	242045	6.55	395994	7.74	206193	11.08	186529	13.29	41513	3.50
ZZZZZZ	279172	6.55	421669	7.73	214385	11.08	194105	13.29	49317	3.49
MC29805-3	285195	6.55	428741	7.74	209051	11.08	215492	13.29	49929	3.50
ZZZZZZ	342370	6.55	481767	7.74	230407	11.08	227083	13.29	55268	3.50
MC29804-4MS	378681	6.55	546257	7.74	261198	11.08	274959	13.29	59759	3.50
MC29804-4MSD	367888	6.55	526630	7.73	245918	11.07	253019	13.29	59772	3.49
ZZZZZZ	337281	6.55	495633	7.73	230413	11.07	240731	13.29	60184	3.50
MC29805-1	333343	6.55	492513	7.73	235137	11.07	230608	13.29	62662	3.50
MC29805-4	500025	6.55	932722	7.74	366171	11.07	397906	13.29	235599 ^c	3.52
MC29805-5	592524	6.62	1246305	7.76	412769	11.07	381283	13.29	141764 ^c	3.52
MC29805-6	687389	6.71	1376465 ^d	7.79	472792	11.08	452905	13.29	148040 ^d	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.
- (d) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

6.4.2



Volatile Internal Standard Area Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSV1136-CC1058	Injection Date:	04/29/14
Lab File ID:	V30404.D	Injection Time:	13:15
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
	AREA		AREA		AREA		AREA		AREA	
Check Std	371905	6.52	519113	7.70	255894	11.06	268106	13.27	60520	3.47
Upper Limit ^a	743810	7.02	1038226	8.20	511788	11.56	536212	13.77	121040	3.97
Lower Limit ^b	185953	6.02	259557	7.20	127947	10.56	134053	12.77	30260	2.97

Lab	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
Sample ID	AREA		AREA		AREA		AREA		AREA	
MSV1136-BS	356194	6.51	507718	7.70	251577	11.06	267917	13.27	62169	3.47
MSV1136-MB	263092	6.52	394718	7.71	207310	11.06	191423	13.27	47281	3.47
MC29805-5	254868	6.51	398935	7.70	198846	11.06	186971	13.27	43273	3.46
MC29805-6	254104	6.52	410271	7.71	202677	11.06	191767	13.27	43509	3.47
MC29805-4	285434	6.52	408973	7.70	206061	11.06	207196	13.27	50117	3.47
MC29805-6	226201	6.51	367153	7.70	185593	11.05	172780	13.27	40975	3.46
ZZZZZZ	231864	6.51	356707	7.70	198434	11.06	218185	13.27	44272	3.46
ZZZZZZ	270401	6.51	411764	7.70	214468	11.05	209507	13.27	40362	3.46
ZZZZZZ	315087	6.52	471248	7.70	237932	11.05	248213	13.27	47119	3.47
ZZZZZZ	397112	6.51	588341	7.70	279953	11.05	283484	13.27	59229	3.47
MC30021-1MS	412258	6.51	583754	7.70	283946	11.05	285272	13.27	63503	3.47
MC30021-1MSD	442394	6.51	632837	7.70	298125	11.05	305609	13.27	70758	3.47
ZZZZZZ	326421	6.51	489892	7.70	240103	11.05	234773	13.27	58756	3.46
ZZZZZZ	316804	6.51	478035	7.70	235851	11.05	223816	13.27	55471	3.46
MC30021-1	305849	6.51	460409	7.70	229155	11.05	215561	13.27	55760	3.46
ZZZZZZ	314596	6.52	479649	7.70	240267	11.05	228443	13.27	49797	3.47
ZZZZZZ	267789	6.51	416543	7.70	209818	11.05	194614	13.27	40809	3.47

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

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

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

6.4.3

Volatile Surrogate Recovery Summary

Job Number: MC29805

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Method: SW846 8260C	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC29805-1	V30356.D	89	88	89
MC29805-1	V30329.D	77	86	94
MC29805-2	V30314.D	96	90	89
MC29805-3	V30351.D	94	94	86
MC29805-4	V30412.D	86	91	92
MC29805-4	V30357.D	79	80	96
MC29805-5	V30410.D	94	89	89
MC29805-5	V30358.D	72	75	93
MC29805-6	V30413.D	100	89	90
MC29805-6	V30411.D	96	87	92
MC29805-6	V30359.D	66* a	78	90
MC29805-7	V30312.D	96	90	89
MC29804-1MS	V30331.D	80	91	92
MC29804-1MSD	V30332.D	79	90	91
MC29804-4MS	V30353.D	86	93	90
MC29804-4MSD	V30354.D	84	91	91
MC30021-1MS	V30420.D	79	92	92
MC30021-1MSD	V30421.D	78	92	92
MSV1133-BS	V30306.D	81	91	89
MSV1133-MB	V30310.D	92	89	89
MSV1134-BS	V30339.D	84	91	91
MSV1134-MB	V30342.D	99	90	91
MSV1136-BS	V30405.D	83	93	91
MSV1136-MB	V30408.D	92	92	91

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

(a) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

6.5.1
6

GC/MS Semi-volatiles

QC Data Summaries

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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: MC29805
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37647-MB	R38301.D	1	04/21/14	WK	04/17/14	OP37647	MSR1412

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

MC29805-1, MC29805-2, MC29805-3, MC29805-4, MC29805-5, MC29805-6

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ng/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	0.83	5.0	0.17	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	1.4	2.0	0.33	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

7.1.1
7

Method Blank Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37647-MB	R38301.D	1	04/21/14	WK	04/17/14	OP37647	MSR1412

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29805-1, MC29805-2, MC29805-3, MC29805-4, MC29805-5, MC29805-6

7.1.1
7

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	38%	15-110%
4165-62-2	Phenol-d5	23%	15-110%
118-79-6	2,4,6-Tribromophenol	75%	15-110%
4165-60-0	Nitrobenzene-d5	64%	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	

Method Blank Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37648-MB	188660.D	1	04/21/14	MR	04/17/14	OP37648	MSI3302

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29805-1, MC29805-2, MC29805-3, MC29805-4, MC29805-5, MC29805-6

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	0.031	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	65% 30-130%
321-60-8	2-Fluorobiphenyl	59% 30-130%
1718-51-0	Terphenyl-d14	86% 30-130%

7.1.2
7

Blank Spike Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37647-BS	R38302.D	1	04/21/14	WK	04/17/14	OP37647	MSR1412

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29805-1, MC29805-2, MC29805-3, MC29805-4, MC29805-5, MC29805-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	15.4	31	30-130
95-57-8	2-Chlorophenol	50	32.1	64	30-130
59-50-7	4-Chloro-3-methyl phenol	50	34.2	68	30-130
120-83-2	2,4-Dichlorophenol	50	35.3	71	30-130
105-67-9	2,4-Dimethylphenol	50	12.7	25* a	30-130
51-28-5	2,4-Dinitrophenol	50	42.8	86	30-130
534-52-1	4,6-Dinitro-o-cresol	50	47.3	95	30-130
95-48-7	2-Methylphenol	50	26.7	53	30-130
	3&4-Methylphenol	100	46.9	47	30-130
88-75-5	2-Nitrophenol	50	35.7	71	30-130
100-02-7	4-Nitrophenol	50	12.8	26* a	30-130
87-86-5	Pentachlorophenol	50	41.0	82	30-130
108-95-2	Phenol	50	11.7	23* a	30-130
95-95-4	2,4,5-Trichlorophenol	50	38.6	77	30-130
88-06-2	2,4,6-Trichlorophenol	50	38.4	77	30-130
62-53-3	Aniline	50	23.4	47	40-140
101-55-3	4-Bromophenyl phenyl ether	50	42.6	85	40-140
85-68-7	Butyl benzyl phthalate	50	41.9	84	40-140
100-51-6	Benzyl Alcohol	50	28.8	58	40-140
91-58-7	2-Chloronaphthalene	50	35.8	72	40-140
106-47-8	4-Chloroaniline	50	29.3	59	40-140
111-91-1	his(2-Chloroethoxy)methane	50	33.4	67	40-140
111-44-4	bis(2-Chloroethyl)ether	50	32.1	64	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	39.9	80	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	37.7	75	40-140
122-66-7	1,2-Diphenylhydrazine	50	35.9	72	40-140
121-14-2	2,4-Dinitrotoluene	50	42.1	84	40-140
606-20-2	2,6-Dinitrotoluene	50	40.5	81	40-140
91-94-1	3,3'-Dichlorobenzidine	50	36.6	73	40-140
132-64-9	Dibenzofuran	50	35.1	70	40-140
84-74-2	Di-n-butyl phthalate	50	40.5	81	40-140
117-84-0	Di-n-octyl phthalate	50	43.0	86	40-140
84-66-2	Diethyl phthalate	50	40.4	81	40-140
131-11-3	Dimethyl phthalate	50	41.1	82	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	41.8	84	40-140
118-74-1	Hexachlorobenzene	50	42.5	85	40-140

* = Outside of Control Limits.

7.2.1
7

Blank Spike Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37647-BS	R38302.D	1	04/21/14	WK	04/17/14	OP37647	MSR1412

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29805-1, MC29805-2, MC29805-3, MC29805-4, MC29805-5, MC29805-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	13.5	27* a	40-140
67-72-1	Hexachloroethane	50	19.8	40	40-140
78-59-1	Isophorone	50	31.0	62	40-140
88-74-4	2-Nitroaniline	50	39.8	80	40-140
99-09-2	3-Nitroaniline	50	36.1	72	40-140
100-01-6	4-Nitroaniline	50	33.8	68	40-140
98-95-3	Nitrobenzene	50	31.7	63	40-140
62-75-9	n-Nitrosodimethylamine	50	12.5	25* a	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	18.7	37* a	40-140
86-30-6	N-Nitrosodiphenylamine	50	36.5	73	40-140
110-86-1	Pyridine	50	18.8	38* a	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	37%	15-110%
4165-62-2	Phenol-d5	23%	15-110%
118-79-6	2,4,6-Tribromophenol	85%	15-110%
4165-60-0	Nitrobenzene-d5	64%	30-130%
321-60-8	2-Fluorobiphenyl	68%	30-130%
1718-51-0	Terphenyl-d14	86%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

7.2.1

Blank Spike Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37648-BS	I88661.D	1	04/21/14	MR	04/17/14	OP37648	MSI3302

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29805-1, MC29805-2, MC29805-3, MC29805-4, MC29805-5, MC29805-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	32.6	65	40-140
208-96-8	Acenaphthylene	50	28.0	56	40-140
120-12-7	Anthracene	50	32.5	65	40-140
56-55-3	Benzo(a)anthracene	50	38.7	77	40-140
50-32-8	Benzo(a)pyrene	50	34.7	69	40-140
205-99-2	Benzo(b)fluoranthene	50	40.6	81	40-140
191-24-2	Benzo(g,h,i)perylene	50	41.3	83	40-140
207-08-9	Benzo(k)fluoranthene	50	38.3	77	40-140
218-01-9	Chrysene	50	37.2	74	40-140
53-70-3	Dibenzo(a,h)anthracene	50	44.2	88	40-140
206-44-0	Fluoranthene	50	38.2	76	40-140
86-73-7	Fluorene	50	35.9	72	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	42.5	85	40-140
90-12-0	1-Methylnaphthalene	50	30.8	62	40-140
91-57-6	2-Methylnaphthalene	50	29.7	59	40-140
85-01-8	Phenanthrene	50	35.3	71	40-140
129-00-0	Pyrene	50	38.2	76	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	66%	30-130%
321-60-8	2-Fluorobiphenyl	61%	30-130%
1718-51-0	Terphenyl-d14	83%	30-130%

* = Outside of Control Limits.

7.2.2
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37647-MS	R38303.D	1	04/21/14	WK	04/17/14	OP37647	MSR1412
OP37647-MSD	R38304.D	1	04/21/14	WK	04/17/14	OP37647	MSR1412
MC29400-14	R38305.D	1	04/21/14	WK	04/17/14	OP37647	MSR1412

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29805-1, MC29805-2, MC29805-3, MC29805-4, MC29805-5, MC29805-6

CAS No.	Compound	MC29400-14 Spike		MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
		ug/l	Q ug/l								
65-85-0	Benzoic Acid	ND	50	17.7	35	50	18.0	36	2	30-130/20	
95-57-8	2-Chlorophenol	ND	50	36.8	74	50	37.1	74	1	30-130/20	
59-50-7	4-Chloro-3-methyl phenol	ND	50	36.0	72	50	37.4	75	4	30-130/20	
120-83-2	2,4-Dichlorophenol	ND	50	39.7	79	50	41.1	82	3	30-130/20	
105-67-9	2,4-Dimethylphenol	ND	50	8.5	17* a	50	17.5	35	69* b	30-130/20	
51-28-5	2,4-Dinitrophenol	ND	50	45.5	91	50	46.8	94	3	30-130/20	
534-52-1	4,6-Dinitro-o-cresol	ND	50	50.0	100	50	50.1	100	0	30-130/20	
95-48-7	2-Methylphenol	ND	50	29.1	58	50	29.3	59	1	30-130/20	
	3&4-Methylphenol	ND	100	52.8	53	100	57.0	57	8	30-130/20	
88-75-5	2-Nitrophenol	ND	50	40.5	81	50	40.9	82	1	30-130/20	
100-02-7	4-Nitrophenol	ND	50	14.5	29* a	50	14.9	30	3	30-130/20	
87-86-5	Pentachlorophenol	ND	50	44.0	88	50	43.7	87	1	30-130/20	
108-95-2	Phenol	ND	50	15.3	31	50	15.2	30	1	30-130/20	
95-95-4	2,4,5-Trichlorophenol	ND	50	42.3	85	50	44.0	88	4	30-130/20	
88-06-2	2,4,6-Trichlorophenol	ND	50	42.0	84	50	43.9	88	4	30-130/20	
62-53-3	Aniline	ND	50	22.9	46	50	24.8	50	8	40-140/20	
101-55-3	4-Bromophenyl phenyl ether	ND	50	47.9	96	50	47.0	94	2	40-140/20	
85-68-7	Butyl benzyl phthalate	ND	50	46.0	92	50	45.2	90	2	40-140/20	
100-51-6	Benzyl Alcohol	ND	50	31.4	63	50	31.9	64	2	40-140/20	
91-58-7	2-Chloronaphthalene	ND	50	42.5	85	50	44.0	88	3	40-140/20	
106-47-8	4-Chloroaniline	ND	50	30.0	60	50	32.3	65	7	40-140/20	
111-91-1	bis(2-Chloroethoxy)methane	ND	50	37.7	75	50	38.1	76	1	40-140/20	
111-44-4	bis(2-Chloroethyl)ether	ND	50	38.2	76	50	36.3	73	5	40-140/20	
108-60-1	bis(2-Chloroisopropyl)ether	ND	50	46.8	94	50	45.4	91	3	40-140/20	
7005-72-3	4-Chlorophenyl phenyl ether	ND	50	42.6	85	50	43.5	87	2	40-140/20	
122-66-7	1,2-Diphenylhydrazine	ND	50	40.3	81	50	39.1	78	3	40-140/20	
121-14-2	2,4-Dinitrotoluene	ND	50	46.5	93	50	46.3	93	0	40-140/20	
606-20-2	2,6-Dinitrotoluene	ND	50	44.8	90	50	44.9	90	0	40-140/20	
91-94-1	3,3'-Dichlorobenzidine	ND	50	45.5	91	50	49.2	98	8	40-140/20	
132-64-9	Dibenzofuran	ND	50	40.2	80	50	41.1	82	2	40-140/20	
84-74-2	Di-n-butyl phthalate	0.86	JB	50	44.9	88	50	43.4	85	3	40-140/20
117-84-0	Di-n-octyl phthalate	ND	50	48.4	97	50	47.2	94	3	40-140/20	
84-66-2	Diethyl phthalate	ND	50	44.1	88	50	43.7	87	1	40-140/20	
131-11-3	Dimethyl phthalate	ND	50	44.4	89	50	44.7	89	1	40-140/20	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	50	45.9	92	50	45.8	92	0	40-140/20	
118-74-1	Hexachlorobenzene	ND	50	46.4	93	50	46.1	92	1	40-140/20	

* = Outside of Control Limits.

7.3.1
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37647-MS	R38303.D	1	04/21/14	WK	04/17/14	OP37647	MSR1412
OP37647-MSD	R38304.D	1	04/21/14	WK	04/17/14	OP37647	MSR1412
MC29400-14	R38305.D	1	04/21/14	WK	04/17/14	OP37647	MSR1412

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29805-1, MC29805-2, MC29805-3, MC29805-4, MC29805-5, MC29805-6

7.3.1
7

CAS No.	Compound	MC29400-14 Spike		MS	MS	Spike	MSD	MSD	RPD	Limits
		ug/l	Q ug/l	ug/l	%	ug/l	ug/l	%		Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND	50	23.2	46	50	24.2	48	4	40-140/20
67-72-1	Hexachloroethane	ND	50	30.2	60	50	28.4	57	6	40-140/20
78-59-1	Isophorone	ND	50	35.2	70	50	36.0	72	2	40-140/20
88-74-4	2-Nitroaniline	ND	50	43.1	86	50	43.8	88	2	40-140/20
99-09-2	3-Nitroaniline	ND	50	35.3	71	50	35.9	72	2	40-140/20
100-01-6	4-Nitroaniline	ND	50	36.7	73	50	38.4	77	5	40-140/20
98-95-3	Nitrobenzene	ND	50	36.9	74	50	36.6	73	1	40-140/20
62-75-9	n-Nitrosodimethylamine	ND	50	19.0	38* ^a	50	20.0	40	5	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND	50	30.1	60	50	32.1	64	6	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND	50	41.4	83	50	41.4	83	0	40-140/20
110-86-1	Pyridine	ND	50	20.1	40	50	21.0	42	4	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29400-14 Limits	
367-12-4	2-Fluorophenol	46%	47%	42%	15-110%
4165-62-2	Phenol-d5	28%	28%	26%	15-110%
118-79-6	2,4,6-Tribromophenol	90%	90%	81%	15-110%
4165-60-0	Nitrobenzene-d5	74%	75%	68%	30-130%
321-60-8	2-Fluorobiphenyl	78%	82%	69%	30-130%
1718-51-0	Terphenyl-d14	90%	91%	93%	30-130%

- (a) Outside control limits. Blank Spike meets program technical requirements.
- (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: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37648-MS	188662.D	1	04/21/14	MR	04/17/14	OP37648	MSI3302
OP37648-MSD	188663.D	1	04/21/14	MR	04/17/14	OP37648	MSI3302
MC29400-17	188664.D	1	04/21/14	MR	04/17/14	OP37648	MSI3302

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29805-1, MC29805-2, MC29805-3, MC29805-4, MC29805-5, MC29805-6

CAS No.	Compound	MC29400-17 Spike		MS	MS	Spike	MSD	MSD	RPD	Limits
		ug/l	Q ug/l	ug/l	%	ug/l	ug/l	%		Rec/RPD
83-32-9	Acenaphthene	ND	50	37.1	74	50	37.5	75	1	40-140/20
208-96-8	Acenaphthylene	ND	50	32.7	65	50	33.4	67	2	40-140/20
120-12-7	Anthracene	ND	50	36.8	74	50	36.9	74	0	40-140/20
56-55-3	Benzo(a)anthracene	ND	50	42.4	85	50	42.1	84	1	40-140/20
50-32-8	Benzo(a)pyrene	ND	50	38.9	78	50	39.0	78	0	40-140/20
205-99-2	Benzo(b)fluoranthene	ND	50	44.1	88	50	42.4	85	4	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND	50	45.6	91	50	44.9	90	2	40-140/20
207-08-9	Benzo(k)fluoranthene	ND	50	42.1	84	50	43.0	86	2	40-140/20
218-01-9	Chrysene	ND	50	40.7	81	50	40.1	80	1	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND	50	48.5	97	50	47.7	95	2	40-140/20
206-44-0	Fluoranthene	ND	50	43.4	87	50	42.6	85	2	40-140/20
86-73-7	Fluorene	ND	50	40.2	80	50	39.8	80	1	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND	50	46.7	93	50	46.0	92	2	40-140/20
90-12-0	1-Methylnaphthalene	ND	50	35.2	70	50	35.5	71	1	40-140/20
91-57-6	2-Methylnaphthalene	ND	50	34.2	68	50	33.1	66	3	40-140/20
85-01-8	Phenanthrene	ND	50	38.7	77	50	37.9	76	2	40-140/20
129-00-0	Pyrene	ND	50	42.2	84	50	41.4	83	2	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29400-17 Limits	
4165-60-0	Nitrobenzene-d5	74%	74%	68%	30-130%
321-60-8	2-Fluorobiphenyl	70%	73%	63%	30-130%
1718-51-0	Terphenyl-d14	91%	92%	92%	30-130%

* = Outside of Control Limits.

7.3.2
7

Semivolatiles Internal Standard Area Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSI3302-CC3238	Injection Date:	04/21/14
Lab File ID:	I88659.D	Injection Time:	08:26
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	263950	3.98	636074	5.02	373416	6.55	634180	7.92	468021	10.70	1172823	12.17
Upper Limit ^a	527900	4.48	1272148	5.52	746832	7.05	1268360	8.42	936042	11.20	2345646	12.67
Lower Limit ^b	131975	3.48	318037	4.52	186708	6.05	317090	7.42	234011	10.20	586412	11.67

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37648-MB	290282	3.98	693913	5.02	411859	6.55	694989	7.92	509450	10.70	1290264	12.17
OP37648-BS	282838	3.98	671904	5.02	405580	6.55	685159	7.93	502616	10.70	1222689	12.17
OP37648-MS	290171	3.98	679188	5.02	400181	6.55	669890	7.93	485773	10.70	1172213	12.17
OP37648-MSD	315955	3.98	753203	5.03	441059	6.55	732184	7.93	534133	10.70	1289458	12.17
MC29400-17	300882	3.98	704611	5.02	410175	6.55	689527	7.92	499349	10.70	1234238	12.17
ZZZZZZ	283257	3.98	675586	5.02	394418	6.55	663015	7.92	481495	10.70	1194883	12.17
ZZZZZZ	307502	3.98	732280	5.02	425406	6.55	720365	7.92	520213	10.70	1283099	12.17
ZZZZZZ	309134	3.98	738424	5.02	428636	6.55	728143	7.92	521921	10.70	1285107	12.17
MC29805-1	296326	3.98	716771	5.02	412996	6.55	700522	7.92	500652	10.70	1243518	12.17
MC29805-2	307435	3.98	728236	5.02	420119	6.55	689158	7.93	500730	10.70	1235010	12.17
MC29805-3	285164	3.98	673179	5.02	391638	6.55	658134	7.92	467596	10.70	1122121	12.17
MC29805-4	325839	3.98	764045	5.03	686011	6.56	745801	7.94	522632	10.70	1195365	12.17
MC29805-5	307140	3.98	711783	5.02	418710	6.55	706110	7.92	523132	10.70	1259792	12.17
MC29805-6	288660	3.98	689395	5.02	402156	6.55	677247	7.92	484242	10.70	1183456	12.17
ZZZZZZ	295375	3.98	695101	5.02	412096	6.55	686113	7.92	506340	10.70	1235366	12.17

- 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
7

Semivolatile Internal Standard Area Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSR1412-CC1410	Injection Date:	04/21/14
Lab File ID:	R38295.D	Injection Time:	16:50
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	108969	5.39	390162	6.49	245323	8.02	417932	9.33	386213	11.92	336580	13.62
Upper Limit ^a	217938	5.89	780324	6.99	490646	8.52	835864	9.83	772426	12.42	673160	14.12
Lower Limit ^b	54485	4.89	195081	5.99	122662	7.52	208966	8.83	193107	11.42	168290	13.12

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
ZZZZZZ	124878	5.39	454855	6.49	282716	8.02	489002	9.32	432077	11.92	350188	13.62
ZZZZZZ	124065	5.39	447101	6.49	275307	8.02	478695	9.33	432923	11.92	367604	13.63
ZZZZZZ	123473	5.39	445567	6.49	289388	8.02	477879	9.33	426917	11.92	361512	13.62
ZZZZZZ	116216	5.39	413020	6.49	261650	8.02	447856	9.32	403149	11.92	349531	13.62
ZZZZZZ	118266	5.39	426754	6.49	271135	8.02	465376	9.32	423384	11.92	363725	13.62
OP37647-MB	122623	5.39	443338	6.49	281856	8.02	487842	9.32	439716	11.92	381642	13.62
OP37647-BS	118453	5.39	422078	6.49	264494	8.02	457601	9.33	433499	11.92	368414	13.63
OP37647-MS	119478	5.39	426660	6.49	262517	8.02	449249	9.33	426668	11.92	356648	13.63
OP37647-MSD	133540	5.39	478225	6.49	291731	8.02	509000	9.33	475370	11.93	407670	13.63
MC29400-14	121482	5.39	441238	6.49	281084	8.02	490707	9.32	452062	11.92	396999	13.62
ZZZZZZ	126570	5.39	455516	6.49	288399	8.02	499141	9.32	453741	11.92	393969	13.62
ZZZZZZ	126416	5.39	458855	6.49	287506	8.02	501009	9.32	458511	11.92	399962	13.62
MC29805-1	118569	5.39	429228	6.49	273953	8.02	463907	9.33	427885	11.92	378382	13.62
MC29805-2	122886	5.39	436465	6.49	279594	8.02	473367	9.33	437527	11.92	379873	13.62
MC29805-3	111278	5.39	403294	6.49	258703	8.02	446860	9.32	412819	11.92	338100	13.62
MC29805-4	127800	5.39	463391	6.49	463170	8.03	494540	9.34	459054	11.92	388057	13.63
MC29805-5	131829	5.39	469904	6.49	289127	8.02	495694	9.32	460686	11.92	407632	13.62
MC29805-6	126249	5.39	443885	6.49	284180	8.02	474828	9.33	437349	11.92	381788	13.62
OP37644-MB	110748	5.39	401099	6.49	249308	8.02	439802	9.32	410696	11.92	368819	13.62
OP37644-BS	105268	5.39	375575	6.49	235737	8.02	408798	9.33	388638	11.92	352997	13.62
OP37644-MS	105636	5.39	382859	6.49	245663	8.02	433762	9.33	418540	11.92	365411	13.63
OP37644-MSD	111306	5.39	399156	6.49	243195	8.02	417146	9.33	398248	11.92	352512	13.62
MC29400-13	110456	5.39	400461	6.49	252634	8.02	443503	9.32	419708	11.92	365003	13.62
ZZZZZZ	107274	5.39	382153	6.49	244234	8.02	434929	9.32	409182	11.92	369770	13.62
ZZZZZZ	115152	5.39	410079	6.49	258296	8.02	453076	9.32	415034	11.92	377209	13.62

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

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

7.4.2
7

Semivolatile Surrogate Recovery Summary

Job Number: MC29805

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29805-1	R38309.D	48	29	93	69	75	92
MC29805-2	R38310.D	39	27	93	64	76	73
MC29805-3	R38311.D	47	29	88	68	70	68
MC29805-4	R38312.D	49	28	100	87	60	104
MC29805-5	R38313.D	39	26	89	64	76	87
MC29805-6	R38314.D	33	20	61	47	47	63
OP37647-BS	R38302.D	37	23	85	64	68	86
OP37647-MB	R38301.D	38	23	75	64	66	91
OP37647-MS	R38303.D	46	28	90	74	78	90
OP37647-MSD	R38304.D	47	28	90	75	82	91

Surrogate Compounds Recovery Limits

S1 = 2-Fluorophenol 15-110%
 S2 = Phenol-d5 15-110%
 S3 = 2,4,6-Tribromophenol 15-110%
 S4 = Nitrobenzene-d5 30-130%
 S5 = 2-Fluorobiphenyl 30-130%
 S6 = Terphenyl-d14 30-130%

7.5.1
7

Semivolatile Surrogate Recovery Summary

Job Number: MC29805

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29805-1	I88668.D	68	68	91
MC29805-2	I88669.D	63	68	74
MC29805-3	I88670.D	68	62	68
MC29805-4	I88671.D	87	50	110
MC29805-5	I88672.D	66	67	85
MC29805-6	I88673.D	45	43	63
OP37648-BS	I88661.D	66	61	83
OP37648-MB	I88660.D	65	59	86
OP37648-MS	I88662.D	74	70	91
OP37648-MSD	I88663.D	74	73	92

Surrogate Compounds Recovery Limits

S1 = Nitrobenzene-d5 30-130%
S2 = 2-Fluorobiphenyl 30-130%
S3 = Terphenyl-d14 30-130%

7.5.2
7

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: MC29805
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37671-MB	BB55406.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222

The QC reported here applies to the following samples: Method: SW846 8011

MC29805-1, MC29805-2, MC29805-3, MC29805-4, MC29805-5, MC29805-6, MC29805-8

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)	85% 36-173%
460-00-4	Bromofluorobenzene (S)	87% 36-173%

8.1.1
8

Blank Spike Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37671-BS	BB55407.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222

The QC reported here applies to the following samples: Method: SW846 8011

MC29805-1, MC29805-2, MC29805-3, MC29805-4, MC29805-5, MC29805-6, MC29805-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.063	89	60-140
106-93-4	1,2-Dibromoethane	0.071	0.064	90	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	93%	36-173%
460-00-4	Bromofluorobenzene (S)	96%	36-173%

8.2.1
8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37671-MS	BB55408.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222
OP37671-MSD	BB55409.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222
MC29400-22	BB55410.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222

The QC reported here applies to the following samples:

Method: SW846 8011

MC29805-1, MC29805-2, MC29805-3, MC29805-4, MC29805-5, MC29805-6, MC29805-8

CAS No.	Compound	MC29400-22 Spike ug/l	Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.065	92	0.071	0.082	23	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.068	96	0.071	0.081	17	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC29400-22 Limits
460-00-4	Bromofluorobenzene (S)	92%	111%	105% 36-173%
460-00-4	Bromofluorobenzene (S)	95%	115%	109% 36-173%

8.3.1

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC29805

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29805-1	BB55411.D	70	82
MC29805-2	BB55412.D	77	82
MC29805-3	BB55413.D	82	85
MC29805-4	BB55414.D	89	99
MC29805-5	BB55415.D	62	83
MC29805-6	BB55417.D	63	66
MC29805-8	BB55418.D	83	88
OP37671-BS	BB55407.D	93	96
OP37671-MB	BB55406.D	85	87
OP37671-MS	BB55408.D	92	95
OP37671-MSD	BB55409.D	111	115

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: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	GBB3222-ICC3222	Injection Date:	04/21/14
Lab File ID:	BB55402.D	Injection Time:	15:30
Instrument ID:	GCBB	Method:	SW846 8011

S1^a S1^b
 RT RT

Check Std	4.30	4.60
-----------	------	------

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
OP37671-MB	BB55406.D	04/21/14	17:09	4.30	4.60
OP37671-BS	BB55407.D	04/21/14	17:34	4.30	4.60
OP37671-MS	BB55408.D	04/21/14	17:59	4.30	4.60
OP37671-MSD	BB55409.D	04/21/14	18:23	4.30	4.60
MC29400-22	BB55410.D	04/21/14	18:48	4.30	4.60
MC29805-1	BB55411.D	04/21/14	19:13	4.30	4.60
MC29805-2	BB55412.D	04/21/14	19:38	4.30	4.60
MC29805-3	BB55413.D	04/21/14	20:03	4.30	4.60
MC29805-4	BB55414.D	04/21/14	20:29	4.30	4.60
MC29805-5	BB55415.D	04/21/14	20:56	4.30	4.60

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: MC29805
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	GBB3222-CC3222	Injection Date:	04/21/14
Lab File ID:	BB55416.D	Injection Time:	21:25
Instrument ID:	GCB B	Method:	SW846 8011

S1^a S1^b
 RT RT

Check Std	4.30	4.60
-----------	------	------

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
MC29805-6	BB55417.D	04/21/14	21:54	4.30	4.60
MC29805-8	BB55418.D	04/21/14	22:24	4.30	4.60
ZZZZZZ	BB55419.D	04/21/14	22:53	4.30	4.60
ZZZZZZ	BB55420.D	04/21/14	23:22	4.30	4.60
ZZZZZZ	BB55421.D	04/21/14	23:51	4.30	4.60
ZZZZZZ	BB55422.D	04/22/14	00:21	4.30	4.60
ZZZZZZ	BB55423.D	04/22/14	00:49	4.30	4.60
ZZZZZZ	BB55424.D	04/22/14	01:18	4.30	4.60
ZZZZZZ	BB55425.D	04/22/14	01:46	4.30	4.60
ZZZZZZ	BB55426.D	04/22/14	02:14	4.30	4.60

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 – 2nd Quarter 2014 Data Review

Laboratory SDG: MC29833

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 5/27/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2013

Sample Identification	Sample Identification
MW4-ROX-041614	MW8-ROX-041614
MW8-ROX-041614-Dup	MW7-ROX-041614
TB-ROX-041614-HCL	TB-ROX-041614-ST

1.0 Data Package Completeness

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

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated di-n-butyl phthalate and phenanthrene were detected in the method blank. The SVOC LCS recovery for benzoic acid was outside evaluation criteria. Samples were diluted due to high levels of VOC target analytes. These issues are addressed further in the appropriate sections below. Additionally, continuing calibration verification for 1,2-dibromo-3-chloropropane exceeded criteria.

The cooler receipt form indicated that one of one cooler was received by the laboratory at a temperature of 1.9°C, which is outside the 4°C ± 2°C 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
OP37657-MB	SVOCs	Di-n-butyl phthalate	0.68 µg/L
OP37657-MB	PAHs	Phenanthrene	0.040 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. Please see Section 12.0 of this review for additional qualifications regarding samples associated with phenanthrene

in method blank OP37657-MB.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
MW4-ROX-041614	SVOCs	Di-n-butyl phthalate	-	U
MW8-ROX-041614	SVOCs	Di-n-butyl phthalate	-	U
MW8-ROX-041614-Dup	SVOCs	Di-n-butyl phthalate	-	U
MW7-ROX-041614	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
OP37657-BS	SVOCs	Benzoic acid	22	30-130

Analytical data that required qualification based on LCS data are included in the table below.

Sample ID	Parameter	Analyte	Qualification
MW4-ROX-041614	SVOCs	Benzoic acid	UJ
MW8-ROX-041614	SVOCs	Benzoic acid	UJ
MW8-ROX-041614-Dup	SVOCs	Benzoic acid	UJ
MW7-ROX-041614	SVOCs	Benzoic acid	UJ

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
MW8-ROX-041614	MW8-ROX-041614-Dup

Were field duplicates within evaluation criteria?

Yes

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

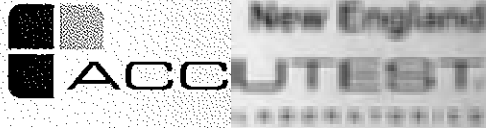
Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

Yes, professional judgment was also used to qualify as estimated, however not reject, data that was associated with phenanthrene in method blank OP37657-MB, due to comparable historical detections.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
MW8-ROX-041614	PAHs	Phenanthrene	-	J
MW8-ROX-041614-Dup	PAHs	Phenanthrene	-	J



Technical Report for

Shell Oil

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Accutest Job Number: MC29833

Sampling Date: 04/16/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: 79



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 5/27/2014
Reza Fard
Reza Fard
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: MC29833

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
MC29833-1	04/16/14	12:55	DMMN04/17/14	AQ	Ground Water	MW4-ROX-041614 ✓
MC29833-2	04/16/14	13:50	DMMN04/17/14	AQ	Ground Water	MW8-ROX-041614 ✓
MC29833-3	04/16/14	13:50	DMMN04/17/14	AQ	Ground Water	MW8-ROX-041614-DUP ✓
MC29833-4	04/16/14	14:50	DMMN04/17/14	AQ	Ground Water	MW7-ROX-041614 ✓
MC29833-5	04/16/14	00:00	DMMN04/17/14	AQ	Trip Blank Water	TB-ROX-041614-HCL ✓
MC29833-6	04/16/14	00:00	DMMN04/17/14	AQ	Trip Blank Water	TB-ROX-041614-ST ✓



SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Shell Oil Job No MC29833
 Site: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Report Date 5/1/2014 12:31:25 PM

4 Sample(s) and 2 Trip Blank(s) were collected on 04/16/2014 and were received at Accutest on 04/17/2014 properly preserved, at 1.9 Deg. C and intact. These Samples received an Accutest job number of MC29833. 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:	MSV1137
--------	----	-----------	---------

- ☛ All samples were analyzed within the recommended method holding time.
- ☛ Sample(s) MC29904-2MS, MC29904-2MSD were used as the QC samples indicated.
- ☛ All method blanks for this batch meet method specific criteria.
- ☛ MC29904-2MS/MSD Recovery(s) for 1,2,3-Trichloropropane, 2-Chloroethyl vinyl ether, Dichlorodifluoromethane are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- ☛ RPD(s) for MSD for 1,2,3-Trichlorobenzene, Naphthalene are outside control limits for sample MC29904-2MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.

Extractables by GCMS By Method SW846 8270D

Matrix	AQ	Batch ID:	OP37657
--------	----	-----------	---------

- ☛ All samples were extracted within the recommended method holding time.
- ☛ All samples were analyzed within the recommended method holding time.
- ☛ Sample(s) MC29400-19MS, MC29400-19MSD were used as the QC samples indicated.
- ☛ Sample(s) MC29833-1, MC29833-2, MC29833-3, MC29833-4 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- ☛ OP37657-BS/MS/MSD Recovery(s) for Benzoic Acid are outside control limits. Blank Spike meets program technical requirements.
- ☛ Matrix Spike Duplicate Recovery(s) for Phenol are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix	AQ	Batch ID:	OP37658
--------	----	-----------	---------

- ☛ All samples were extracted within the recommended method holding time.
- ☛ All samples were analyzed within the recommended method holding time.
- ☛ Sample(s) MC29400-20MS, MC29400-20MSD were used as the QC samples indicated.
- ☛ Sample(s) MC29833-2, MC29833-3, MC29833-4 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:	OP37671
--------	----	-----------	---------

2

- 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) MC29400-22MS, MC29400-22MSD were used as the QC samples indicated.
- Continuing calibration check standard GBB3222-CC3222 for 1,2-Dibromo-3-chloropropane exceed criteria (response bias high). Associated samples are non-detect for this compound.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report (MC29833).

Summary of Hits

Job Number: MC29833
 Account: Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Collected: 04/16/14



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

MC29833-1 MW4-ROX-041614

Benzene		553	5.0	3.2	ug/l	SW846 8260C
Isopropylbenzene		0.59 J	5.0	0.35	ug/l	SW846 8260C
n-Propylbenzene		0.81 J	5.0	0.49	ug/l	SW846 8260C
Toluene		0.99 J	1.0	0.33	ug/l	SW846 8260C
m,p-Xylene		2.7	1.0	0.93	ug/l	SW846 8260C
o-Xylene		0.39 J	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		3.1	1.0	0.36	ug/l	SW846 8260C
Di-n-butyl phthalate		0.76 JB u	5.6	0.19	ug/l	SW846 8270D
1-Methylnaphthalene		0.072 J	0.22	0.055	ug/l	SW846 8270D BY SIM

MC29833-2 MW8-ROX-041614

Benzene		862000	5000	3200	ug/l	SW846 8260C
3&4-Methylphenol		6.2 J	11	0.52	ug/l	SW846 8270D
Phenol		135	5.6	0.34	ug/l	SW846 8270D
Dibenzofuran		0.50 J	2.2	0.29	ug/l	SW846 8270D
Di-u-butyl phthalate		0.73 JB u	5.6	0.19	ug/l	SW846 8270D
Acenaphthene		0.18	0.11	0.077	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.074 J	0.11	0.055	ug/l	SW846 8270D BY SIM
Fluorene		0.46	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		14.2	0.22	0.055	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		9.7	0.22	0.082	ug/l	SW846 8270D BY SIM
Phenanthrene		0.15 B u	0.056 0.15	0.014	ug/l	SW846 8270D BY SIM

MC29833-3 MW8-ROX-041614-DUP

Benzene		1060000	5000	3200	ug/l	SW846 8260C
3&4-Methylphenol		5.3 J	10	0.48	ug/l	SW846 8270D
Phenol		118	5.1	0.31	ug/l	SW846 8270D
Dibenzofuran		0.45 J	2.0	0.26	ug/l	SW846 8270D
Di-n-butyl phthalate		0.60 JB u	5.1	0.18	ug/l	SW846 8270D
Acenaphthene		0.16	0.10	0.070	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.063 J	0.10	0.051	ug/l	SW846 8270D BY SIM
Fluorene		0.43	0.10	0.10	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		12.9	0.20	0.051	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		8.6	0.20	0.076	ug/l	SW846 8270D BY SIM
Phenanthrene		0.16 B u	0.051 0.16	0.013	ug/l	SW846 8270D BY SIM

MC29833-4 MW7-ROX-041614

Benzene		1390000	2500	1600	ug/l	SW846 8260C
Phenol		98.8	5.2	0.31	ug/l	SW846 8270D
Di-u-butyl phthalate		0.71 JB u	5.2	0.18	ug/l	SW846 8270D

Summary of Hits

Job Number: MC29833

Account: Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Collected: 04/16/14



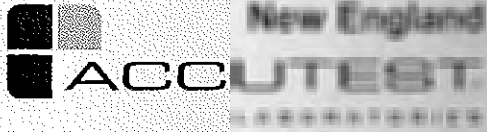
Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method	
		Acenaphthene	0.34	0.10	0.071	ug/l	SW846 8270D BY SIM
		Fluorene	0.26	0.10	0.10	ug/l	SW846 8270D BY SIM
		1-Methylnaphthalene	7.4	0.21	0.051	ug/l	SW846 8270D BY SIM
		2-Methylnaphthalene	10.3	0.21	0.076	ug/l	SW846 8270D BY SIM
		Phenanthrene	0.33 B	0.052	0.013	ug/l	SW846 8270D BY SIM

MC29833-5 TB-ROX-041614-HCL

No hits reported in this sample.

MC29833-6 TB-ROX-041614-ST

No hits reported in this sample.



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW4-ROX-041614	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-1	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30455.D	1	04/30/14	AMY	n/a	n/a	MSV1137
Run #2	V30463.D	10	04/30/14	AMY	n/a	n/a	MSV1137

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	553 ^a	5.0	3.2	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ng/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	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 presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW4-ROX-041614	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-1	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	0.59	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	0.81	5.0	0.49	ug/l	J
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	0.99	1.0	0.33	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	2.7	1.0	0.93	ug/l	
95-47-6	o-Xylene	0.39	1.0	0.36	ug/l	J
1330-20-7	Xylene (total)	3.1	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID: MW4-ROX-041614	Date Sampled: 04/16/14
Lab Sample ID: MC29833-1	Date Received: 04/17/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	82%	97%	70-130%
2037-26-5	Toluene-D8	94%	88%	70-130%
460-00-4	4-Bromofluorobenzene	94%	91%	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 J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW4-ROX-041614	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-1	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38288.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	WJ
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.71	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.59	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.62	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ng/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	0.76 u	5.6	0.19	ug/l	JB u
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

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 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW4-ROX-041614	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-1	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	46%		15-110%
4165-62-2	Phenol-d5	29%		15-110%
118-79-6	2,4,6-Tribromophenol	89%		15-110%
4165-60-0	Nitrobenzene-d5	77%		30-130%
321-60-8	2-Fluorobiphenyl	78%		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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 E = Indicates value exceeds calibration range

J = Indicates 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-041614	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-1	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	188686.D	1	04/21/14	MR	04/18/14	OP37658	MSI3303
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.055	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	0.072	0.22	0.055	ug/l	J
91-57-6	2-Methylnaphthalene	ND	0.22	0.082	ug/l	
85-01-8	Phenanthrene	ND	0.056	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	71%		30-130%
321-60-8	2-Fluorobiphenyl	70%		30-130%
1718-51-0	Terphenyl-d14	94%		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:	MW4-ROX-041614	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-1	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB55419.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222
Run #2							

Run #	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)	75%		36-173%
460-00-4	Bromofluorobenzene (S)	79%		36-173%

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

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Report of Analysis

Client Sample ID:	MW8-ROX-041614	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-2	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30456.D	2000	04/30/14	AMY	n/a	n/a	MSV1137
Run #2	V30464.D	10000	04/30/14	AMY	n/a	n/a	MSV1137

Run #	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	20000	5000	ug/l	
107-02-8	Acrolein	ND	50000	12000	ug/l	
107-13-1	Acrylonitrile	ND	10000	4200	ug/l	
71-43-2	Benzene	862000 ^a	5000	3200	ug/l	
108-86-1	Bromobenzene	ND	10000	700	ug/l	
74-97-5	Bromochloromethane	ND	10000	1100	ug/l	
75-27-4	Bromodichloromethane	ND	2000	680	ug/l	
75-25-2	Bromoform	ND	2000	1200	ug/l	
74-83-9	Bromomethane	ND	4000	3500	ug/l	
78-93-3	2-Butanone (MEK)	ND	10000	4700	ug/l	
104-51-8	n-Butylbenzene	ND	10000	2200	ug/l	
135-98-8	sec-Butylbenzene	ND	10000	840	ug/l	
98-06-6	tert-Butylbenzene	ND	10000	780	ug/l	
75-15-0	Carbon disulfide	ND	10000	920	ug/l	
56-23-5	Carbon tetrachloride	ND	2000	1100	ug/l	
108-90-7	Chlorobenzene	ND	2000	860	ug/l	
75-00-3	Chloroethane	ND	4000	1100	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	10000	6600	ug/l	
67-66-3	Chloroform	ND	2000	820	ug/l	
74-87-3	Chloromethane	ND	4000	2100	ug/l	
95-49-8	o-Chlorotoluene	ND	10000	760	ug/l	
106-43-4	p-Chlorotoluene	ND	10000	900	ug/l	
124-48-1	Dibromochloromethane	ND	2000	760	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2000	630	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2000	1100	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2000	710	ug/l	
75-71-8	Dichlorodifluoromethane	ND	4000	1400	ug/l	
75-34-3	1,1-Dichloroethane	ND	2000	720	ug/l	
107-06-2	1,2-Dichloroethane	ND	2000	1000	ug/l	
75-35-4	1,1-Dichloroethene	ND	2000	1200	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2000	1700	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2000	1000	ug/l	

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 E = Indicates value exceeds calibration range

J = Indicates 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-041614	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-2	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	4000	1000	ug/l	
142-28-9	1,3-Dichloropropane	ND	10000	1800	ug/l	
594-20-7	2,2-Dichloropropane	ND	10000	1400	ug/l	
563-58-6	1,1-Dichloropropene	ND	10000	950	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1000	840	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1000	1000	ng/l	
123-91-1	1,4-Dioxane	ND	50000	22000	ug/l	
97-63-2	Ethyl methacrylate	ND	10000	990	ug/l	
100-41-4	Ethylbenzene	ND	2000	760	ug/l	
87-68-3	Hexachlorobutadiene	ND	10000	3300	ug/l	
591-78-6	2-Hexanone	ND	10000	3200	ug/l	
98-82-8	Isopropylbenzene	ND	10000	700	ug/l	
99-87-6	p-Isopropyltoluene	ND	10000	750	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2000	1000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	10000	2000	ug/l	
74-95-3	Methylene bromide	ND	10000	1000	ug/l	
75-09-2	Methylene chloride	ND	4000	560	ug/l	
91-20-3	Naphthalene	ND	10000	1400	ug/l	
103-65-1	n-Propylbenzene	ND	10000	980	ug/l	
100-42-5	Styrene	ND	10000	1700	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2000	870	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1000	800	ug/l	
127-18-4	Tetrachloroethene	ND	2000	1200	ug/l	
108-88-3	Toluene	ND	2000	660	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	10000	1400	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	10000	1000	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2000	930	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2000	910	ug/l	
79-01-6	Trichloroethene	ND	2000	940	ug/l	
75-69-4	Trichlorofluoromethane	ND	2000	1100	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	10000	1600	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	10000	640	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	10000	770	ug/l	
108-05-4	Vinyl Acetate	ND	10000	1400	ug/l	
75-01-4	Vinyl chloride	ND	2000	1200	ug/l	
	m,p-Xylene	ND	2000	1900	ug/l	
95-47-6	o-Xylene	ND	2000	730	ug/l	
1330-20-7	Xylene (total)	ND	2000	730	ug/l	

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

J = Indicates 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-041614	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-2	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

4.2
4

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%	108%	70-130%
2037-26-5	Toluene-D8	87%	88%	70-130%
460-00-4	4-Bromofluorobenzene	90%	88%	70-130%

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

(a) Result is from Run# 2

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

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

Report of Analysis

Client Sample ID:	MW8-ROX-041614	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-2	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38289.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	uJ
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	6.2	11	0.52	ug/l	J
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	135	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.71	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.59	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.62	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	0.50	2.2	0.29	ug/l	J
84-74-2	Di-n-butyl phthalate	0.73 u	5.6	0.19	ug/l	JB u
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

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

J = Indicates 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-041614	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-2	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

4.2
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ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.21	ng/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	51%		15-110%
4165-62-2	Phenol-d5	32%		15-110%
118-79-6	2,4,6-Tribromophenol	97%		15-110%
4165-60-0	Nitrobenzene-d5	76%		30-130%
321-60-8	2-Fluorobiphenyl	79%		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-041614	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-2	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88687.D	1	04/21/14	MR	04/18/14	OP37658	MSI3303
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.18	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	0.074	0.11	0.055	ug/l	J
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(h)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dihenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	0.46	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	14.2	0.22	0.055	ng/l	
91-57-6	2-Methylnaphthalene	9.7	0.22	0.082	ug/l	
85-01-8	Phenanthrene	0.15 u	0.056 u	0.014	ug/l	B U
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	72%		30-130%
321-60-8	2-Fluorobiphenyl	72%		30-130%
1718-51-0	Terphenyl-d14	93%		30-130%

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

4.2
4

Report of Analysis

Client Sample ID:	MW8-ROX-041614	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-2	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB55420.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222
Run #2							

Run #	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)	80%		36-173%
460-00-4	Bromofluorobenzene (S)	94%		36-173%

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

4.2
4

Report of Analysis

Client Sample ID:	MW8-ROX-041614-DUP	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-3	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30457.D	2000	04/30/14	AMY	n/a	n/a	MSV1137
Run #2	V30470.D	10000	04/30/14	AMY	n/a	n/a	MSV1137

Run #	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	20000	5000	ug/l	
107-02-8	Acrolein	ND	50000	12000	ug/l	
107-13-1	Acrylonitrile	ND	10000	4200	ug/l	
71-43-2	Benzene	1060000 ^a	5000	3200	ug/l	
108-86-1	Bromobenzene	ND	10000	700	ng/l	
74-97-5	Bromochloromethane	ND	10000	1100	ug/l	
75-27-4	Bromodichloromethane	ND	2000	680	ng/l	
75-25-2	Bromoform	ND	2000	1200	ug/l	
74-83-9	Bromomethane	ND	4000	3500	ug/l	
78-93-3	2-Butanone (MEK)	ND	10000	4700	ug/l	
104-51-8	n-Butylbenzene	ND	10000	2200	ug/l	
135-98-8	sec-Butylbenzene	ND	10000	840	ug/l	
98-06-6	tert-Butylbenzene	ND	10000	780	ug/l	
75-15-0	Carbon disulfide	ND	10000	920	ug/l	
56-23-5	Carbon tetrachloride	ND	2000	1100	ug/l	
108-90-7	Chlorobenzene	ND	2000	860	ug/l	
75-00-3	Chloroethane	ND	4000	1100	ng/l	
110-75-8	2-Chloroethyl vinyl ether	ND	10000	6600	ug/l	
67-66-3	Chloroform	ND	2000	820	ug/l	
74-87-3	Chloromethane	ND	4000	2100	ng/l	
95-49-8	o-Chlorotoluene	ND	10000	760	ug/l	
106-43-4	p-Chlorotoluene	ND	10000	900	ug/l	
124-48-1	Dibromochloromethane	ND	2000	760	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2000	630	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2000	1100	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2000	710	ug/l	
75-71-8	Dichlorodifluoromethane	ND	4000	1400	ug/l	
75-34-3	1,1-Dichloroethane	ND	2000	720	ug/l	
107-06-2	1,2-Dichloroethane	ND	2000	1000	ug/l	
75-35-4	1,1-Dichloroethene	ND	2000	1200	ng/l	
156-59-2	cis-1,2-Dichloroethene	ND	2000	1700	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2000	1000	ug/l	

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

J = Indicates 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-041614-DUP	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-3	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	4000	1000	ug/l	
142-28-9	1,3-Dichloropropane	ND	10000	1800	ug/l	
594-20-7	2,2-Dichloropropane	ND	10000	1400	ug/l	
563-58-6	1,1-Dichloropropene	ND	10000	950	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1000	840	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1000	1000	ug/l	
123-91-1	1,4-Dioxane	ND	50000	22000	ug/l	
97-63-2	Ethyl methacrylate	ND	10000	990	ug/l	
100-41-4	Ethylbenzene	ND	2000	760	ug/l	
87-68-3	Hexachlorobutadiene	ND	10000	3300	ug/l	
591-78-6	2-Hexanone	ND	10000	3200	ug/l	
98-82-8	Isopropylbenzene	ND	10000	700	ug/l	
99-87-6	p-Isopropyltoluene	ND	10000	750	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2000	1000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	10000	2000	ug/l	
74-95-3	Methylene bromide	ND	10000	1000	ug/l	
75-09-2	Methylene chloride	ND	4000	560	ug/l	
91-20-3	Naphthalene	ND	10000	1400	ug/l	
103-65-1	n-Propylbenzene	ND	10000	980	ug/l	
100-42-5	Styrene	ND	10000	1700	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2000	870	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1000	800	ug/l	
127-18-4	Tetrachloroethene	ND	2000	1200	ug/l	
108-88-3	Toluene	ND	2000	660	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	10000	1400	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	10000	1000	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2000	930	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2000	910	ug/l	
79-01-6	Trichloroethene	ND	2000	940	ug/l	
75-69-4	Trichlorofluoromethane	ND	2000	1100	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	10000	1600	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	10000	640	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	10000	770	ug/l	
108-05-4	Vinyl Acetate	ND	10000	1400	ug/l	
75-01-4	Vinyl chloride	ND	2000	1200	ug/l	
	m,p-Xylene	ND	2000	1900	ug/l	
95-47-6	o-Xylene	ND	2000	730	ug/l	
1330-20-7	Xylene (total)	ND	2000	730	ug/l	

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

J = Indicates 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-041614-DUP	Date Sampled: 04/16/14
Lab Sample ID: MC29833-3	Date Received: 04/17/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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4

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%	87%	70-130%
2037-26-5	Toluene-D8	88%	86%	70-130%
460-00-4	4-Bromofluorobenzene	89%	90%	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	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW8-ROX-041614-DUP	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-3	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38290.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411
Run #2							

Run #	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	2.6	ug/l	WJ
95-57-8	2-Chlorophenol	ND	5.1	0.32	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.84	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.57	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	5.3	10	0.48	ug/l	J
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.55	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	118	5.1	0.31	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.38	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.65	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.1	0.48	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.1	0.54	ng/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.1	0.32	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.57	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	0.36	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.1	0.34	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.1	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.47	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.31	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.1	0.27	ug/l	
132-64-9	Dibenzofuran	0.45	2.0	0.26	ug/l	J
84-74-2	Di-n-butyl phthalate	0.00 W	5.1	0.18	ug/l	JB W
117-84-0	Di-n-octyl phthalate	ND	5.1	0.29	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW8-ROX-041614-DUP	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-3	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.1	0.35	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.34	ng/l	
118-74-1	Hexachlorobenzene	ND	5.1	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.1	0.31	ug/l	
78-59-1	Isophorone	ND	5.1	0.46	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.1	0.40	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.1	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	0.41	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	0.20	ug/l	
110-86-1	Pyridine	ND	10	0.53	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	50%		15-110%
4165-62-2	Phenol-d5	31%		15-110%
118-79-6	2,4,6-Tribromophenol	90%		15-110%
4165-60-0	Nitrobenzene-d5	76%		30-130%
321-60-8	2-Fluorobiphenyl	75%		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	

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

J = Indicates 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-041614-DUP	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-3	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88688.D	1	04/21/14	MR	04/18/14	OP37658	MSI3303
Run #2							

Run #	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	0.16	0.10	0.070	ug/l	
208-96-8	Acenaphthylene	0.063	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	0.43	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	12.9	0.20	0.051	ug/l	
91-57-6	2-Methylnaphthalene	8.6	0.20	0.076	ug/l	
85-01-8	Phenanthrene	0.10	0.051	0.013	ug/l	B/A
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	72%		30-130%
321-60-8	2-Fluorobiphenyl	70%		30-130%
1718-51-0	Terphenyl-d14	89%		30-130%

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

MDL = Method Detection Limit

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	MW8-ROX-041614-DUP	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-3	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB55421.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222
Run #2							

Run #	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)	90%		36-173%		
460-00-4	Bromofluorobenzene (S)	109%		36-173%		

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

Report of Analysis

Client Sample ID: MW7-ROX-041614	Date Sampled: 04/16/14
Lab Sample ID: MC29833-4	Date Received: 04/17/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30458.D	5000	04/30/14	AMY	n/a	n/a	MSV1137
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50000	13000	ug/l	
107-02-8	Acrolein	ND	130000	30000	ug/l	
107-13-1	Acrylonitrile	ND	25000	11000	ug/l	
71-43-2	Benzene	1390000	2500	1600	ug/l	
108-86-1	Bromobenzene	ND	25000	1700	ug/l	
74-97-5	Bromochloromethane	ND	25000	2800	ug/l	
75-27-4	Bromodichloromethane	ND	5000	1700	ug/l	
75-25-2	Bromoform	ND	5000	3100	ug/l	
74-83-9	Bromomethane	ND	10000	8800	ug/l	
78-93-3	2-Butanone (MEK)	ND	25000	12000	ug/l	
104-51-8	n-Butylbenzene	ND	25000	5400	ug/l	
135-98-8	sec-Butylbenzene	ND	25000	2100	ug/l	
98-06-6	tert-Butylbenzene	ND	25000	1900	ug/l	
75-15-0	Carbon disulfide	ND	25000	2300	ug/l	
56-23-5	Carbon tetrachloride	ND	5000	2700	ug/l	
108-90-7	Chlorobenzene	ND	5000	2100	ug/l	
75-00-3	Chloroethane	ND	10000	2700	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	25000	17000	ug/l	
67-66-3	Chloroform	ND	5000	2100	ug/l	
74-87-3	Chloromethane	ND	10000	5400	ug/l	
95-49-8	o-Chlorotoluene	ND	25000	1900	ug/l	
106-43-4	p-Chlorotoluene	ND	25000	2200	ug/l	
124-48-1	Dibromochloromethane	ND	5000	1900	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5000	1600	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5000	2800	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5000	1800	ug/l	
75-71-8	Dichlorodifluoromethane	ND	10000	3600	ug/l	
75-34-3	1,1-Dichloroethane	ND	5000	1800	ug/l	
107-06-2	1,2-Dichloroethane	ND	5000	2500	ug/l	
75-35-4	1,1-Dichloroethene	ND	5000	3000	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	5000	4200	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	5000	2500	ug/l	

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

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Report of Analysis

Client Sample ID:	MW7-ROX-041614	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-4	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	10000	2500	ug/l	
142-28-9	1,3-Dichloropropane	ND	25000	4500	ug/l	
594-20-7	2,2-Dichloropropane	ND	25000	3500	ug/l	
563-58-6	1,1-Dichloropropene	ND	25000	2400	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2500	2100	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2500	2500	ug/l	
123-91-1	1,4-Dioxane	ND	130000	54000	ug/l	
97-63-2	Ethyl methacrylate	ND	25000	2500	ug/l	
100-41-4	Ethylbenzene	ND	5000	1900	ug/l	
87-68-3	Hexachlorobutadiene	ND	25000	8300	ug/l	
591-78-6	2-Hexanone	ND	25000	8000	ug/l	
98-82-8	Isopropylbenzene	ND	25000	1700	ug/l	
99-87-6	p-Isopropyltoluene	ND	25000	1900	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	5000	2600	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	25000	4900	ug/l	
74-95-3	Methylene bromide	ND	25000	2600	ug/l	
75-09-2	Methylene chloride	ND	10000	1400	ng/l	
91-20-3	Naphthalene	ND	25000	3400	ug/l	
103-65-1	n-Propylbenzene	ND	25000	2500	ug/l	
100-42-5	Styrene	ND	25000	4300	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5000	2200	ng/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2500	2000	ug/l	
127-18-4	Tetrachloroethene	ND	5000	3000	ug/l	
108-88-3	Toluene	ND	5000	1700	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	25000	3400	ng/l	
120-82-1	1,2,4-Trichlorobenzene	ND	25000	2500	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5000	2300	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5000	2300	ug/l	
79-01-6	Trichloroethene	ND	5000	2400	ug/l	
75-69-4	Trichlorofluoromethane	ND	5000	2700	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	25000	4100	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	25000	1600	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	25000	1900	ug/l	
108-05-4	Vinyl Acetate	ND	25000	3600	ug/l	
75-01-4	Vinyl chloride	ND	5000	2900	ug/l	
	m,p-Xylene	ND	5000	4700	ug/l	
95-47-6	o-Xylene	ND	5000	1800	ug/l	
1330-20-7	Xylene (total)	ND	5000	1800	ug/l	

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

J = Indicates 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-041614	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-4	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		70-130%
2037-26-5	Toluene-D8	89%		70-130%
460-00-4	4-Bromofluorobenzene	90%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW7-ROX-041614	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-4	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38291.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411
Run #2							

Run #	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.6	ug/l	WJ
95-57-8	2-Chlorophenol	ND	5.2	0.32	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.85	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.41	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.58	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.48	ug/l	
88-75-5	2-Nitrophenol	ND	10	3.0	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.55	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.2	ug/l	
108-95-2	Phenol	98.8	5.2	0.31	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.38	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.66	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.2	0.49	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.2	0.55	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.2	0.32	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.57	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.2	0.30	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.2	0.36	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.2	0.34	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.2	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.2	0.25	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.47	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.31	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.2	0.28	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	0.71 u	5.2	0.18	ug/l	JB u
117-84-0	Di-n-octyl phthalate	ND	5.2	0.29	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW7-ROX-041614	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-4	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.2	0.21	ug/l	
131-11-3	Dimethyl phthalate	ND	5.2	0.35	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.34	ug/l	
118-74-1	Hexachlorobenzene	ND	5.2	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.2	0.31	ug/l	
78-59-1	Isophorone	ND	5.2	0.46	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.41	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.2	0.40	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.2	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.2	0.42	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.2	0.20	ug/l	
110-86-1	Pyridine	ND	10	0.53	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	60%		15-110%
4165-62-2	Phenol-d5	31%		15-110%
118-79-6	2,4,6-Tribromophenol	89%		15-110%
4165-60-0	Nitrobenzene-d5	72%		30-130%
321-60-8	2-Fluorobiphenyl	76%		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: MW7-ROX-041614	Date Sampled: 04/16/14
Lab Sample ID: MC29833-4	Date Received: 04/17/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D BY SIM SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	188689.D	1	04/21/14	MR	04/18/14	OP37658	MSI3303
Run #2							

Run #	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	0.34	0.10	0.071	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.051	ug/l	
120-12-7	Anthracene	ND	0.10	0.095	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.052	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.030	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.052	0.033	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.028	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.040	ug/l	
218-01-9	Chrysene	ND	0.10	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.033	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.042	ug/l	
86-73-7	Fluorene	0.26	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	7.4	0.21	0.051	ug/l	
91-57-6	2-Methylnaphthalene	10.3	0.21	0.076	ug/l	
85-01-8	Phenanthrene	0.33	0.052	0.013	ug/l	B
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	72%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	92%		30-130%

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

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

4.4
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Report of Analysis

Client Sample ID:	MW7-ROX-041614	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-4	Date Received:	04/17/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB55422.D	1	04/22/14	SZ	04/18/14	OP37671	GBB3222
Run #2							

Run #	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)	65%		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

4.4
4

Report of Analysis

Client Sample ID:	TB-ROX-041614-HCL	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-5	Date Received:	04/17/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30452.D	1	04/30/14	AMY	n/a	n/a	MSV1137
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromohenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-041614-HCL	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-5	Date Received:	04/17/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB-ROX-041614-HCL	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-5	Date Received:	04/17/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

4.5
4

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	89%		70-130%

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

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

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

Report of Analysis

Client Sample ID:	TB-ROX-041614-ST	Date Sampled:	04/16/14
Lab Sample ID:	MC29833-6	Date Received:	04/17/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB55423.D	1	04/22/14	SZ	04/18/14	OP37671	GBB3222
Run #2							

Run #	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.	Surr ogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	79%		36-173%
460-00-4	Bromofluorobenzene (S)	86%		36-173%

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

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

4.6

4



Misc. Forms



Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

LAB (LOCATION)

- AHEAD
- CALSOUTH
- OTHER
- SMI



Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:

<input checked="" type="checkbox"/> ENV. SERVICES	<input type="checkbox"/> MOTIVA RETAIL	<input type="checkbox"/> SHELL RETAIL
<input type="checkbox"/> MOTIVA SEASON	<input type="checkbox"/> CONSULTANT	<input type="checkbox"/> LUBES
<input type="checkbox"/> SHELL PIPELINE	<input type="checkbox"/> OTHER	

Print Bill To Contact Name: Bob Biltan

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

DATE: 4/16/14

PO #

SAP #

PAGE: 1 of 1

Lab Vendor #

URS CORPORATION

1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110

Elizabeth Kunkel, Wendy Pennington, Bob Biltan

314-420-0100

314-420-0462

TURNAROUND TIME (STANDARD 10 DAY) 5 DAYS 2 DAYS 24 HOURS

Site Address: Greenland City

900 South Central Ave, ROXANA

LAB USE ONLY

mc29833

REQUESTED ANALYSIS

LA - RWOCB REPORT FORMAT

DELIVERABLES: LEVEL 1, LEVEL 2, LEVEL 3, LEVEL 4, OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT: Cooler #1, Cooler #2, Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:

Please include "J" values on Reports.

Please provide sample receipt upon login.

*Please contact Accutest PM regarding SVOC extractions.

FIELD NOTES:

TEMPERATURE ON RECEIPT:

Container PID Readings or Laboratory Notes

LAB USE ONLY	Field Sample Identification		SAMPLING		MTRX	PRESERVATION					NO. OF CONT.	PID (ppm)		
	DATE	TIME	INCL	VOL		NOSE	NOSE	OTHER	VOC 8280C SL-TICS	VOC 8011 SL			SVOC 8270D SL-TICS	PAH 8270LL
-1	MW4-RDX-041614	✓	4/16/14	1355	water	2		2	2	6	X	X	X	
-2	MLUB-RDX-041614	✓		1350		2		2	2	6	X	X	X	
-3	MLUB-RDX-041614-DUP			1350		2		2	2	6	X	X	X	
4	MW1-RDX-041614	✓		1450		2		2	2	6	X	X	X	
-5	TB-RDX-041614-HCI	✓		0000		2				2	X			
-6	TB-RDX-041614-ST	✓		0000				2	2		X			

Received by (Signature): *Elizabeth Kunkel* Date: 4/16/14 Time: 1700

Requested by (Signature): *FEDX* Date: 4-17-14 Time: 930

Received by (Signature): *Wayne...* Date: Time:

Requested by (Signature): Date: Time:

1.9°C

5.1



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC29833 Client: URS Immediate Client Services Action Required: No
 Date / Time Received: 4/17/2014 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: Infrared 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

5.1



MC29833: Chain of Custody
 Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC29833

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

5.2



Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
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MC29833-1 Collected: 16-APR-14 12:55 By: DMMM Received: 17-APR-14 By: MW4-ROX-041614

MC29833-1	SW846 8270D	21-APR-14 13:51	WK	18-APR-14	PA	AB8270SL+
MC29833-1	SW846 8270D BY SIM	21-APR-14 19:01	MR	18-APR-14	PA	B8270SIMSL
MC29833-1	SW846 8011	21-APR-14 22:53	SZ	18-APR-14	MT	V8011SL
MC29833-1	SW846 8260C	30-APR-14 11:26	AMY			V8260SL+
MC29833-1	SW846 8260C	30-APR-14 15:20	AMY			V8260SL+

MC29833-2 Collected: 16-APR-14 13:50 By: DMMM Received: 17-APR-14 By: MW8-ROX-041614

MC29833-2	SW846 8270D	21-APR-14 14:16	WK	18-APR-14	PA	AB8270SL+
MC29833-2	SW846 8270D BY SIM	21-APR-14 19:24	MR	18-APR-14	PA	B8270SIMSL
MC29833-2	SW846 8011	21-APR-14 23:22	SZ	18-APR-14	MT	V8011SL
MC29833-2	SW846 8260C	30-APR-14 11:52	AMY			V8260SL+
MC29833-2	SW846 8260C	30-APR-14 15:46	AMY			V8260SL+

MC29833-3 Collected: 16-APR-14 13:50 By: DMMM Received: 17-APR-14 By: MW8-ROX-041614-DUP

MC29833-3	SW846 8270D	21-APR-14 14:40	WK	18-APR-14	PA	AB8270SL+
MC29833-3	SW846 8270D BY SIM	21-APR-14 19:47	MR	18-APR-14	PA	B8270SIMSL
MC29833-3	SW846 8011	21-APR-14 23:51	SZ	18-APR-14	MT	V8011SL
MC29833-3	SW846 8260C	30-APR-14 12:18	AMY			V8260SL+
MC29833-3	SW846 8260C	30-APR-14 18:41	AMY			V8260SL+

MC29833-4 Collected: 16-APR-14 14:50 By: DMMM Received: 17-APR-14 By: MW7-ROX-041614

MC29833-4	SW846 8270D	21-APR-14 15:05	WK	18-APR-14	PA	AB8270SL+
MC29833-4	SW846 8270D BY SIM	21-APR-14 20:10	MR	18-APR-14	PA	B8270SIMSL
MC29833-4	SW846 8011	22-APR-14 00:21	SZ	18-APR-14	MT	V8011SL
MC29833-4	SW846 8260C	30-APR-14 12:44	AMY			V8260SL+

MC29833-5 Collected: 16-APR-14 00:00 By: DMMM Received: 17-APR-14 By: TB-ROX-041614-HCL

MC29833-5	SW846 8260C	30-APR-14 10:08	AMY			V8260SL+
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Internal Sample Tracking Chronicle

Shell Oil

Job No: MC29833

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

5.2
5

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
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MC29833-6 Collected: 16-APR-14 00:00 By: DMMM Received: 17-APR-14 By: TB-ROX-041614-ST

MC29833-6 SW846 8011 22-APR-14 00:49 SZ 18-APR-14 MT V8011SL

Accutest Internal Chain of Custody

Job Number: MC29833
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Received: 04/17/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29833-1.2	Walk In Ref #22	Michael DiBuono	04/18/14 08:56	Retrieve from Storage
MC29833-1.4	VOC Ref #5	Amy Min Yang	04/30/14 09:06	Retrieve from Storage
MC29833-1.4	Amy Min Yang	GCMSV	04/30/14 09:06	Load on Instrument
MC29833-1.4	GCMSV	Amy Min Yang	05/02/14 15:43	Unload from Instrument
MC29833-1.4	Amy Min Yang	VOC Ref #5	05/02/14 15:43	Return to Storage
MC29833-1.6	VOC Ref #5	Marc Tahtamoni	04/18/14 18:53	Retrieve from Storage
MC29833-2.2	Walk In Ref #22	Michael DiBuono	04/18/14 08:56	Retrieve from Storage
MC29833-2.4	VOC Ref #5	Amy Min Yang	04/30/14 09:06	Retrieve from Storage
MC29833-2.4	Amy Min Yang	GCMSV	04/30/14 09:06	Load on Instrument
MC29833-2.4	GCMSV	Amy Min Yang	05/02/14 15:43	Unload from Instrument
MC29833-2.4	Amy Min Yang	VOC Ref #5	05/02/14 15:43	Return to Storage
MC29833-2.5	VOC Ref #5	Marc Tahtamoni	04/18/14 18:53	Retrieve from Storage
MC29833-3.2	Walk In Ref #22	Michael DiBnono	04/18/14 08:56	Retrieve from Storage
MC29833-3.4	VOC Ref #5	Amy Min Yang	04/30/14 09:06	Retrieve from Storage
MC29833-3.4	Amy Min Yang	GCMSV	04/30/14 09:06	Load on Instrument
MC29833-3.4	GCMSV	Amy Min Yang	05/02/14 15:43	Unload from Instrument
MC29833-3.4	Amy Min Yang	VOC Ref #5	05/02/14 15:43	Return to Storage
MC29833-3.6	VOC Ref #5	Marc Tahtamoni	04/18/14 18:53	Retrieve from Storage
MC29833-4.2	Walk In Ref #22	Michael DiBuono	04/18/14 08:56	Retrieve from Storage
MC29833-4.4	VOC Ref #5	Amy Min Yang	04/30/14 09:06	Retrieve from Storage
MC29833-4.4	Amy Min Yang	GCMSV	04/30/14 09:06	Load on Instrument
MC29833-4.4	GCMSV	Amy Min Yang	05/02/14 15:43	Unload from Instrument
MC29833-4.4	Amy Min Yang	VOC Ref #5	05/02/14 15:43	Return to Storage
MC29833-4.5	VOC Ref #5	Marc Tahtamoni	04/18/14 18:53	Retrieve from Storage
MC29833-5.1	VOC Ref #5	Amy Min Yang	04/30/14 09:06	Retrieve from Storage
MC29833-5.1	Amy Min Yang	GCMSV	04/30/14 09:06	Load on Instrument
MC29833-5.1	GCMSV	Amy Min Yang	05/02/14 15:43	Unload from Instrument
MC29833-5.1	Amy Min Yang	VOC Ref #5	05/02/14 15:43	Return to Storage
MC29833-6.2	VOC Ref #5	Marc Tahtamoni	04/18/14 18:53	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: MC29833
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1137-MB	V30451.D	1	04/30/14	AMY	n/a	n/a	MSV1137

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29833-1, MC29833-2, MC29833-3, MC29833-4, MC29833-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ng/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

6.1.1



Method Blank Summary

Job Number: MC29833
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1137-MB	V30451.D	1	04/30/14	AMY	n/a	n/a	MSV1137

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29833-1, MC29833-2, MC29833-3, MC29833-4, MC29833-5

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

6.1.1



Method Blank Summary

Job Number: MC29833

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1137-MB	V30451.D	1	04/30/14	AMY	n/a	n/a	MSV1137

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29833-1, MC29833-2, MC29833-3, MC29833-4, MC29833-5

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	104% 70-130%
2037-26-5	Toluene-D8	93% 70-130%
460-00-4	4-Bromofluorobenzene	89% 70-130%

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

6.1.1



Blank Spike Summary

Job Number: MC29833
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1137-BS	V30448.D	1	04/30/14	AMY	n/a	n/a	MSV1137

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29833-1, MC29833-2, MC29833-3, MC29833-4, MC29833-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	61.1	122	70-130
107-02-8	Acrolein	250	256	102	70-130
107-13-1	Acrylonitrile	50	49.2	98	70-130
71-43-2	Benzene	50	50.1	100	70-130
108-86-1	Bromobenzene	50	51.2	102	70-130
74-97-5	Bromochloromethane	50	48.2	96	70-130
75-27-4	Bromodichloromethane	50	49.3	99	70-130
75-25-2	Bromoform	50	40.9	82	70-130
74-83-9	Bromomethane	50	46.0	92	70-130
78-93-3	2-Butanone (MEK)	50	57.4	115	70-130
104-51-8	n-Butylbenzene	50	53.1	106	70-130
135-98-8	sec-Butylbenzene	50	54.0	108	70-130
98-06-6	tert-Butylbenzene	50	50.4	101	70-130
75-15-0	Carbon disulfide	50	46.3	93	70-130
56-23-5	Carbon tetrachloride	50	51.0	102	70-130
108-90-7	Chlorobenzene	50	50.9	102	70-130
75-00-3	Chloroethane	50	54.6	109	70-130
110-75-8	2-Chloroethyl vinyl ether	50	36.2	72	70-130
67-66-3	Chloroform	50	47.9	96	70-130
74-87-3	Chloromethane	50	48.1	96	70-130
95-49-8	o-Chlorotoluene	50	51.5	103	70-130
106-43-4	p-Chlorotoluene	50	53.2	106	70-130
124-48-1	Dibromochloromethane	50	45.1	90	70-130
95-50-1	1,2-Dichlorobenzene	50	48.8	98	70-130
541-73-1	1,3-Dichlorobenzene	50	50.1	100	70-130
106-46-7	1,4-Dichlorobenzene	50	50.4	101	70-130
75-71-8	Dichlorodifluoromethane	50	35.8	72	70-130
75-34-3	1,1-Dichloroethane	50	50.2	100	70-130
107-06-2	1,2-Dichloroethane	50	48.6	97	70-130
75-35-4	1,1-Dichloroethene	50	51.8	104	70-130
156-59-2	cis-1,2-Dichloroethene	50	48.4	97	70-130
156-60-5	trans-1,2-Dichloroethene	50	48.4	97	70-130
78-87-5	1,2-Dichloropropane	50	55.7	111	70-130
142-28-9	1,3-Dichloropropane	50	52.8	106	70-130
594-20-7	2,2-Dichloropropane	50	49.8	100	70-130
563-58-6	1,1-Dichloropropene	50	49.3	99	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC29833
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1137-BS	V30448.D	1	04/30/14	AMY	n/a	n/a	MSV1137

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29833-1, MC29833-2, MC29833-3, MC29833-4, MC29833-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	47.3	95	70-130
10061-02-6	trans-1,3-Dichloropropene	50	58.9	118	70-130
123-91-1	1,4-Dioxane	250	222	89	70-130
97-63-2	Ethyl methacrylate	50	47.2	94	77-137
100-41-4	Ethylbenzene	50	54.2	108	70-130
87-68-3	Hexachlorohutadiene	50	41.5	83	70-130
591-78-6	2-Hexanone	50	58.3	117	70-130
98-82-8	Isopropylbenzene	50	52.4	105	70-130
99-87-6	p-Isopropyltoluene	50	53.3	107	70-130
1634-04-4	Methyl Tert Butyl Ether	50	45.6	91	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	48.4	97	70-130
74-95-3	Methylene bromide	50	51.6	103	70-130
75-09-2	Methylene chloride	50	49.8	100	70-130
91-20-3	Naphthalene	50	48.4	97	70-130
103-65-1	n-Propylbenzene	50	53.5	107	70-130
100-42-5	Styrene	50	55.8	112	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	52.5	105	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	57.3	115	70-130
127-18-4	Tetrachloroethene	50	50.8	102	70-130
108-88-3	Toluene	50	55.4	111	70-130
87-61-6	1,2,3-Trichlorobenzene	50	50.9	102	70-130
120-82-1	1,2,4-Trichlorobenzene	50	41.4	83	70-130
71-55-6	1,1,1-Trichloroethane	50	50.4	101	70-130
79-00-5	1,1,2-Trichloroethane	50	57.3	115	70-130
79-01-6	Trichloroethene	50	47.8	96	70-130
75-69-4	Trichlorofluoromethane	50	51.3	103	70-130
96-18-4	1,2,3-Trichloropropane	50	54.8	110	70-130
95-63-6	1,2,4-Trimethylbenzene	50	52.6	105	70-130
108-67-8	1,3,5-Trimethylbenzene	50	53.2	106	70-130
108-05-4	Vinyl Acetate	50	48.2	96	70-130
75-01-4	Vinyl chloride	50	50.3	101	70-130
	m,p-Xylene	100	110	110	70-130
95-47-6	o-Xylene	50	53.6	107	70-130
1330-20-7	Xylene (total)	150	163	109	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC29833

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1137-BS	V30448.D	1	04/30/14	AMY	n/a	n/a	MSV1137

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29833-1, MC29833-2, MC29833-3, MC29833-4, MC29833-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	85%	70-130%
2037-26-5	Toluene-D8	93%	70-130%
460-00-4	4-Bromofluorobenzene	90%	70-130%

* = Outside of Control Limits.

6.2.1



Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29833
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29904-2MS	V30472.D	5	04/30/14	AMY	n/a	n/a	MSV1137
MC29904-2MSD	V30473.D	5	04/30/14	AMY	n/a	n/a	MSV1137
MC29904-2	V30459.D	1	04/30/14	AMY	n/a	n/a	MSV1137

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29833-1, MC29833-2, MC29833-3, MC29833-4, MC29833-5

CAS No.	Compound	MC29904-2 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	250	189	76	250	187	75	1	70-130/30
107-02-8	Acrolein	ND	1250	1230	98	1250	1160	93	6	70-130/30
107-13-1	Acrylonitrile	ND	250	277	111	250	265	106	4	70-130/30
71-43-2	Benzene	2.5	250	278	110	250	259	103	7	70-130/30
108-86-1	Bromobenzene	ND	250	288	115	250	274	110	5	70-130/30
74-97-5	Bromochloromethane	ND	250	265	106	250	247	99	7	70-130/30
75-27-4	Bromodichloromethane	ND	250	246	98	250	232	93	6	70-130/30
75-25-2	Bromoform	ND	250	213	85	250	212	85	0	70-130/30
74-83-9	Bromomethane	ND	250	209	84	250	191	76	9	70-130/30
78-93-3	2-Butanone (MEK)	ND	250	213	85	250	203	81	5	70-130/30
104-51-8	n-Butylbenzene	ND	250	295	118	250	280	112	5	70-130/30
135-98-8	sec-Butylbenzene	ND	250	309	124	250	289	116	7	70-130/30
98-06-6	tert-Butylbenzene	ND	250	282	113	250	263	105	7	70-130/30
75-15-0	Carbon disulfide	ND	250	262	105	250	242	97	8	70-130/30
56-23-5	Carbon tetrachloride	ND	250	257	103	250	238	95	8	70-130/30
108-90-7	Chlorobenzene	ND	250	275	110	250	263	105	4	70-130/30
75-00-3	Chloroethane	ND	250	264	106	250	240	96	10	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND	250	ND	0* a	250	ND	0* a	nc	70-130/30
67-66-3	Chloroform	ND	250	248	99	250	229	92	8	70-130/30
74-87-3	Chloromethane	ND	250	221	88	250	201	80	9	70-130/30
95-49-8	o-Chlorotoluene	ND	250	280	112	250	265	106	6	70-130/30
106-43-4	p-Chlorotoluene	ND	250	281	112	250	264	106	6	70-130/30
124-48-1	Dibromochloromethane	ND	250	237	95	250	231	92	3	70-130/30
95-50-1	1,2-Dichlorobenzene	ND	250	254	102	250	252	101	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND	250	269	108	250	259	104	4	70-130/30
106-46-7	1,4-Dichlorobenzene	ND	250	268	107	250	258	103	4	70-130/30
75-71-8	Dichlorodifluoromethane	ND	250	157	63* a	250	139	56* a	12	70-130/30
75-34-3	1,1-Dichloroethane	ND	250	271	108	250	249	100	8	70-130/30
107-06-2	1,2-Dichloroethane	ND	250	232	93	250	217	87	7	70-130/30
75-35-4	1,1-Dichloroethene	ND	250	294	118	250	270	108	9	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND	250	276	110	250	254	102	8	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	250	272	109	250	250	100	8	70-130/30
78-87-5	1,2-Dichloropropane	ND	250	298	119	250	284	114	5	70-130/30
142-28-9	1,3-Dichloropropane	ND	250	283	113	250	275	110	3	70-130/30
594-20-7	2,2-Dichloropropane	ND	250	235	94	250	216	86	8	70-130/30
563-58-6	1,1-Dichloropropene	ND	250	268	107	250	249	100	7	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29833
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29904-2MS	V30472.D	5	04/30/14	AMY	n/a	n/a	MSV1137
MC29904-2MSD	V30473.D	5	04/30/14	AMY	n/a	n/a	MSV1137
MC29904-2	V30459.D	1	04/30/14	AMY	n/a	n/a	MSV1137

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29833-1, MC29833-2, MC29833-3, MC29833-4, MC29833-5

CAS No.	Compound	MC29904-2 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND	250	237	95	250	228	91	4	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND	250	299	120	250	289	116	3	70-130/30
123-91-1	1,4-Dioxane	ND	1250	965	77	1250	999	80	3	70-130/30
97-63-2	Ethyl methacrylate	ND	250	264	106	250	256	102	3	72-139/30
100-41-4	Ethylbenzene	ND	250	289	116	250	275	110	5	70-130/30
87-68-3	Hexachlorobutadiene	ND	250	245	98	250	245	98	0	70-130/30
591-78-6	2-Hexanone	ND	250	230	92	250	227	91	1	70-130/30
98-82-8	Isopropylbenzene	ND	250	300	120	250	282	113	6	70-130/30
99-87-6	p-Isopropyltoluene	ND	250	297	119	250	280	112	6	70-130/30
1634-04-4	Methyl Tert Butyl Ether	46.3	250	299	101	250	283	95	5	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	250	264	106	250	259	104	2	70-130/30
74-95-3	Methylene bromide	ND	250	263	105	250	250	100	5	70-130/30
75-09-2	Methylene chloride	ND	250	272	109	250	252	101	8	70-130/30
91-20-3	Naphthalene	ND	250	186	74	250	278	111	40* b	70-130/30
103-65-1	n-Propylbenzene	ND	250	297	119	250	275	110	8	70-130/30
100-42-5	Styrene	ND	250	295	118	250	282	113	5	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND	250	281	112	250	265	106	6	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	318	127	250	313	125	2	70-130/30
127-18-4	Tetrachloroethene	ND	250	280	112	250	267	107	5	70-130/30
108-88-3	Toluene	ND	250	293	117	250	277	111	6	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND	250	186	74	250	271	108	37* b	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND	250	204	82	250	236	94	15	70-130/30
71-55-6	1,1,1-Trichloroethane	ND	250	259	104	250	238	95	8	70-130/30
79-00-5	1,1,2-Trichloroethane	ND	250	296	118	250	283	113	4	70-130/30
79-01-6	Trichloroethene	ND	250	255	102	250	242	97	5	70-130/30
75-69-4	Trichlorofluoromethane	ND	250	224	90	250	202	81	10	70-130/30
96-18-4	1,2,3-Trichloropropane	ND	250	340	136* a	250	331	132* a	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND	250	286	114	250	270	108	6	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND	250	294	118	250	276	110	6	70-130/30
108-05-4	Vinyl Acetate	ND	250	256	102	250	240	96	6	70-130/30
75-01-4	Vinyl chloride	ND	250	241	96	250	218	87	10	70-130/30
	m,p-Xylene	ND	500	585	117	500	561	112	4	70-130/30
95-47-6	o-Xylene	ND	250	293	117	250	282	113	4	70-130/30
1330-20-7	Xylene (total)	ND	750	879	117	750	842	112	4	70-130/30

* = Outside of Control Limits.

6.3.1



Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29833

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29904-2MS	V30472.D	5	04/30/14	AMY	n/a	n/a	MSV1137
MC29904-2MSD	V30473.D	5	04/30/14	AMY	n/a	n/a	MSV1137
MC29904-2	V30459.D	1	04/30/14	AMY	n/a	n/a	MSV1137

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29833-1, MC29833-2, MC29833-3, MC29833-4, MC29833-5

6.3.1



CAS No.	Surrogate Recoveries	MS	MSD	MC29904-2	Limits
1868-53-7	Dibromofluoromethane	82%	80%	109%	70-130%
2037-26-5	Toluene-D8	90%	91%	95%	70-130%
460-00-4	4-Bromofluorobenzene	92%	90%	92%	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: MC29833
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSV1137-CC1058	Injection Date:	04/30/14
Lab File ID:	V30448.D	Injection Time:	08:24
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	323603	6.51	458261	7.70	225342	11.05	236581	13.27	45932	3.47
Upper Limit ^a	647206	7.01	916522	8.20	450684	11.55	473162	13.77	91864	3.97
Lower Limit ^b	161802	6.01	229131	7.20	112671	10.55	118291	12.77	22966	2.97

Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
MSV1137-BS	323603	6.51	458261	7.70	225342	11.05	236581	13.27	45932	3.47
MSV1137-MB	203264	6.52	318418	7.71	167183	11.06	152396	13.27	34979	3.47
MC29833-5	197485	6.51	313848	7.70	164701	11.06	149126	13.27	33222	3.46
ZZZZZZ	183436	6.51	289201	7.70	153665	11.06	139934	13.27	33220	3.46
ZZZZZZ	195035	6.52	308728	7.71	164755	11.06	148204	13.27	32787	3.47
MC29833-1	271796	6.52	354198	7.71	177634	11.06	154160	13.27	48662	3.48
MC29833-2	199586	6.52	340744	7.71	165718	11.06	147960	13.27	33337	3.47
MC29833-3	188814	6.52	325323	7.71	158240	11.06	144553	13.27	32209	3.47
MC29833-4	194279	6.52	329861	7.71	164747	11.06	146674	13.27	34316	3.47
MC29904-2	188172	6.51	291096	7.70	160175	11.06	140384	13.27	33501	3.46
ZZZZZZ	272446	6.52	362089	7.71	196177	11.06	194669	13.27	41691	3.47
ZZZZZZ	257664	6.52	391012	7.71	190881	11.06	198815	13.27	43696	3.47
ZZZZZZ	248271	6.52	352123	7.71	168120	11.06	181550	13.27	67553	3.48
MC29833-1	263118	6.52	391258	7.71	186410	11.06	163641	13.27	44521	3.47
MC29833-2	207468	6.52	343567	7.71	169440	11.06	159158	13.28	39019	3.47
ZZZZZZ	281584	6.52	374095	7.71	184949	11.06	187777	13.27	64591	3.48
ZZZZZZ	292025	6.52	389699	7.71	192712	11.06	194478	13.27	59087	3.48
ZZZZZZ	303658	6.52	428230	7.71	205632	11.06	204528	13.27	56912	3.47
ZZZZZZ	444548	6.52	615604	7.71	290641	11.06	270749	13.28	207281 ^c	3.48
MC29833-3	339191	6.53	520392	7.71	241917	11.06	230218	13.28	54990	3.48
ZZZZZZ	375524	6.52	507310	7.71	245317	11.06	238511	13.28	63105	3.48
MC29904-2MS	395690	6.53	566626	7.72	265884	11.06	265101	13.28	59093	3.48
MC29904-2MSD	425589	6.53	608809	7.72	281998	11.06	285473	13.28	65375	3.48

- 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: MC29833

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Method: SW846 8260C	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC29833-1	V30463.D	97	88	91
MC29833-1	V30455.D	82	94	94
MC29833-2	V30464.D	108	88	88
MC29833-2	V30456.D	109	87	90
MC29833-3	V30470.D	87	86	90
MC29833-3	V30457.D	113	88	89
MC29833-4	V30458.D	110	89	90
MC29833-5	V30452.D	107	93	89
MC29904-2MS	V30472.D	82	90	92
MC29904-2MSD	V30473.D	80	91	90
MSV1137-BS	V30448.D	85	93	90
MSV1137-MB	V30451.D	104	93	89

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

6.5.1



GC/MS Semi-volatiles

QC Data Summaries

7

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: MC29833
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37657-MB	R38279.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29833-1, MC29833-2, MC29833-3, MC29833-4

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	0.68	5.0	0.17	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

7.1.1



Method Blank Summary

Job Number: MC29833

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37657-MB	R38279.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29833-1, MC29833-2, MC29833-3, MC29833-4

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ng/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	42%	15-110%
4165-62-2	Phenol-d5	28%	15-110%
118-79-6	2,4,6-Tribromophenol	73%	15-110%
4165-60-0	Nitrobenzene-d5	72%	30-130%
321-60-8	2-Fluorobiphenyl	74%	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	

7.1.1
7

Method Blank Summary

Job Number: MC29833

Account: SHELLWIC Shell Oil

Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37658-MB	I88679.D	1	04/21/14	MR	04/18/14	OP37658	MSI3303

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29833-1, MC29833-2, MC29833-3, MC29833-4

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	0.040	0.050	0.013	ug/l	J
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	35%	15-110%
4165-62-2	Phenol-d5	24%	15-110%
118-79-6	2,4,6-Tribromophenol	78%	15-110%
4165-60-0	Nitrobenzene-d5	72%	30-130%
321-60-8	2-Fluorobiphenyl	66%	30-130%
1718-51-0	Terphenyl-d14	93%	30-130%

7.1.2
7

Blank Spike Summary

Job Number: MC29833
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37657-BS	R38280.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29833-1, MC29833-2, MC29833-3, MC29833-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	10.9	22* a	30-130
95-57-8	2-Chlorophenol	50	38.9	78	30-130
59-50-7	4-Chloro-3-methyl phenol	50	37.0	74	30-130
120-83-2	2,4-Dichlorophenol	50	40.1	80	30-130
105-67-9	2,4-Dimethylphenol	50	32.5	65	30-130
51-28-5	2,4-Dinitrophenol	50	27.8	56	30-130
534-52-1	4,6-Dinitro-o-cresol	50	38.5	77	30-130
95-48-7	2-Methylphenol	50	27.6	55	30-130
	3&4-Methylphenol	100	53.3	53	30-130
88-75-5	2-Nitrophenol	50	40.6	81	30-130
100-02-7	4-Nitrophenol	50	15.8	32	30-130
87-86-5	Pentachlorophenol	50	40.6	81	30-130
108-95-2	Phenol	50	17.6	35	30-130
95-95-4	2,4,5-Trichlorophenol	50	43.4	87	30-130
88-06-2	2,4,6-Trichlorophenol	50	44.1	88	30-130
62-53-3	Aniline	50	32.3	65	40-140
101-55-3	4-Bromophenyl phenyl ether	50	46.6	93	40-140
85-68-7	Butyl benzyl phthalate	50	45.1	90	40-140
100-51-6	Benzyl Alcohol	50	29.4	59	40-140
91-58-7	2-Chloronaphthalene	50	41.1	82	40-140
106-47-8	4-Chloroaniline	50	35.5	71	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	38.2	76	40-140
111-44-4	bis(2-Chloroethyl)ether	50	42.3	85	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	44.6	89	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	43.1	86	40-140
122-66-7	1,2-Diphenylhydrazine	50	39.9	80	40-140
121-14-2	2,4-Dinitrotoluene	50	45.7	91	40-140
606-20-2	2,6-Dinitrotoluene	50	44.0	88	40-140
91-94-1	3,3'-Dichlorobenzidine	50	36.1	72	40-140
132-64-9	Dibenzofuran	50	39.9	80	40-140
84-74-2	Di-n-butyl phthalate	50	43.5	87	40-140
117-84-0	Di-n-octyl phthalate	50	47.3	95	40-140
84-66-2	Diethyl phthalate	50	44.0	88	40-140
131-11-3	Dimethyl phthalate	50	44.1	88	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	45.9	92	40-140
118-74-1	Hexachlorohenzene	50	45.0	90	40-140

* = Outside of Control Limits.

7.2.1
7

Blank Spike Summary

Job Number: MC29833
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37657-BS	R38280.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29833-1, MC29833-2, MC29833-3, MC29833-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	22.9	46	40-140
67-72-1	Hexachloroethane	50	24.0	48	40-140
78-59-1	Isophorone	50	36.2	72	40-140
88-74-4	2-Nitroaniline	50	43.7	87	40-140
99-09-2	3-Nitroaniline	50	39.6	79	40-140
100-01-6	4-Nitroaniline	50	41.3	83	40-140
98-95-3	Nitrobenzene	50	36.6	73	40-140
62-75-9	n-Nitrosodimethylamine	50	28.7	57	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	36.7	73	40-140
86-30-6	N-Nitrosodiphenylamine	50	40.9	82	40-140
110-86-1	Pyridine	50	27.1	54	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	55%	15-110%
4165-62-2	Phenol-d5	33%	15-110%
118-79-6	2,4,6-Tribromophenol	91%	15-110%
4165-60-0	Nitrobenzene-d5	79%	30-130%
321-60-8	2-Fluorobiphenyl	83%	30-130%
1718-51-0	Terphenyl-d14	96%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

7.2.1



Blank Spike Summary

Job Number: MC29833
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37658-BS	I88680.D	1	04/21/14	MR	04/18/14	OP37658	MSI3303

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29833-1, MC29833-2, MC29833-3, MC29833-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	36.9	74	40-140
208-96-8	Acenaphthylene	50	34.0	68	40-140
120-12-7	Anthracene	50	37.4	75	40-140
56-55-3	Benzo(a)anthracene	50	41.3	83	40-140
50-32-8	Benzo(a)pyrene	50	39.5	79	40-140
205-99-2	Benzo(b)fluoranthene	50	41.4	83	40-140
191-24-2	Benzo(g,h,i)perylene	50	45.0	90	40-140
207-08-9	Benzo(k)fluoranthene	50	42.8	86	40-140
218-01-9	Chrysene	50	39.3	79	40-140
53-70-3	Dibenzo(a,h)anthracene	50	47.7	95	40-140
206-44-0	Fluoranthene	50	42.5	85	40-140
86-73-7	Fluorene	50	39.9	80	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	45.9	92	40-140
90-12-0	1-Methylnaphthalene	50	33.5	67	40-140
91-57-6	2-Methylnaphthalene	50	32.4	65	40-140
85-01-8	Phenanthrene	50	38.4	77	40-140
129-00-0	Pyrene	50	40.9	82	40-140

CAS No.	Surr ogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	39%	15-110%
4165-62-2	Phenol-d5	25%	15-110%
118-79-6	2,4,6-Tribromophenol	87%	15-110%
4165-60-0	Nitrobenzene-d5	77%	30-130%
321-60-8	2-Fluorobiphenyl	75%	30-130%
1718-51-0	Terphenyl-d14	96%	30-130%

* = Outside of Control Limits.

7.2.2
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29833
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37657-MS	R38281.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411
OP37657-MSD	R38282.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411
MC29400-19	R38283.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29833-1, MC29833-2, MC29833-3, MC29833-4

CAS No.	Compound	MC29400-19 Spike		MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
		ug/l	Q ug/l							
65-85-0	Benzoic Acid	ND	50	12.7	25* a	50	12.9	26* a	2	30-130/20
95-57-8	2-Chlorophenol	ND	50	36.2	72	50	34.3	69	5	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND	50	39.3	79	50	36.7	73	7	30-130/20
120-83-2	2,4-Dichlorophenol	ND	50	41.7	83	50	39.0	78	7	30-130/20
105-67-9	2,4-Dimethylphenol	ND	50	33.8	68	50	30.1	60	12	30-130/20
51-28-5	2,4-Dinitrophenol	ND	50	30.7	61	50	30.9	62	1	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND	50	41.6	83	50	41.0	82	1	30-130/20
95-48-7	2-Methylphenol	ND	50	30.6	61	50	28.3	57	8	30-130/20
	3&4-Methylphenol	ND	100	60.6	61	100	54.5	55	11	30-130/20
88-75-5	2-Nitrophenol	ND	50	43.2	86	50	39.0	78	10	30-130/20
100-02-7	4-Nitrophenol	ND	50	16.1	32	50	15.7	31	3	30-130/20
87-86-5	Pentachlorophenol	ND	50	41.5	83	50	40.0	80	4	30-130/20
108-95-2	Phenol	ND	50	15.5	31	50	14.7	29* b	5	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND	50	44.6	89	50	41.6	83	7	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND	50	44.9	90	50	42.6	85	5	30-130/20
62-53-3	Aniline	ND	50	29.4	59	50	28.4	57	3	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND	50	47.5	95	50	46.1	92	3	40-140/20
85-68-7	Butyl benzyl phthalate	ND	50	46.0	92	50	44.7	89	3	40-140/20
100-51-6	Benzyl Alcohol	ND	50	33.9	68	50	30.8	62	10	40-140/20
91-58-7	2-Chloronaphthalene	ND	50	44.0	88	50	40.5	81	8	40-140/20
106-47-8	4-Chloroaniline	ND	50	37.5	75	50	34.4	69	9	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND	50	39.8	80	50	37.1	74	7	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND	50	37.1	74	50	36.8	74	1	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND	50	47.7	95	50	46.5	93	3	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND	50	44.7	89	50	42.6	85	5	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND	50	41.1	82	50	40.1	80	2	40-140/20
121-14-2	2,4-Dinitrotoluene	ND	50	47.6	95	50	45.5	91	5	40-140/20
606-20-2	2,6-Dinitrotoluene	ND	50	45.3	91	50	43.5	87	4	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND	50	38.1	76	50	37.7	75	1	40-140/20
132-64-9	Dibenzofuran	ND	50	40.9	82	50	39.3	79	4	40-140/20
84-74-2	Di-n-butyl phthalate	0.73	J	50	44.7	88	43.1	85	4	40-140/20
117-84-0	Di-n-octyl phthalate	ND	50	47.4	95	50	45.6	91	4	40-140/20
84-66-2	Diethyl phthalate	ND	50	45.5	91	50	44.3	89	3	40-140/20
131-11-3	Dimethyl phthalate	ND	50	45.9	92	50	44.3	89	4	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND	50	46.9	94	50	45.5	91	3	40-140/20
118-74-1	Hexachlorobenzene	ND	50	46.3	93	50	44.6	89	4	40-140/20

* = Outside of Control Limits.

7.3.1
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29833
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37657-MS	R38281.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411
OP37657-MSD	R38282.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411
MC29400-19	R38283.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29833-1, MC29833-2, MC29833-3, MC29833-4

CAS No.	Compound	MC29400-19 Spike		MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
		ug/l	Q							
77-47-4	Hexachlorocyclopentadiene	ND	50	24.0	48	50	22.1	44	8	40-140/20
67-72-1	Hexachloroethane	ND	50	27.4	55	50	26.3	53	4	40-140/20
78-59-1	Isophorone	ND	50	38.0	76	50	36.4	73	4	40-140/20
88-74-4	2-Nitroaniline	ND	50	45.4	91	50	43.8	88	4	40-140/20
99-09-2	3-Nitroaniline	ND	50	41.5	83	50	39.2	78	6	40-140/20
100-01-6	4-Nitroaniline	ND	50	41.9	84	50	40.4	81	4	40-140/20
98-95-3	Nitrobenzene	ND	50	37.9	76	50	36.1	72	5	40-140/20
62-75-9	n-Nitrosodimethylamine	ND	50	31.0	62	50	30.3	61	2	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND	50	41.4	83	50	37.7	75	9	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND	50	41.8	84	50	40.2	80	4	40-140/20
110-86-1	Pyridine	ND	50	29.2	58	50	28.9	58	1	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29400-19 Limits	
367-12-4	2-Fluorophenol	45%	47%	38%	15-110%
4165-62-2	Phenol-d5	30%	28%	24%	15-110%
118-79-6	2,4,6-Tribromophenol	91%	89%	74%	15-110%
4165-60-0	Nitrobenzene-d5	76%	74%	72%	30-130%
321-60-8	2-Fluorobiphenyl	84%	78%	64%	30-130%
1718-51-0	Terphenyl-d14	93%	91%	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.

7.3.1



Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29833
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37658-MS	I88681.D	1	04/21/14	MR	04/18/14	OP37658	MSI3303
OP37658-MSD	I88682.D	1	04/21/14	MR	04/18/14	OP37658	MSI3303
MC29400-20	I88683.D	1	04/21/14	MR	04/18/14	OP37658	MSI3303

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29833-1, MC29833-2, MC29833-3, MC29833-4

CAS No.	Compound	MC29400-20 Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
83-32-9	Acenaphthene	ND	50	38.0	76	50	36.3	73	5	40-140/20
208-96-8	Acenaphthylene	ND	50	34.9	70	50	33.4	67	4	40-140/20
120-12-7	Anthracene	ND	50	37.4	75	50	36.8	74	2	40-140/20
56-55-3	Benzo(a)anthracene	ND	50	42.1	84	50	41.1	82	2	40-140/20
50-32-8	Benzo(a)pyrene	ND	50	39.6	79	50	38.6	77	3	40-140/20
205-99-2	Benzo(b)fluoranthene	ND	50	43.4	87	50	41.8	84	4	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND	50	45.4	91	50	44.3	89	2	40-140/20
207-08-9	Benzo(k)fluoranthene	ND	50	42.0	84	50	41.3	83	2	40-140/20
218-01-9	Chrysene	ND	50	40.2	80	50	39.5	79	2	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND	50	48.0	96	50	46.7	93	3	40-140/20
206-44-0	Fluoranthene	ND	50	43.1	86	50	41.7	83	3	40-140/20
86-73-7	Fluorene	ND	50	40.2	80	50	39.3	79	2	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND	50	46.2	92	50	45.0	90	3	40-140/20
90-12-0	1-Methylnaphthalene	ND	50	35.4	71	50	33.5	67	6	40-140/20
91-57-6	2-Methylnaphthalene	ND	50	34.2	68	50	32.5	65	5	40-140/20
85-01-8	Phenanthrene	ND	50	38.2	76	50	37.1	74	3	40-140/20
129-00-0	Pyrene	ND	50	42.0	84	50	40.4	81	4	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29400-20 Limits
367-12-4	2-Fluorophenol	38%	38%	33% 15-110%
4165-62-2	Phenol-d5	26%	24%	22% 15-110%
118-79-6	2,4,6-Tribromophenol	85%	83%	76% 15-110%
4165-60-0	Nitrobenzene-d5	76%	73%	67% 30-130%
321-60-8	2-Fluorobiphenyl	75%	72%	61% 30-130%
1718-51-0	Terphenyl-d14	94%	92%	89% 30-130%

* = Outside of Control Limits.

7.3.2

Semivolatile Internal Standard Area Summary

Job Number: MC29833
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSI3303-CC3238	Injection Date:	04/21/14
Lab File ID:	I88677.D	Injection Time:	15:37
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	263580	3.97	615489	5.02	360317	6.54	617721	7.91	446343	10.69	1103240	12.16
Upper Limit ^a	527160	4.47	1230978	5.52	720634	7.04	1235442	8.41	892686	11.19	2206480	12.66
Lower Limit ^b	131790	3.47	307745	4.52	180159	6.04	308861	7.41	223172	10.19	551620	11.66

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
ZZZZZZ	296697	3.97	681645	5.02	409354	6.54	692527	7.91	498806	10.69	1246718	12.17
OP37658-MB	305575	3.97	715366	5.02	422793	6.54	710683	7.91	520447	10.69	1298502	12.17
OP37658-BS	299871	3.98	693087	5.02	401596	6.55	670124	7.92	489040	10.69	1170448	12.17
OP37658-MS	288985	3.97	683969	5.02	397025	6.54	667934	7.92	481210	10.69	1168091	12.17
OP37658-MSD	295308	3.98	689546	5.02	402201	6.54	673506	7.92	489209	10.69	1187613	12.17
MC29400-20	283311	3.97	670168	5.02	390149	6.54	658059	7.91	471554	10.69	1168718	12.16
ZZZZZZ	290645	3.97	685599	5.02	397290	6.54	672085	7.91	480521	10.69	1196916	12.16
ZZZZZZ	302113	3.97	711607	5.02	410128	6.54	688701	7.91	493553	10.69	1215626	12.17
MC29833-1	286241	3.97	682797	5.02	394750	6.54	669422	7.91	478585	10.69	1182887	12.16
MC29833-2	295642	3.98	696807	5.02	398930	6.54	666871	7.91	476789	10.69	1182312	12.17
MC29833-3	285543	3.98	672895	5.02	382809	6.54	629632	7.91	454825	10.69	1115295	12.16
MC29833-4	315665	3.98	737174	5.02	419700	6.54	693089	7.91	488621	10.69	1204401	12.16
ZZZZZZ	292439	3.97	676938	5.02	398787	6.54	667728	7.91	482467	10.69	1190658	12.17
ZZZZZZ	277505	3.98	649163	5.02	375932	6.54	632184	7.91	446466	10.69	1105543	12.16
ZZZZZZ	281677	3.98	653540	5.02	382818	6.54	642708	7.91	464204	10.69	1120329	12.16

- 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
7

Semivolatile Internal Standard Area Summary

Job Number: MC29833
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSR1411-CC1410	Injection Date:	01/21/14
Lab File ID:	R38278.D	Injection Time:	09:41
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	119472	5.41	428450	6.51	266822	8.04	473515	9.35	453402	11.94	394254	13.65
Upper Limit ^a	238944	5.91	856900	7.01	533644	8.54	947030	9.85	906804	12.44	788508	14.15
Lower Limit ^b	59736	4.91	214225	6.01	133411	7.54	236758	8.85	226701	11.44	197127	13.15

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37657-MB	135006	5.41	489741	6.50	305204	8.04	538899	9.34	507315	11.94	444856	13.64
OP37657-BS	140201	5.41	472614	6.51	294251	8.04	514369	9.34	489336	11.94	421199	13.64
OP37657-MS	129939	5.41	469854	6.51	292550	8.04	512441	9.35	493469	11.94	427015	13.64
OP37657-MSD	130477	5.41	462134	6.51	290257	8.04	506022	9.34	486758	11.94	428401	13.64
MC29400-19	163993	5.41	581099	6.50	337715	8.04	570831	9.34	548258	11.94	487442	13.64
ZZZZZZ	140523	5.41	451574	6.50	276508	8.04	492814	9.34	472387	11.94	415079	13.64
ZZZZZZ	152519	5.41	538696	6.50	346124	8.04	551955	9.34	493276	11.94	446137	13.64
ZZZZZZ	172189	5.41	615115	6.50	384310	8.04	672587	9.34	537100	11.94	481945	13.64
ZZZZZZ	167452	5.41	605031	6.50	343233	8.04	578386	9.34	551960	11.93	472241	13.64
MC29833-1	167281	5.41	605849	6.50	380770	8.04	667012	9.34	610631	11.94	483373	13.64
MC29833-2	175930	5.41	631190	6.50	393521	8.04	658956	9.34	560351	11.94	472653	13.64
MC29833-3	176994	5.41	635207	6.50	402564	8.04	700721	9.34	641216	11.94	558555	13.64
MC29833-4	137173	5.41	488477	6.50	303663	8.04	535300	9.34	519084	11.94	466318	13.64
ZZZZZZ	121079	5.41	439990	6.50	279915	8.04	487787	9.34	465322	11.94	413815	13.64

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

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

7.4.2
7

Semivolatile Surrogate Recovery Summary

Job Number: MC29833

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Method: SW846 8270D	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC29833-1	R38288.D	46	29	89	77	78	95
MC29833-2	R38289.D	51	32	97	76	79	94
MC29833-3	R38290.D	50	31	90	76	75	90
MC29833-4	R38291.D	60	31	89	72	76	88
OP37657-BS	R38280.D	55	33	91	79	83	96
OP37657-MB	R38279.D	42	28	73	72	74	94
OP37657-MS	R38281.D	45	30	91	76	84	93
OP37657-MSD	R38282.D	47	28	89	74	78	91

Surrogate Compounds Recovery Limits

- S1 = 2-Fluorophenol 15-110%
- S2 = Phenol-d5 15-110%
- S3 = 2,4,6-Tribromophenol 15-110%
- S4 = Nitrobenzene-d5 30-130%
- S5 = 2-Fluorobiphenyl 30-130%
- S6 = Terphenyl-d14 30-130%

7.5.1
7

Semivolatile Surrogate Recovery Summary

Job Number: MC29833

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Method: SW846 8270D BY SIM	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC29833-1	I88686.D	71	70	94
MC29833-2	I88687.D	72	72	93
MC29833-3	I88688.D	72	70	89
MC29833-4	I88689.D	72	68	92
OP37658-BS	I88680.D	77	75	96
OP37658-MB	I88679.D	72	66	93
OP37658-MS	I88681.D	76	75	94
OP37658-MSD	I88682.D	73	72	92

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

7.5.2

7

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: MC29833

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37671-MB	BB55406.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222

The QC reported here applies to the following samples:

Method: SW846 8011

MC29833-1, MC29833-2, MC29833-3, MC29833-4, MC29833-6

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)	85% 36-173%
460-00-4	Bromofluorobenzene (S)	87% 36-173%

8.1.1
8

Blank Spike Summary

Job Number: MC29833

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37671-BS	BB55407.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222

The QC reported here applies to the following samples:

Method: SW846 8011

MC29833-1, MC29833-2, MC29833-3, MC29833-4, MC29833-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.063	89	60-140
106-93-4	1,2-Dibromoethane	0.071	0.064	90	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	93%	36-173%
460-00-4	Bromoflnorobenzene (S)	96%	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29833
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37671-MS	BB55408.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222
OP37671-MSD	BB55409.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222
MC29400-22	BB55410.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222

The QC reported here applies to the following samples: Method: SW846 8011

MC29833-1, MC29833-2, MC29833-3, MC29833-4, MC29833-6

CAS No.	Compound	MC29400-22 Spike		MS	MS	Spike	MSD	MSD	RPD	Limits
		ug/l	Q ug/l	ug/l	%	ug/l	ug/l	%		Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.071	0.065	92	0.071	0.082	115	23	64-141/29
106-93-4	1,2-Dibromoethane	ND	0.071	0.068	96	0.071	0.081	114	17	63-163/27

8.3.1
8

CAS No.	Surrogate Recoveries	MS	MSD	MC29400-22 Limits
460-00-4	Bromofluorobenzene (S)	92%	111%	105% 36-173%
460-00-4	Bromofluorobenzene (S)	95%	115%	109% 36-173%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC29833

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29833-1	BB55419.D	75	79
MC29833-2	BB55420.D	80	94
MC29833-3	BB55421.D	90	109
MC29833-4	BB55422.D	65	73
MC29833-6	BB55423.D	79	86
OP37671-BS	BB55407.D	93	96
OP37671-MB	BB55406.D	85	87
OP37671-MS	BB55408.D	92	95
OP37671-MSD	BB55409.D	111	115

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: MC29833
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	GBB3222-ICC3222	Injection Date:	04/21/14
Lab File ID:	BB55402.D	Injection Time:	15:30
Instrument ID:	GCBB	Method:	SW846 8011

S1^a S1^b
 RT RT

Check Std	4.30	4.60
-----------	------	------

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
OP37671-MB	BB55406.D	04/21/14	17:09	4.30	4.60
OP37671-BS	BB55407.D	04/21/14	17:34	4.30	4.60
OP37671-MS	BB55408.D	04/21/14	17:59	4.30	4.60
OP37671-MSD	BB55409.D	04/21/14	18:23	4.30	4.60
MC29400-22	BB55410.D	04/21/14	18:48	4.30	4.60
ZZZZZZ	BB55411.D	04/21/14	19:13	4.30	4.60
ZZZZZZ	BB55412.D	04/21/14	19:38	4.30	4.60
ZZZZZZ	BB55413.D	04/21/14	20:03	4.30	4.60
ZZZZZZ	BB55414.D	04/21/14	20:29	4.30	4.60
ZZZZZZ	BB55415.D	04/21/14	20:56	4.30	4.60

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: MC29833
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	GBB3222-CC3222	Injection Date:	04/21/14
Lab File ID:	BB55416.D	Injection Time:	21:25
Instrument ID:	GCB	Method:	SW846 8011

S1^a S1^b
 RT RT

Check Std	4.30	4.60
-----------	------	------

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
ZZZZZZ	BB55417.D	04/21/14	21:54	4.30	4.60
ZZZZZZ	BB55418.D	04/21/14	22:24	4.30	4.60
MC29833-1	BB55419.D	04/21/14	22:53	4.30	4.60
MC29833-2	BB55420.D	04/21/14	23:22	4.30	4.60
MC29833-3	BB55421.D	04/21/14	23:51	4.30	4.60
MC29833-4	BB55422.D	04/22/14	00:21	4.30	4.60
MC29833-6	BB55423.D	04/22/14	00:49	4.30	4.60
ZZZZZZ	BB55424.D	04/22/14	01:18	4.30	4.60
ZZZZZZ	BB55425.D	04/22/14	01:46	4.30	4.60
ZZZZZZ	BB55426.D	04/22/14	02:14	4.30	4.60

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 – 2nd Quarter 2014 Data Review

Laboratory SDG: MC29882

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 5/27/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2013

Sample Identification	Sample Identification
P93C-ROX-041714	P93A-ROX-041714
P93B-ROX-041714	P93B-ROX-041714-Dup
TB-ROX-041714-HCL	TB-ROX-041714-ST

1.0 Data Package Completeness

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

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated di-n-butyl phthalate and phenanthrene were detected in the method blank. SVOC LCS recoveries were outside evaluation criteria. VOC MS/MSD recoveries and RPDs were outside evaluation criteria in sample P93C-ROX-041714. Several samples were diluted due to high levels of VOC target analytes. These issues are addressed further in the appropriate sections below. Additionally, continuing calibration verification for 1,2-dibromo-3-chloropropane exceeded criteria.

The cooler receipt form indicated that one of one cooler was received by the laboratory at a temperature of 0.7°C, which is outside the 4°C ± 2°C 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
OP37657-MB	SVOCs	Di-n-butyl phthalate	0.68 µg/L
OP37681-MB	SVOCs	Di-n-butyl phthalate	0.37 µg/L
OP37658-MB	PAHs	Phenanthrene	0.040 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. Please see Section 12.0 of this review for additional qualifications regarding samples associated with phenanthrene in method blank OP37658-MB.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
P93A-ROX-041714	SVOCs	Di-n-butyl phthalate	-	U
P93B-ROX-041714	SVOCs	Di-n-butyl phthalate	-	U
P93B-ROX-041714-Dup	SVOCs	Di-n-butyl phthalate	-	U
P93C-ROX-041714	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
OP37657-BS	SVOCs	Benzoic acid	22	30-130
OP37681-BS	SVOCs	Benzoic acid	18	30-130
OP37681-BS	SVOCs	4-Nitrophenol	24	30-130
OP37681-BS	SVOCs	Phenol	27	30-130

Analytical data that required qualification based on LCS data are included in the table below.

Sample ID	Parameter	Analyte	Qualification
P93A-ROX-041714	SVOCs	Benzoic acid	UJ
P93B-ROX-041714	SVOCs	Benzoic acid	UJ
P93B-ROX-041714-Dup	SVOCs	Benzoic acid	UJ
P93C-ROX-041714	SVOCs	Benzoic acid	UJ
P93C-ROX-041714	SVOCs	4-Nitrophenol	UJ
P93C-ROX-041714	SVOCs	Phenol	UJ

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

Yes, although not requested, sample P93C-ROX-041714 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-041714	VOCs	Acetone	60/58	3	70-130/30
P93C-ROX-041714	VOCs	2-Chloroethyl vinyl ether	0/0	NA	70-130/30
P93C-ROX-041714	VOCs	Naphthalene	57/87	42	70-130/30
P93C-ROX-041714	VOCs	1,2,3-Trichlorobenzene	65/90	32	70-130/30
P93C-ROX-041714	VOCs	1,2,4-Trichlorobenzene	68/78	14	70-130/30
P93C-ROX-041714	VOCs	1,2,3-Trichloropropane	134/126	6	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 analytes listed and qualified as appropriate in Section 5.0 of this data review. No further qualification of data was required.

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
P93B-ROX-041714	P93B-ROX-041714-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?

Yes, professional judgment was also used to qualify as estimated, however not reject, data that was associated with phenanthrene in method blank OP37658-MB, due to comparable historical detections.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
P93A-ROX-041714	PAHs	Phenanthrene	-	J



Technical Report for

Shell Oil

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana,

Accutest Job Number: MC29882

Sampling Date: 04/17/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: 103



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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Reviewed on
5/27/2014
Reza Fard
Lab Director

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Sample Summary

Shell Oil

Job No: MC29882

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
MC29882-1	04/17/14	10:35	DMDH04/18/14	AQ	Ground Water	P93C-ROX-041714 ✓
MC29882-2	04/17/14	11:45	DMDH04/18/14	AQ	Ground Water	P93A-ROX-041714 ✓
MC29882-3	04/17/14	15:05	DMDH04/18/14	AQ	Ground Water	P93B-ROX-041714 ✓
MC29882-4	04/17/14	15:05	DMDH04/18/14	AQ	Ground Water	P93B-ROX-041714-DUP ✓
MC29882-5	04/17/14	00:00	DMDH04/18/14	AQ	Trip Blank Water	TB-ROX-041714-HCL ✓
MC29882-6	04/17/14	00:00	DMDH04/18/14	AQ	Trip Blank Water	TB-ROX-041714-ST ✓



SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Shell Oil Job No MC29882
 Site: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Report Date 5/2/2014 1:33:49 PM

4 Sample(s) and 2 Trip Blank(s) were collected on 04/17/2014 and were received at Accutest on 04/18/2014 properly preserved, at 0.7 Deg. C and intact. These Samples received an Accutest job number of MC29882. 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: MSV1137
--------	----	-------------------

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29904-2MS, MC29904-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MC29904-2MS/MSD Recovery(s) for 1,2,3-Trichloropropane, 2-Chloroethyl vinyl ether, Dichlorodifluoromethane are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 1,2,3-Trichlorobenzene, Naphthalene are outside control limits for sample MC29904-2MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.

Matrix	AQ	Batch ID: MSV1139
--------	----	-------------------

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC29882-IMS, MC29882-IMS D were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike Recovery(s) for 1,2,3-Trichlorobenzene, 1,2,3-Trichloropropane, 1,2,4-Trichlorobenzene, 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 2-Chloroethyl vinyl ether, Acetone are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 1,2,3-Trichlorobenzene, Naphthalene are outside control limits for sample MC29882-IMS D. High RPD due to possible matrix interference and/or sample non-homogeneity.

Extractables by GCMS By Method SW846 8270D

Matrix AQ	Batch ID: OP37657
------------------	--------------------------

- ☒ All samples were extracted within the recommended method holding time.
- ☒ All samples were analyzed within the recommended method holding time.
- ☒ Sample(s) MC29400-19MS, MC29400-19MSD were used as the QC samples indicated.
- ☒ Sample(s) MC29882-3, MC29882-4 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- ☒ OP37657-BS/MS/MSD Recovery(s) for Benzoic Acid are outside control limits. Blank Spike meets program technical requirements.
- ☒ Matrix Spike Duplicate Recovery(s) for Phenol are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.

Matrix AQ	Batch ID: OP37681
------------------	--------------------------

- ☒ All samples were extracted within the recommended method holding time.
- ☒ All samples were analyzed within the recommended method holding time.
- ☒ Sample(s) MC29400-26MS, MC29400-26MSD were used as the QC samples indicated.
- ☒ Sample(s) MC29882-1 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- ☒ OP37681-BS/MS/MSD Recovery(s) for 4-Nitrophenol, Benzoic Acid, Phenol 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 Pyridine are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ	Batch ID: OP37658
------------------	--------------------------

- ☒ All samples were extracted within the recommended method holding time.
- ☒ All samples were analyzed within the recommended method holding time.
- ☒ Sample(s) MC29400-20MS, MC29400-20MSD were used as the QC samples indicated.
- ☒ Sample(s) MC29882-2 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.

Matrix AQ	Batch ID: OP37682
------------------	--------------------------

- ☒ All samples were extracted within the recommended method holding time.
- ☒ All samples were analyzed within the recommended method holding time.
- ☒ Sample(s) MC29400-27MS, MC29400-27MSD 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: OP37671
------------------	--------------------------

- ☒ All samples were extracted within the recommended method holding time.
- ☒ All samples were analyzed within the recommended method holding time.
- ☒ Sample(s) MC29400-22MS, MC29400-22MSD were used as the QC samples indicated.
- ☒ All method blanks for this batch meet method specific criteria.
- ☒ Continuing calibration check standard GBB3222-CC3222 for 1,2-Dibromo-3-chloropropane exceed criteria (response bias high). Associated samples are non-detect for this compound.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report 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(MC29882).

Summary of Hits

Job Number: MC29882
Account: Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
Collected: 04/17/14



Lab Sample ID	Client Sample ID	Result/ Analyte	Qual	RL	MDL	Units	Method
---------------	------------------	--------------------	------	----	-----	-------	--------

MC29882-1 P93C-ROX-041714

Methyl Tert Butyl Ether	4.3	1.0	0.51	ug/l	SW846 8260C
Di-n-butyl phthalate	0.48 JB	5.2	0.18	ug/l	SW846 8270D

MC29882-2 P93A-ROX-041714

Benzene	132000	250	160	ug/l	SW846 8260C
Phenol	73.5	5.6	0.34	ug/l	SW846 8270D
Di-n-butyl phthalate	1.2 J	5.6	0.19	ug/l	SW846 8270D
Acenaphthene	0.13	0.11	0.077	ug/l	SW846 8270D BY SIM
Fluorene	0.27	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene	8.6	0.22	0.055	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene	4.8	0.22	0.082	ug/l	SW846 8270D BY SIM
Phenanthrene	0.18 B	0.056	0.014	ug/l	SW846 8270D BY SIM

MC29882-3 P93B-ROX-041714

Benzene	134000	250	160	ug/l	SW846 8260C
Phenol	71.9	5.1	0.31	ug/l	SW846 8270D
Di-n-butyl phthalate	2.4 JB	5.1	0.18	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate	1.5 J	2.0	0.34	ug/l	SW846 8270D

MC29882-4 P93B-ROX-041714-DUP

Benzene	126000	250	160	ug/l	SW846 8260C
Phenol	86.1	5.3	0.32	ug/l	SW846 8270D
Di-n-butyl phthalate	0.98 JB	5.3	0.18	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate	0.45 J	2.1	0.35	ug/l	SW846 8270D

MC29882-5 TB-ROX-041714-HCL

No hits reported in this sample.

MC29882-6 TB-ROX-041714-ST

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P93C-ROX-041714	Date Sampled:	04/17/14
Lab Sample ID:	MC29882-1	Date Received:	04/18/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30496.D	1	05/01/14	AMY	n/a	n/a	MSV1139
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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

Report of Analysis

Client Sample ID:	P93C-ROX-041714	Date Sampled:	04/17/14
Lab Sample ID:	MC29882-1	Date Received:	04/18/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	4.3	1.0	0.51	ng/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ng/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ng/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ng/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ng/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ng/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ng/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ng/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID: P93C-ROX-041714		Date Sampled: 04/17/14
Lab Sample ID: MC29882-1		Date Received: 04/18/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260C		
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		70-130%
2037-26-5	Toluene-D8	88%		70-130%
460-00-4	4-Bromofluorobenzene	92%		70-130%

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

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

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

Report of Analysis

Client Sample ID: P93C-ROX-041714	Date Sampled: 04/17/14
Lab Sample ID: MC29882-1	Date Received: 04/18/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F72504.D	1	04/22/14	WK	04/19/14	OP37681	MSF3224
Run #2							

Run #	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.6	ug/l	WJ
95-57-8	2-Chlorophenol	ND	5.2	0.32	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.85	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.41	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.58	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.48	ug/l	
88-75-5	2-Nitrophenol	ND	10	3.0	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.55	ug/l	WJ
87-86-5	Pentachlorophenol	ND	10	1.2	ug/l	
108-95-2	Phenol	ND	5.2	0.31	ug/l	WJ
95-95-4	2,4,5-Trichlorophenol	ND	10	0.38	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.66	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.2	0.49	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.2	0.55	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.2	0.32	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.57	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.2	0.30	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.2	0.36	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.2	0.34	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.2	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.2	0.25	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.47	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.31	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.2	0.28	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	0.48 u	5.2	0.18	ug/l	JB W
117-84-0	Di-n-octyl phthalate	ND	5.2	0.29	ug/l	

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

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Report of Analysis

Client Sample ID:	P93C-ROX-041714	Date Sampled:	04/17/14
Lab Sample ID:	MC29882-1	Date Received:	04/18/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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	5.2	0.21	ug/l	
131-11-3	Dimethyl phthalate	ND	5.2	0.35	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.34	ug/l	
118-74-1	Hexachlorobenzene	ND	5.2	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.2	0.31	ug/l	
78-59-1	Isophorone	ND	5.2	0.46	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.41	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.2	0.40	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.2	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.2	0.42	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.2	0.20	ug/l	
110-86-1	Pyridine	ND	10	0.53	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	24%		15-110%
4165-62-2	Phenol-d5	16%		15-110%
118-79-6	2,4,6-Tribromophenol	76%		15-110%
4165-60-0	Nitrobenzene-d5	39%		30-130%
321-60-8	2-Fluorobiphenyl	41%		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 J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: P93C-ROX-041714	Date Sampled: 04/17/14
Lab Sample ID: MC29882-1	Date Received: 04/18/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D BY SIM SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88730.D	1	04/23/14	MR	04/19/14	OP37682	MSI3305
Run #2							

Run #	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.071	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.051	ug/l	
120-12-7	Anthracene	ND	0.10	0.095	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.052	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.030	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.052	0.033	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.028	ug/l	
207-08-9	Beuzo(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)pyreue	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	39%		30-130%
321-60-8	2-Fluorobiphenyl	35%		30-130%
1718-51-0	Terphenyl-d14	87%		30-130%

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

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

4.1
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Report of Analysis

Client Sample ID: P93C-ROX-041714	Date Sampled: 04/17/14
Lab Sample ID: MC29882-1	Date Received: 04/18/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB55424.D	1	04/22/14	SZ	04/18/14	OP37671	GBB3222
Run #2							

Run #	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)	82%		36-173%
460-00-4	Bromofluorobenzene (S)	86%		36-173%

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

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

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Report of Analysis

Client Sample ID: P93A-ROX-041714	Date Sampled: 04/17/14
Lab Sample ID: MC29882-2	Date Received: 04/18/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30497.D	500	05/01/14	AMY	n/a	n/a	MSV1139
Run #2							

Run #	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	1300	ug/l	
107-02-8	Acrolein	ND	13000	3000	ug/l	
107-13-1	Acrylonitrile	ND	2500	1100	ug/l	
71-43-2	Benzene	132000	250	160	ug/l	
108-86-1	Bromobenzene	ND	2500	170	ug/l	
74-97-5	Bromochloromethane	ND	2500	280	ug/l	
75-27-4	Bromodichloromethane	ND	500	170	ug/l	
75-25-2	Bromoform	ND	500	310	ug/l	
74-83-9	Bromomethane	ND	1000	880	ug/l	
78-93-3	2-Butanone (MEK)	ND	2500	1200	ug/l	
104-51-8	n-Butylbenzene	ND	2500	540	ug/l	
135-98-8	sec-Butylbenzene	ND	2500	210	ug/l	
98-06-6	tert-Butylbenzene	ND	2500	190	ug/l	
75-15-0	Carbon disulfide	ND	2500	230	ug/l	
56-23-5	Carbon tetrachloride	ND	500	270	ug/l	
108-90-7	Chlorobenzene	ND	500	210	ug/l	
75-00-3	Chloroethane	ND	1000	270	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	2500	1700	ug/l	
67-66-3	Chloroform	ND	500	210	ug/l	
74-87-3	Chloromethane	ND	1000	540	ug/l	
95-49-8	o-Chlorotoluene	ND	2500	190	ug/l	
106-43-4	p-Chlorotoluene	ND	2500	220	ug/l	
124-48-1	Dibromochloromethane	ND	500	190	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	500	160	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	500	280	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	500	180	ng/l	
75-71-8	Dichlorodifluoromethane	ND	1000	360	ug/l	
75-34-3	1,1-Dichloroethane	ND	500	180	ug/l	
107-06-2	1,2-Dichloroethane	ND	500	250	ug/l	
75-35-4	1,1-Dichloroethene	ND	500	300	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	500	420	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	500	250	ug/l	

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

4.2
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Report of Analysis

Client Sample ID:	P93A-ROX-041714	Date Sampled:	04/17/14
Lab Sample ID:	MC29882-2	Date Received:	04/18/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	1000	250	ug/l	
142-28-9	1,3-Dichloropropane	ND	2500	450	ug/l	
594-20-7	2,2-Dichloropropane	ND	2500	350	ug/l	
563-58-6	1,1-Dichloropropene	ND	2500	240	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	250	210	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	250	250	ug/l	
123-91-1	1,4-Dioxane	ND	13000	5400	ug/l	
97-63-2	Ethyl methacrylate	ND	2500	250	ug/l	
100-41-4	Ethylbenzene	ND	500	190	ug/l	
87-68-3	Hexachlorobutadiene	ND	2500	830	ug/l	
591-78-6	2-Hexanone	ND	2500	800	ug/l	
98-82-8	Isopropylbenzene	ND	2500	170	ug/l	
99-87-6	p-Isopropyltoluene	ND	2500	190	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	500	260	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2500	490	ug/l	
74-95-3	Methylene bromide	ND	2500	260	ug/l	
75-09-2	Methylene chloride	ND	1000	140	ug/l	
91-20-3	Naphthalene	ND	2500	340	ug/l	
103-65-1	n-Propylbenzene	ND	2500	250	ug/l	
100-42-5	Styrene	ND	2500	430	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	500	220	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	200	ug/l	
127-18-4	Tetrachloroethene	ND	500	300	ug/l	
108-88-3	Toluene	ND	500	170	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2500	340	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2500	250	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	500	230	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	500	230	ug/l	
79-01-6	Trichloroethene	ND	500	240	ug/l	
75-69-4	Trichlorofluoromethane	ND	500	270	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2500	410	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2500	160	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2500	190	ug/l	
108-05-4	Vinyl Acetate	ND	2500	360	ug/l	
75-01-4	Vinyl chloride	ND	500	290	ug/l	
	m,p-Xylene	ND	500	470	ug/l	
95-47-6	o-Xylene	ND	500	180	ug/l	
1330-20-7	Xylene (total)	ND	500	180	ug/l	

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

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

Report of Analysis

Client Sample ID: P93A-ROX-041714		Date Sampled: 04/17/14
Lab Sample ID: MC29882-2		Date Received: 04/18/14
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260C		
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		70-130%
2037-26-5	Toluene-D8	86%		70-130%
460-00-4	4-Bromofluorobenzene	88%		70-130%
CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units Q
	Total TIC, Volatile		0	ug/l

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

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

Report of Analysis

Client Sample ID:	P93A-ROX-041714	Date Sampled:	04/17/14
Lab Sample ID:	MC29882-2	Date Received:	04/18/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38298.D	1	04/21/14	WK	04/18/14	OP37657	MSR1412
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	73.5	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.71	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.59	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.62	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ng/l	
84-74-2	Di-n-butyl phthalate	1.2 U	5.6	0.19	ug/l	J U
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

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

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

4.2
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Report of Analysis

Client Sample ID:	P93A-ROX-041714	Date Sampled:	04/17/14
Lab Sample ID:	MC29882-2	Date Received:	04/18/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		15-110%
4165-62-2	Phenol-d5	30%		15-110%
118-79-6	2,4,6-Tribromophenol	100%		15-110%
4165-60-0	Nitrobenzene-d5	70%		30-130%
321-60-8	2-Fluorobiphenyl	73%		30-130%
1718-51-0	Terphenyl-d14	100%		30-130%

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

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

J = Indicates 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-041714	Date Sampled: 04/17/14
Lab Sample ID: MC29882-2	Date Received: 04/18/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D BY SIM SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88690.D	1	04/21/14	MR	04/18/14	OP37658	MSI3303
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.13	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.055	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	0.27	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	8.6	0.22	0.055	ug/l	
91-57-6	2-Methylnaphthalene	4.8	0.22	0.082	ug/l	
85-01-8	Phenanthrene	0.18	0.056	0.014	ug/l	B u
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	70%		30-130%
321-60-8	2-Fluorobiphenyl	69%		30-130%
1718-51-0	Terphenyl-d14	97%		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

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Report of Analysis

Client Sample ID: P93A-ROX-041714	Date Sampled: 04/17/14
Lab Sample ID: MC29882-2	Date Received: 04/18/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB55425.D	1	04/22/14	SZ	04/18/14	OP37671	GBB3222
Run #2							

Run #	Initial Volume	Final Volume
Run #1	36.9 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0051	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)	79%		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

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Report of Analysis

Client Sample ID: P93B-ROX-041714	Date Sampled: 04/17/14
Lab Sample ID: MC29882-3	Date Received: 04/18/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30498.D	500	05/01/14	AMY	n/a	n/a	MSV1139
Run #2							

Run #	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	1300	ug/l	
107-02-8	Acrolein	ND	13000	3000	ug/l	
107-13-1	Acrylonitrile	ND	2500	1100	ug/l	
71-43-2	Benzene	134000	250	160	ug/l	
108-86-1	Bromobenzene	ND	2500	170	ug/l	
74-97-5	Bromochloromethane	ND	2500	280	ug/l	
75-27-4	Bromodichloromethane	ND	500	170	ug/l	
75-25-2	Bromoform	ND	500	310	ug/l	
74-83-9	Bromomethane	ND	1000	880	ug/l	
78-93-3	2-Butanone (MEK)	ND	2500	1200	ug/l	
104-51-8	n-Butylbenzene	ND	2500	540	ug/l	
135-98-8	sec-Butylbenzene	ND	2500	210	ng/l	
98-06-6	tert-Butylbenzene	ND	2500	190	ug/l	
75-15-0	Carbon disulfide	ND	2500	230	ng/l	
56-23-5	Carbon tetrachloride	ND	500	270	ug/l	
108-90-7	Chlorobenzene	ND	500	210	ug/l	
75-00-3	Chloroethane	ND	1000	270	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	2500	1700	ug/l	
67-66-3	Chloroform	ND	500	210	ug/l	
74-87-3	Chloromethane	ND	1000	540	ug/l	
95-49-8	o-Chlorotoluene	ND	2500	190	ug/l	
106-43-4	p-Chlorotoluene	ND	2500	220	ug/l	
124-48-1	Dibromochloromethane	ND	500	190	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	500	160	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	500	280	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	500	180	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1000	360	ug/l	
75-34-3	1,1-Dichloroethane	ND	500	180	ug/l	
107-06-2	1,2-Dichloroethane	ND	500	250	ug/l	
75-35-4	1,1-Dichloroethene	ND	500	300	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	500	420	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	500	250	ug/l	

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

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Report of Analysis

Client Sample ID:	P93B-ROX-041714	Date Sampled:	04/17/14
Lab Sample ID:	MC29882-3	Date Received:	04/18/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	1000	250	ug/l	
142-28-9	1,3-Dichloropropane	ND	2500	450	ug/l	
594-20-7	2,2-Dichloropropane	ND	2500	350	ug/l	
563-58-6	1,1-Dichloropropene	ND	2500	240	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	250	210	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	250	250	ug/l	
123-91-1	1,4-Dioxane	ND	13000	5400	ug/l	
97-63-2	Ethyl methacrylate	ND	2500	250	ug/l	
100-41-4	Ethylbenzene	ND	500	190	ug/l	
87-68-3	Hexachlorobutadiene	ND	2500	830	ug/l	
591-78-6	2-Hexanone	ND	2500	800	ug/l	
98-82-8	Isopropylbenzene	ND	2500	170	ug/l	
99-87-6	p-Isopropyltoluene	ND	2500	190	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	500	260	ug/l	
108-10-1	4-Methyl-2-pentauone (MIBK)	ND	2500	490	ug/l	
74-95-3	Methylene bromide	ND	2500	260	ug/l	
75-09-2	Methylene chloride	ND	1000	140	ug/l	
91-20-3	Naphthalene	ND	2500	340	ug/l	
103-65-1	n-Propylbenzene	ND	2500	250	ug/l	
100-42-5	Styrene	ND	2500	430	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	500	220	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	200	ug/l	
127-18-4	Tetrachloroethene	ND	500	300	ug/l	
108-88-3	Toluene	ND	500	170	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2500	340	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2500	250	ng/l	
71-55-6	1,1,1-Trichloroethane	ND	500	230	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	500	230	ug/l	
79-01-6	Trichloroethene	ND	500	240	ug/l	
75-69-4	Trichlorofluoromethane	ND	500	270	ng/l	
96-18-4	1,2,3-Trichloropropane	ND	2500	410	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2500	160	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2500	190	ug/l	
108-05-4	Vinyl Acetate	ND	2500	360	ug/l	
75-01-4	Vinyl chloride	ND	500	290	ug/l	
	m,p-Xylene	ND	500	470	ug/l	
95-47-6	o-Xylene	ND	500	180	ug/l	
1330-20-7	Xylene (total)	ND	500	180	ug/l	

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

MDL = Method Detection Limit

J = Indicates 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-041714	Date Sampled:	04/17/14
Lab Sample ID:	MC29882-3	Date Received:	04/18/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		70-130%
2037-26-5	Toluene-D8	85%		70-130%
460-00-4	4-Bromofluorobenzene	88%		70-130%
CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units Q
	Total TIC, Volatile		0	ug/l

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

Report of Analysis

Client Sample ID: P93B-ROX-041714	Date Sampled: 04/17/14
Lab Sample ID: MC29882-3	Date Received: 04/18/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38299.D	1	04/21/14	WK	04/18/14	OP37657	MSR1412
Run #2							

Run #	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	2.6	ug/l	WJ
95-57-8	2-Chlorophenol	ND	5.1	0.32	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.84	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.57	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.48	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.55	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	71.9	5.1	0.31	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.38	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.65	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.1	0.48	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.1	0.54	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.1	0.32	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.57	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	0.36	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.1	0.34	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.1	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.47	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.31	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.1	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	2.4 u	5.1	0.18	ug/l	JB u
117-84-0	Di-n-octyl phthalate	ND	5.1	0.29	ug/l	

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

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

4.3
 4

Report of Analysis

Client Sample ID:	P93B-ROX-041714	Date Sampled:	04/17/14
Lab Sample ID:	MC29882-3	Date Received:	04/18/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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	5.1	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.1	0.35	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	1.5	2.0	0.34	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.1	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.1	0.31	ug/l	
78-59-1	Isophorone	ND	5.1	0.46	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.1	0.40	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.1	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	0.41	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	0.20	ug/l	
110-86-1	Pyridine	ND	10	0.53	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	46%		15-110%
4165-62-2	Phenol-d5	29%		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	79%		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	

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

J = Indicates 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-041714	Date Sampled: 04/17/14
Lab Sample ID: MC29882-3	Date Received: 04/18/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D BY SIM SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88691.D	1	04/21/14	MR	04/18/14	OP37658	MSI3303
Run #2							

Run #	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	71%		30-130%
321-60-8	2-Fluorobiphenyl	72%		30-130%
1718-51-0	Terphenyl-d14	98%		30-130%

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

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

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Report of Analysis

Client Sample ID: P93B-ROX-041714	Date Sampled: 04/17/14
Lab Sample ID: MC29882-3	Date Received: 04/18/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB55426.D	1	04/22/14	SZ	04/18/14	OP37671	GBB3222
Run #2							

Run #	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)	79%		36-173%
460-00-4	Bromofluorobenzene (S)	89%		36-173%

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

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

4.3
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Report of Analysis

Client Sample ID:	P93B-ROX-041714-DUP	Date Sampled:	04/17/14
Lab Sample ID:	MC29882-4	Date Received:	04/18/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30499.D	500	05/01/14	AMY	n/a	n/a	MSV1139
Run #2							

Run #	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	1300	ug/l	
107-02-8	Acrolein	ND	13000	3000	ug/l	
107-13-1	Acrylonitrile	ND	2500	1100	ug/l	
71-43-2	Benzene	126000	250	160	ug/l	
108-86-1	Bromobenzene	ND	2500	170	ug/l	
74-97-5	Bromochloromethane	ND	2500	280	ug/l	
75-27-4	Bromodichloromethane	ND	500	170	ug/l	
75-25-2	Bromoform	ND	500	310	ug/l	
74-83-9	Bromomethane	ND	1000	880	ug/l	
78-93-3	2-Butanone (MEK)	ND	2500	1200	ug/l	
104-51-8	n-Butylbenzene	ND	2500	540	ug/l	
135-98-8	sec-Butylbenzene	ND	2500	210	ug/l	
98-06-6	tert-Butylbenzene	ND	2500	190	ug/l	
75-15-0	Carbon disulfide	ND	2500	230	ug/l	
56-23-5	Carbon tetrachloride	ND	500	270	ug/l	
108-90-7	Chlorobenzene	ND	500	210	ug/l	
75-00-3	Chloroethane	ND	1000	270	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	2500	1700	ug/l	
67-66-3	Chloroform	ND	500	210	ug/l	
74-87-3	Chloromethane	ND	1000	540	ug/l	
95-49-8	o-Chlorotoluene	ND	2500	190	ug/l	
106-43-4	p-Chlorotoluene	ND	2500	220	ug/l	
124-48-1	Dibromochloromethane	ND	500	190	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	500	160	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	500	280	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	500	180	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1000	360	ug/l	
75-34-3	1,1-Dichloroethane	ND	500	180	ug/l	
107-06-2	1,2-Dichloroethane	ND	500	250	ug/l	
75-35-4	1,1-Dichloroethene	ND	500	300	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	500	420	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	500	250	ug/l	

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

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

Report of Analysis

Client Sample ID:	P93B-ROX-041714-DUP	Date Sampled:	04/17/14
Lab Sample ID:	MC29882-4	Date Received:	04/18/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	1000	250	ug/l	
142-28-9	1,3-Dichloropropane	ND	2500	450	ug/l	
594-20-7	2,2-Dichloropropane	ND	2500	350	ug/l	
563-58-6	1,1-Dichloropropene	ND	2500	240	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	250	210	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	250	250	ug/l	
123-91-1	1,4-Dioxane	ND	13000	5400	ug/l	
97-63-2	Ethyl methacrylate	ND	2500	250	ug/l	
100-41-4	Ethylbenzene	ND	500	190	ug/l	
87-68-3	Hexachlorobutadiene	ND	2500	830	ug/l	
591-78-6	2-Hexanone	ND	2500	800	ug/l	
98-82-8	Isopropylbenzene	ND	2500	170	ug/l	
99-87-6	p-Isopropyltoluene	ND	2500	190	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	500	260	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2500	490	ug/l	
74-95-3	Methylene bromide	ND	2500	260	ug/l	
75-09-2	Methylene chloride	ND	1000	140	ug/l	
91-20-3	Naphthalene	ND	2500	340	ug/l	
103-65-1	n-Propylbenzene	ND	2500	250	ug/l	
100-42-5	Styrene	ND	2500	430	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	500	220	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	200	ug/l	
127-18-4	Tetrachloroethene	ND	500	300	ug/l	
108-88-3	Toluene	ND	500	170	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2500	340	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2500	250	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	500	230	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	500	230	ug/l	
79-01-6	Trichloroethene	ND	500	240	ug/l	
75-69-4	Trichlorofluoromethane	ND	500	270	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2500	410	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2500	160	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2500	190	ug/l	
108-05-4	Vieryl Acetate	ND	2500	360	ug/l	
75-01-4	Vieryl chloride	ND	500	290	ug/l	
	m,p-Xylene	ND	500	470	ug/l	
95-47-6	o-Xylene	ND	500	180	ug/l	
1330-20-7	Xylene (total)	ND	500	180	ug/l	

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

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

Report of Analysis

Client Sample ID:	P93B-ROX-041714-DUP	Date Sampled:	04/17/14
Lab Sample ID:	MC29882-4	Date Received:	04/18/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		70-130%
2037-26-5	Toluene-D8	86%		70-130%
460-00-4	4-Bromofluorobenzene	90%		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 J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: P93B-ROX-041714-DUP	Date Sampled: 04/17/14
Lab Sample ID: MC29882-4	Date Received: 04/18/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38300.D	1	04/21/14	WK	04/18/14	OP37657	MSR1412
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.6	ug/l	WJ
95-57-8	2-Chlorophenol	ND	5.3	0.33	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.87	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.42	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.59	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.0	ug/l	
95-48-7	2-Methylphenol	ND	11	0.24	ug/l	
	3&4-Methylphenol	ND	11	0.49	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.0	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.56	ng/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	86.1	5.3	0.32	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.39	ng/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.18	ug/l	
62-53-3	Aniline	ND	11	0.67	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.50	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.56	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.4	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.33	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.59	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.30	ug/l	
111-44-4	his(2-Chloroethyl)ether	ND	5.3	0.37	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.35	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.25	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.48	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.28	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	0.98 W	5.3	0.18	ug/l	JB W
117-84-0	Di-n-octyl phthalate	ND	5.3	0.30	ug/l	

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

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

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Report of Analysis

Client Sample ID:	P93B-ROX-041714-DUP	Date Sampled:	04/17/14
Lab Sample ID:	MC29882-4	Date Received:	04/18/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.3	0.21	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.36	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.45	2.1	0.35	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.3	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.3	0.32	ug/l	
78-59-1	Isophorone	ND	5.3	0.47	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.42	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.41	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.42	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.20	ug/l	
110-86-1	Pyridine	ND	11	0.54	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	43%		15-110%
4165-62-2	Phenol-d5	28%		15-110%
118-79-6	2,4,6-Tribromophenol	98%		15-110%
4165-60-0	Nitrobenzene-d5	70%		30-130%
321-60-8	2-Fluorobiphenyl	76%		30-130%
1718-51-0	Terphenyl-d14	96%		30-130%

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

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

Report of Analysis

Client Sample ID: P93B-ROX-041714-DUP	Date Sampled: 04/17/14
Lab Sample ID: MC29882-4	Date Received: 04/18/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D BY SIM SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88692.D	1	04/21/14	MR	04/18/14	OP37658	MSI3303
Run #2							

Run #	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	69%		30-130%
321-60-8	2-Fluorobiphenyl	70%		30-130%
1718-51-0	Terphenyl-d14	96%		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

4.4
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Report of Analysis

Client Sample ID:	P93B-ROX-041714-DUP	Date Sampled:	04/17/14
Lab Sample ID:	MC29882-4	Date Received:	04/18/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8011 SW846 8011	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB55428.D	1	04/22/14	SZ	04/18/14	OP37671	GBB3222
Run #2							

Run #	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)	90%		36-173%
460-00-4	Bromofluorobenzene (S)	101%		36-173%

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

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

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Report of Analysis

Client Sample ID:	TB-ROX-041714-HCL	Date Sampled:	04/17/14
Lab Sample ID:	MC29882-5	Date Received:	04/18/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30454.D	1	04/30/14	AMY	n/a	n/a	MSV1137
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromo chloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ng/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

MDL = Method Detection Limit

J = Indicates 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-041714-HCL	Date Sampled:	04/17/14
Lab Sample ID:	MC29882-5	Date Received:	04/18/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB-ROX-041714-HCL	Date Sampled:	04/17/14
Lab Sample ID:	MC29882-5	Date Received:	04/18/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

4.5
4

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		70-130%
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	90%		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 J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TB-ROX-041714-ST	Date Sampled: 04/17/14
Lab Sample ID: MC29882-6	Date Received: 04/18/14
Matrix: AQ - Trip Blank Water	Percents Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB55429.D	1	04/22/14	SZ	04/18/14	OP37671	GBB3222
Run #2							

Run #	Initial Volume	Final Volume
Run #1	36.0 ml	2.0 ml
Run #2		

VOA Special List

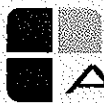
CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	100%		36-173%
460-00-4	Bromofluorobenzene (S)	108%		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

4.6
 4



Misc. Forms



Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

LAB (LOCATION)

- AT&T
- CALSONICE
- OTHER: Marlborough, MA 01752 (508-461-6200)
- SFI



Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:

<input checked="" type="checkbox"/> ENV. SERVICES	<input type="checkbox"/> MOTIVA RETAIL	<input type="checkbox"/> SHELL RETAIL
<input type="checkbox"/> MOTIVA SMOCH	<input type="checkbox"/> CONSULTANT	<input type="checkbox"/> LUBES
<input type="checkbox"/> SHELL PIPELINE	<input type="checkbox"/> OTHER	

Print Bill To Contact Name: Bob Bliman

INCIDENT # (ENV SERVICES) 0 7 2 1 6 8 4 0

DATE: 4/17/14

PO # _____ SAP # _____

PAGE: 1 of 1

Lab Vendor # _____

URS CORPORATION
1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST LOUIS, MO 63110

900 South Central Ave, ROXANA, ILL.

314-429-0100

Elizabeth Kunkel, Wendy Pennington, Bob Bliman

314-429-0462

ROXANA QUARTERLY GW / 21662973.03002

DATE AGAILED: Street and City

DATE RECEIVED: 4/17/14

LAB USE ONLY: mc29882

TURNAROUND TIME (CALENDAR DAYS)

STANDARD (10-DAY) 5 DAYS 3 DAYS 2 DAYS 24 HOURS RESULTS NEEDED 24 HOURS

LA - AMOCS REPORT FORMAT USE AGENCY: _____

DELIVERABLES LEVEL 1 LEVEL 2 LEVEL 3 LEVEL 4 OTHER (SPECIFY) _____ EDD _____

TEMPERATURE ON RECEIPT °C _____ °F _____

SPECIAL INSTRUCTIONS OR NOTES:

- Please include "J" values on Reports
- Please provide sample receipt upon login.
- SHALL CONTRACT RATE APPLIES
- STATE REIMBURSEMENT RATE APPLIES
- CDO NOT NEEDED
- SELECTIVE VOSPICATION REQUESTED
- HIGHWAY LEAD OHS

LAB USE ONLY	Field Sample Identification	SAMPLING		MTRR	PRESERVATIVE						NO. OF CONT.	PID (ppm)	FIELD NOTES:	
		DATE	TIME		NCL	INCL	NO. A.	SOL	NONE	OTHER				
-1	P93C-ROX-041714	4/17/14	1035	water	2		2	2	6	X	X	X	0	
-2	P93A-ROX-041714	4/17/14	1145		2		2	2	6	X	X	X		
-3	P93B-ROX-041714	4/17/14	1515		2		2	2	6	X	X	X		
-4	P93B-ROX-041714-DUR	4/17/14	1515		2		2	2	6	X	X	X		
-5	TB-ROX-041714-HCL	4/17/14	2000		2				2	X				
-6	TB-ROX-041714-ST	4/17/14	2000						2	2	X			19B, 182

Requested by: (Signature) *Conrad*

Requested by: (Signature) *Buenos*

Requested by: (Signature) _____

DATE: 4/17/14

DATE: 4-18-14

TIME: 1700

TIME: 930

0.78C

5.1
5



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC29882 Client: URS Immediate Client Services Action Required: No
 Date / Time Received: 4/18/2014 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: Infrared 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. Filling instructions clear:

Comments

5.1
5

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC29882

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

5.2
5

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC29882-1 Collected: 17-APR-14 10:35 By: DMDH Received: 18-APR-14 By: P93C-ROX-041714						
MC29882-1	SW846 8011	22-APR-14 01:18	SZ	18-APR-14	MT	V8011SL
MC29882-1	SW846 8270D	22-APR-14 19:58	WK	19-APR-14	AJ	AB8270SL+
MC29882-1	SW846 8270D BY SIM	23-APR-14 12:19	MR	19-APR-14	SC	B8270SIMSL
MC29882-1	SW846 8260C	01-MAY-14 10:43	AMY			V8260SL+
MC29882-2 Collected: 17-APR-14 11:45 By: DMDH Received: 18-APR-14 By: P93A-ROX-041714						
MC29882-2	SW846 8270D	21-APR-14 18:04	WK	18-APR-14	PA	AB8270SL+
MC29882-2	SW846 8270D BY SIM	21-APR-14 20:33	MR	18-APR-14	PA	B8270SIMSL
MC29882-2	SW846 8011	22-APR-14 01:46	SZ	18-APR-14	MT	V8011SL
MC29882-2	SW846 8260C	01-MAY-14 11:09	AMY			V8260SL+
MC29882-3 Collected: 17-APR-14 15:05 By: DMDH Received: 18-APR-14 By: P93B-ROX-041714						
MC29882-3	SW846 8270D	21-APR-14 18:29	WK	18-APR-14	PA	AB8270SL+
MC29882-3	SW846 8270D BY SIM	21-APR-14 20:57	MR	18-APR-14	PA	B8270SIMSL
MC29882-3	SW846 8011	22-APR-14 02:14	SZ	18-APR-14	MT	V8011SL
MC29882-3	SW846 8260C	01-MAY-14 11:35	AMY			V8260SL+
MC29882-4 Collected: 17-APR-14 15:05 By: DMDH Received: 18-APR-14 By: P93B-ROX-041714-DUP						
MC29882-4	SW846 8270D	21-APR-14 18:53	WK	18-APR-14	PA	AB8270SL+
MC29882-4	SW846 8270D BY SIM	21-APR-14 21:21	MR	18-APR-14	PA	B8270SIMSL
MC29882-4	SW846 8011	22-APR-14 03:11	SZ	18-APR-14	MT	V8011SL
MC29882-4	SW846 8260C	01-MAY-14 12:02	AMY			V8260SL+
MC29882-5 Collected: 17-APR-14 00:00 By: DMDH Received: 18-APR-14 By: TB-ROX-041714-HCL						
MC29882-5	SW846 8260C	30-APR-14 11:00	AMY			V8260SL+
MC29882-6 Collected: 17-APR-14 00:00 By: DMDH Received: 18-APR-14 By: TB-ROX-041714-ST						

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC29882

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL



Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC29882-6	SW846 8011	22-APR-14 03:39	SZ	18-APR-14	MT	V8011SL

Accutest Internal Chain of Custody

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Received: 04/18/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29882-1.1	Walk In Ref #22	Michael DiBuono	04/19/14 15:26	Retrieve from Storage
MC29882-1.3	VOC Ref #1	Amy Min Yang	04/30/14 09:07	Retrieve from Storage
MC29882-1.3	Amy Min Yang	GCMSV	04/30/14 09:07	Load on Instrument
MC29882-1.3	GCMSV	Amy Min Yang	05/02/14 15:43	Unload from Instrument
MC29882-1.3	Amy Min Yang	VOC Ref #1	05/02/14 15:44	Return to Storage
MC29882-1.4	VOC Ref #1	Amy Min Yang	05/01/14 09:20	Retrieve from Storage
MC29882-1.4	Amy Min Yang	GCMSV	05/01/14 09:20	Load on Instrument
MC29882-1.4	GCMSV	Amy Min Yang	05/02/14 15:43	Unload from Instrument
MC29882-1.4	Amy Min Yang	VOC Ref #1	05/02/14 15:44	Return to Storage
MC29882-1.5	VOC Ref #1	Marc Tahtamoni	04/18/14 18:53	Retrieve from Storage
MC29882-2.2	Walk In Ref #22	Thomas Abruzzise	04/18/14 19:10	Retrieve from Storage
MC29882-2.2	Thomas Abruzzise		04/30/14 21:28	Depleted
MC29882-2.3	VOC Ref #1	Amy Min Yang	05/01/14 09:20	Retrieve from Storage
MC29882-2.3	Amy Min Yang	GCMSV	05/01/14 09:20	Load on Instrument
MC29882-2.3	GCMSV	Amy Min Yang	05/02/14 15:43	Unload from Instrument
MC29882-2.3	Amy Min Yang	VOC Ref #1	05/02/14 15:44	Return to Storage
MC29882-2.4	VOC Ref #1	Amy Min Yang	04/30/14 09:07	Retrieve from Storage
MC29882-2.4	Amy Min Yang	GCMSV	04/30/14 09:07	Load on Instrument
MC29882-2.4	GCMSV	Amy Min Yang	05/02/14 15:43	Unload from Instrument
MC29882-2.4	Amy Min Yang	VOC Ref #1	05/02/14 15:44	Return to Storage
MC29882-2.6	VOC Ref #1	Marc Tahtamoni	04/18/14 18:53	Retrieve from Storage
MC29882-3.1	Walk In Ref #22	Thomas Abruzzise	04/18/14 19:10	Retrieve from Storage
MC29882-3.1	Thomas Abruzzise		04/30/14 21:28	Depleted
MC29882-3.3	VOC Ref #1	Amy Min Yang	05/01/14 09:20	Retrieve from Storage
MC29882-3.3	Amy Min Yang	GCMSV	05/01/14 09:20	Load on Instrument
MC29882-3.3	GCMSV	Amy Min Yang	05/02/14 15:43	Unload from Instrument
MC29882-3.3	Amy Min Yang	VOC Ref #1	05/02/14 15:44	Return to Storage
MC29882-3.4	VOC Ref #1	Amy Min Yang	04/30/14 09:07	Retrieve from Storage
MC29882-3.4	Amy Min Yang	GCMSV	04/30/14 09:07	Load on Instrument
MC29882-3.4	GCMSV	Amy Min Yang	05/02/14 15:43	Unload from Instrument
MC29882-3.4	Amy Min Yang	VOC Ref #1	05/02/14 15:44	Return to Storage
MC29882-3.6	VOC Ref #1	Marc Tahtamoni	04/18/14 18:53	Retrieve from Storage

5.3

Accutest Internal Chain of Custody

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Received: 04/18/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29882-4.1	Walk In Ref #22	Thomas Abruzzise	04/18/14 19:10	Retrieve from Storage
MC29882-4.1	Thomas Abruzzise		04/30/14 21:28	Depleted
MC29882-4.3	VOC Ref #1	Amy Min Yang	04/30/14 09:07	Retrieve from Storage
MC29882-4.3	Amy Min Yang	GCMSV	04/30/14 09:07	Load on Instrument
MC29882-4.3	GCMSV	Amy Min Yang	05/02/14 15:43	Unload from Instrument
MC29882-4.3	Amy Min Yang	VOC Ref #1	05/02/14 15:44	Return to Storage
MC29882-4.4	VOC Ref #1	Amy Min Yang	05/01/14 09:20	Retrieve from Storage
MC29882-4.4	Amy Min Yang	GCMSV	05/01/14 09:20	Load on Instrument
MC29882-4.4	GCMSV	Amy Min Yang	05/02/14 15:43	Unload from Instrument
MC29882-4.4	Amy Min Yang	VOC Ref #1	05/02/14 15:44	Return to Storage
MC29882-4.5	VOC Ref #1	Marc Tahtamoni	04/18/14 18:53	Retrieve from Storage
MC29882-5.1	VOC Ref #1	Amy Min Yang	04/30/14 09:07	Retrieve from Storage
MC29882-5.1	Amy Min Yang	GCMSV	04/30/14 09:07	Load on Instrument
MC29882-5.1	GCMSV	Amy Min Yang	05/02/14 15:43	Unload from Instrument
MC29882-5.1	Amy Min Yang	VOC Ref #1	05/02/14 15:44	Return to Storage
MC29882-6.2	VOC Ref #1	Marc Tahtamoni	04/18/14 18:53	Retrieve from Storage

5.3


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: MC29882
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1137-MB	V30451.D	1	04/30/14	AMY	n/a	n/a	MSV1137

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29882-5

6.1.1



CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1137-MB	V30451.D	1	04/30/14	AMY	n/a	n/a	MSV1137

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29882-5

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

6.1.1



Method Blank Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1137-MB	V30451.D	1	04/30/14	AMY	n/a	n/a	MSV1137

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29882-5

6.1.1
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CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	104% 70-130%
2037-26-5	Toluene-D8	93% 70-130%
460-00-4	4-Bromofluorobenzene	89% 70-130%

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

Method Blank Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1139-MB	V30494.D	1	05/01/14	AMY	n/a	n/a	MSV1139

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29882-1, MC29882-2, MC29882-3, MC29882-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromohenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

6.1.2



Method Blank Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1139-MB	V30494.D	1	05/01/14	AMY	n/a	n/a	MSV1139

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29882-1, MC29882-2, MC29882-3, MC29882-4

6.1.2
6

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

Method Blank Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1139-MB	V30494.D	1	05/01/14	AMY	n/a	n/a	MSV1139

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29882-1, MC29882-2, MC29882-3, MC29882-4

6.1.2



CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	92%	70-130%
2037-26-5	Toluene-D8	87%	70-130%
460-00-4	4-Bromofluorobenzene	91%	70-130%

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

Blank Spike Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1137-BS	V30448.D	1	04/30/14	AMY	n/a	n/a	MSV1137

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29882-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	61.1	122	70-130
107-02-8	Acrolein	250	256	102	70-130
107-13-1	Acrylonitrile	50	49.2	98	70-130
71-43-2	Benzene	50	50.1	100	70-130
108-86-1	Bromobenzene	50	51.2	102	70-130
74-97-5	Bromochloromethane	50	48.2	96	70-130
75-27-4	Bromodichloromethane	50	49.3	99	70-130
75-25-2	Bromoform	50	40.9	82	70-130
74-83-9	Bromomethane	50	46.0	92	70-130
78-93-3	2-Butanone (MEK)	50	57.4	115	70-130
104-51-8	n-Butylbenzene	50	53.1	106	70-130
135-98-8	sec-Butylbenzene	50	54.0	108	70-130
98-06-6	tert-Butylbenzene	50	50.4	101	70-130
75-15-0	Carbon disulfide	50	46.3	93	70-130
56-23-5	Carbon tetrachloride	50	51.0	102	70-130
108-90-7	Chlorobenzene	50	50.9	102	70-130
75-00-3	Chloroethane	50	54.6	109	70-130
110-75-8	2-Chloroethyl vinyl ether	50	36.2	72	70-130
67-66-3	Chloroform	50	47.9	96	70-130
74-87-3	Chloromethane	50	48.1	96	70-130
95-49-8	o-Chlorotoluene	50	51.5	103	70-130
106-43-4	p-Chlorotoluene	50	53.2	106	70-130
124-48-1	Dibromochloromethane	50	45.1	90	70-130
95-50-1	1,2-Dichlorobenzene	50	48.8	98	70-130
541-73-1	1,3-Dichlorobenzene	50	50.1	100	70-130
106-46-7	1,4-Dichlorobenzene	50	50.4	101	70-130
75-71-8	Dichlorodifluoromethane	50	35.8	72	70-130
75-34-3	1,1-Dichloroethane	50	50.2	100	70-130
107-06-2	1,2-Dichloroethane	50	48.6	97	70-130
75-35-4	1,1-Dichloroethene	50	51.8	104	70-130
156-59-2	cis-1,2-Dichloroethene	50	48.4	97	70-130
156-60-5	trans-1,2-Dichloroethene	50	48.4	97	70-130
78-87-5	1,2-Dichloropropane	50	55.7	111	70-130
142-28-9	1,3-Dichloropropane	50	52.8	106	70-130
594-20-7	2,2-Dichloropropane	50	49.8	100	70-130
563-58-6	1,1-Dichloropropene	50	49.3	99	70-130

* = Outside of Control Limits.

6.2.1
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Blank Spike Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1137-BS	V30448.D	1	04/30/14	AMY	n/a	n/a	MSV1137

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29882-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	47.3	95	70-130
10061-02-6	trans-1,3-Dichloropropene	50	58.9	118	70-130
123-91-1	1,4-Dioxane	250	222	89	70-130
97-63-2	Ethyl methacrylate	50	47.2	94	77-137
100-41-4	Ethylbenzene	50	54.2	108	70-130
87-68-3	Hexachlorobutadiene	50	41.5	83	70-130
591-78-6	2-Hexanone	50	58.3	117	70-130
98-82-8	Isopropylbenzene	50	52.4	105	70-130
99-87-6	p-Isopropyltoluene	50	53.3	107	70-130
1634-04-4	Methyl Tert Butyl Ether	50	45.6	91	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	48.4	97	70-130
74-95-3	Methylene bromide	50	51.6	103	70-130
75-09-2	Methylene chloride	50	49.8	100	70-130
91-20-3	Naphthalene	50	48.4	97	70-130
103-65-1	n-Propylbenzene	50	53.5	107	70-130
100-42-5	Styrene	50	55.8	112	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	52.5	105	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	57.3	115	70-130
127-18-4	Tetrachloroethene	50	50.8	102	70-130
108-88-3	Toluene	50	55.4	111	70-130
87-61-6	1,2,3-Trichlorobenzene	50	50.9	102	70-130
120-82-1	1,2,4-Trichlorobenzene	50	41.4	83	70-130
71-55-6	1,1,1-Trichloroethane	50	50.4	101	70-130
79-00-5	1,1,2-Trichloroethane	50	57.3	115	70-130
79-01-6	Trichloroethene	50	47.8	96	70-130
75-69-4	Trichlorofluoromethane	50	51.3	103	70-130
96-18-4	1,2,3-Trichloropropane	50	54.8	110	70-130
95-63-6	1,2,4-Trimethylbenzene	50	52.6	105	70-130
108-67-8	1,3,5-Trimethylbenzene	50	53.2	106	70-130
108-05-4	Vinyl Acetate	50	48.2	96	70-130
75-01-4	Vinyl chloride	50	50.3	101	70-130
	m,p-Xylene	100	110	110	70-130
95-47-6	o-Xylene	50	53.6	107	70-130
1330-20-7	Xylene (total)	150	163	109	70-130

* = Outside of Control Limits.

6.2.1
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Blank Spike Summary

Job Number: MC29882
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1137-BS	V30448.D	1	04/30/14	AMY	n/a	n/a	MSV1137

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29882-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	85%	70-130%
2037-26-5	Toluene-D8	93%	70-130%
460-00-4	4-Bromofluorobenzene	90%	70-130%

6.2.1



* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1139-BS	V30491.D	1	05/01/14	AMY	n/a	n/a	MSV1139

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29882-1, MC29882-2, MC29882-3, MC29882-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	45.3	91	70-130
107-02-8	Acrolein	250	273	109	70-130
107-13-1	Acrylonitrile	50	48.1	96	70-130
71-43-2	Benzene	50	49.3	99	70-130
108-86-1	Bromobenzene	50	52.7	105	70-130
74-97-5	Bromochloromethane	50	47.3	95	70-130
75-27-4	Bromodichloromethane	50	44.5	89	70-130
75-25-2	Bromoform	50	41.1	82	70-130
74-83-9	Bromomethane	50	44.9	90	70-130
78-93-3	2-Butanone (MEK)	50	46.1	92	70-130
104-51-8	n-Butylbenzene	50	53.5	107	70-130
135-98-8	sec-Butylbenzene	50	55.9	112	70-130
98-06-6	tert-Butylbenzene	50	50.1	100	70-130
75-15-0	Carbon disulfide	50	46.5	93	70-130
56-23-5	Carbon tetrachloride	50	46.1	92	70-130
108-90-7	Chlorobenzene	50	50.4	101	70-130
75-00-3	Chloroethane	50	53.4	107	70-130
110-75-8	2-Chloroethyl vinyl ether	50	42.1	84	70-130
67-66-3	Chloroform	50	43.9	88	70-130
74-87-3	Chloromethane	50	47.1	94	70-130
95-49-8	o-Chlorotoluene	50	51.1	102	70-130
106-43-4	p-Chlorotoluene	50	50.8	102	70-130
124-48-1	Dibromochloromethane	50	44.8	90	70-130
95-50-1	1,2-Dichlorobenzene	50	49.7	99	70-130
541-73-1	1,3-Dichlorobenzene	50	50.5	101	70-130
106-46-7	1,4-Dichlorobenzene	50	50.4	101	70-130
75-71-8	Dichlorodifluoromethane	50	46.1	92	70-130
75-34-3	1,1-Dichloroethane	50	47.9	96	70-130
107-06-2	1,2-Dichloroethane	50	41.7	83	70-130
75-35-4	1,1-Dichloroethene	50	51.6	103	70-130
156-59-2	cis-1,2-Dichloroethene	50	48.3	97	70-130
156-60-5	trans-1,2-Dichloroethene	50	47.7	95	70-130
78-87-5	1,2-Dichloropropane	50	53.6	107	70-130
142-28-9	1,3-Dichloropropane	50	52.9	106	70-130
594-20-7	2,2-Dichloropropane	50	48.0	96	70-130
563-58-6	1,1-Dichloropropene	50	46.8	94	70-130

* = Outside of Control Limits.

6.2.2
 6

Blank Spike Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1139-BS	V30491.D	I	05/01/14	AMY	n/a	n/a	MSV1139

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29882-1, MC29882-2, MC29882-3, MC29882-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	46.5	93	70-130
10061-02-6	trans-1,3-Dichloropropene	50	57.0	114	70-130
123-91-1	1,4-Dioxane	250	217	87	70-130
97-63-2	Ethyl methacrylate	50	48.1	96	77-137
100-41-4	Ethylbenzene	50	52.9	106	70-130
87-68-3	Hexachlorobutadiene	50	45.0	90	70-130
591-78-6	2-Hexanone	50	48.2	96	70-130
98-82-8	Isopropylbenzene	50	54.4	109	70-130
99-87-6	p-Isopropyltoluene	50	54.4	109	70-130
1634-04-4	Methyl Tert Butyl Ether	50	47.4	95	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	49.4	99	70-130
74-95-3	Methylene bromide	50	47.6	95	70-130
75-09-2	Methylene chloride	50	48.7	97	70-130
91-20-3	Naphthalene	50	56.6	113	70-130
103-65-1	n-Propylbenzene	50	53.5	107	70-130
100-42-5	Styrene	50	55.0	110	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	51.7	103	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	60.3	121	70-130
127-18-4	Tetrachloroethene	50	51.8	104	70-130
108-88-3	Toluene	50	52.8	106	70-130
87-61-6	1,2,3-Trichlorobenzene	50	59.4	119	70-130
120-82-1	1,2,4-Trichlorobenzene	50	47.6	95	70-130
71-55-6	1,1,1-Trichloroethane	50	46.8	94	70-130
79-00-5	1,1,2-Trichloroethane	50	53.7	107	70-130
79-01-6	Trichloroethene	50	45.4	91	70-130
75-69-4	Trichlorofluoromethane	50	45.8	92	70-130
96-18-4	1,2,3-Trichloropropane	50	52.3	105	70-130
95-63-6	1,2,4-Trimethylbenzene	50	52.7	105	70-130
108-67-8	1,3,5-Trimethylbenzene	50	53.7	107	70-130
108-05-4	Vinyl Acetate	50	46.0	92	70-130
75-01-4	Vinyl chloride	50	51.8	104	70-130
	m,p-Xylene	100	109	109	70-130
95-47-6	o-Xylene	50	54.2	108	70-130
1330-20-7	Xylene (total)	150	163	109	70-130

* = Outside of Control Limits.

6.2.2


Blank Spike Summary

Job Number: MC29882
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1139-BS	V30491.D	1	05/01/14	AMY	n/a	n/a	MSV1139

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29882-1, MC29882-2, MC29882-3, MC29882-4

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	81%	70-130%
2037-26-5	Toluene-D8	90%	70-130%
460-00-4	4-Bromofluorobenzene	92%	70-130%

* = Outside of Control Limits.



Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29904-2MS	V30472.D	5	04/30/14	AMY	n/a	n/a	MSV1137
MC29904-2MSD	V30473.D	5	04/30/14	AMY	n/a	n/a	MSV1137
MC29904-2	V30459.D	1	04/30/14	AMY	n/a	n/a	MSV1137

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29882-5

CAS No.	Compound	MC29904-2 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	250	189	76	250	187	75	1	70-130/30
107-02-8	Acrolein	ND	1250	1230	98	1250	1160	93	6	70-130/30
107-13-1	Acrylonitrile	ND	250	277	111	250	265	106	4	70-130/30
71-43-2	Benzene	2.5	250	278	110	250	259	103	7	70-130/30
108-86-1	Bromobenzene	ND	250	288	115	250	274	110	5	70-130/30
74-97-5	Bromochloromethane	ND	250	265	106	250	247	99	7	70-130/30
75-27-4	Bromodichloromethane	ND	250	246	98	250	232	93	6	70-130/30
75-25-2	Bromoform	ND	250	213	85	250	212	85	0	70-130/30
74-83-9	Bromomethane	ND	250	209	84	250	191	76	9	70-130/30
78-93-3	2-Butanone (MEK)	ND	250	213	85	250	203	81	5	70-130/30
104-51-8	n-Butylbenzene	ND	250	295	118	250	280	112	5	70-130/30
135-98-8	sec-Butylbenzene	ND	250	309	124	250	289	116	7	70-130/30
98-06-6	tert-Butylbenzene	ND	250	282	113	250	263	105	7	70-130/30
75-15-0	Carbon disulfide	ND	250	262	105	250	242	97	8	70-130/30
56-23-5	Carbon tetrachloride	ND	250	257	103	250	238	95	8	70-130/30
108-90-7	Chlorobenzene	ND	250	275	110	250	263	105	4	70-130/30
75-00-3	Chloroethane	ND	250	264	106	250	240	96	10	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND	250	ND	0* a	250	ND	0* a	nc	70-130/30
67-66-3	Chloroform	ND	250	248	99	250	229	92	8	70-130/30
74-87-3	Chloromethane	ND	250	221	88	250	201	80	9	70-130/30
95-49-8	o-Chlorotoluene	ND	250	280	112	250	265	106	6	70-130/30
106-43-4	p-Chlorotoluene	ND	250	281	112	250	264	106	6	70-130/30
124-48-1	Dibromochloromethane	ND	250	237	95	250	231	92	3	70-130/30
95-50-1	1,2-Dichlorobenzene	ND	250	254	102	250	252	101	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND	250	269	108	250	259	104	4	70-130/30
106-46-7	1,4-Dichlorobenzene	ND	250	268	107	250	258	103	4	70-130/30
75-71-8	Dichlorodifluoromethane	ND	250	157	63* a	250	139	56* a	12	70-130/30
75-34-3	1,1-Dichloroethane	ND	250	271	108	250	249	100	8	70-130/30
107-06-2	1,2-Dichloroethane	ND	250	232	93	250	217	87	7	70-130/30
75-35-4	1,1-Dichloroethene	ND	250	294	118	250	270	108	9	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND	250	276	110	250	254	102	8	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	250	272	109	250	250	100	8	70-130/30
78-87-5	1,2-Dichloropropane	ND	250	298	119	250	284	114	5	70-130/30
142-28-9	1,3-Dichloropropane	ND	250	283	113	250	275	110	3	70-130/30
594-20-7	2,2-Dichloropropane	ND	250	235	94	250	216	86	8	70-130/30
563-58-6	1,1-Dichloropropene	ND	250	268	107	250	249	100	7	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29882

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29904-2MS	V30472.D	5	04/30/14	AMY	n/a	n/a	MSV1137
MC29904-2MSD	V30473.D	5	04/30/14	AMY	n/a	n/a	MSV1137
MC29904-2	V30459.D	1	04/30/14	AMY	n/a	n/a	MSV1137

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29882-5

6.3.1
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CAS No.	Compound	MC29904-2 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND	250	237	95	250	228	91	4	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND	250	299	120	250	289	116	3	70-130/30
123-91-1	1,4-Dioxane	ND	1250	965	77	1250	999	80	3	70-130/30
97-63-2	Ethyl methacrylate	ND	250	264	106	250	256	102	3	72-139/30
100-41-4	Ethylbenzene	ND	250	289	116	250	275	110	5	70-130/30
87-68-3	Hexachlorobutadiene	ND	250	245	98	250	245	98	0	70-130/30
591-78-6	2-Hexanone	ND	250	230	92	250	227	91	1	70-130/30
98-82-8	Isopropylbenzene	ND	250	300	120	250	282	113	6	70-130/30
99-87-6	p-Isopropyltoluene	ND	250	297	119	250	280	112	6	70-130/30
1634-04-4	Methyl Tert Butyl Ether	46.3	250	299	101	250	283	95	5	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	250	264	106	250	259	104	2	70-130/30
74-95-3	Methylene bromide	ND	250	263	105	250	250	100	5	70-130/30
75-09-2	Methylene chloride	ND	250	272	109	250	252	101	8	70-130/30
91-20-3	Naphthalene	ND	250	186	74	250	278	111	40* b	70-130/30
103-65-1	n-Propylbenzene	ND	250	297	119	250	275	110	8	70-130/30
100-42-5	Styrene	ND	250	295	118	250	282	113	5	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND	250	281	112	250	265	106	6	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	318	127	250	313	125	2	70-130/30
127-18-4	Tetrachloroethene	ND	250	280	112	250	267	107	5	70-130/30
108-88-3	Toluene	ND	250	293	117	250	277	111	6	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND	250	186	74	250	271	108	37* b	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND	250	204	82	250	236	94	15	70-130/30
71-55-6	1,1,1-Trichloroethane	ND	250	259	104	250	238	95	8	70-130/30
79-00-5	1,1,2-Trichloroethane	ND	250	296	118	250	283	113	4	70-130/30
79-01-6	Trichloroethene	ND	250	255	102	250	242	97	5	70-130/30
75-69-4	Trichlorofluoromethane	ND	250	224	90	250	202	81	10	70-130/30
96-18-4	1,2,3-Trichloropropane	ND	250	340	136* a	250	331	132* a	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND	250	286	114	250	270	108	6	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND	250	294	118	250	276	110	6	70-130/30
108-05-4	Vinyl Acetate	ND	250	256	102	250	240	96	6	70-130/30
75-01-4	Vinyl chloride	ND	250	241	96	250	218	87	10	70-130/30
	m,p-Xylene	ND	500	585	117	500	561	112	4	70-130/30
95-47-6	o-Xylene	ND	250	293	117	250	282	113	4	70-130/30
1330-20-7	Xylene (total)	ND	750	879	117	750	842	112	4	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29904-2MS	V30472.D	5	04/30/14	AMY	n/a	n/a	MSV1137
MC29904-2MSD	V30473.D	5	04/30/14	AMY	n/a	n/a	MSV1137
MC29904-2	V30459.D	1	04/30/14	AMY	n/a	n/a	MSV1137

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29882-5

CAS No.	Surrogate Recoveries	MS	MSD	MC29904-2	Limits
1868-53-7	Dibromofluoromethane	82%	80%	109%	70-130%
2037-26-5	Toluene-D8	90%	91%	95%	70-130%
460-00-4	4-Bromofluorobenzene	92%	90%	92%	70-130%

- (a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
- (b) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29882-1MS	V30513.D	5	05/01/14	AMY	n/a	n/a	MSV1139
MC29882-1MSD	V30514.D	5	05/01/14	AMY	n/a	n/a	MSV1139
MC29882-1	V30496.D	1	05/01/14	AMY	n/a	n/a	MSV1139

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29882-1, MC29882-2, MC29882-3, MC29882-4

CAS No.	Compound	MC29882-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	250	149	60* a	250	144	58* a	3	70-130/30
107-02-8	Acrolein	ND	1250	1190	95	1250	1120	90	6	70-130/30
107-13-1	Acrylonitrile	ND	250	247	99	250	224	90	10	70-130/30
71-43-2	Benzene	ND	250	250	100	250	234	94	7	70-130/30
108-86-1	Bromobenzene	ND	250	254	102	250	239	96	6	70-130/30
74-97-5	Bromochloromethane	ND	250	243	97	250	223	89	9	70-130/30
75-27-4	Bromodichloromethane	ND	250	257	103	250	233	93	10	70-130/30
75-25-2	Bromoform	ND	250	216	86	250	200	80	8	70-130/30
74-83-9	Bromomethane	ND	250	253	101	250	235	94	7	70-130/30
78-93-3	2-Butanone (MEK)	ND	250	206	82	250	188	75	9	70-130/30
104-51-8	n-Butylbenzene	ND	250	265	106	250	252	101	5	70-130/30
135-98-8	sec-Butylbenzene	ND	250	274	110	250	259	104	6	70-130/30
98-06-6	tert-Butylbenzene	ND	250	260	104	250	248	99	5	70-130/30
75-15-0	Carbon disulfide	ND	250	229	92	250	213	85	7	70-130/30
56-23-5	Carbon tetrachloride	ND	250	273	109	250	250	100	9	70-130/30
108-90-7	Chlorobenzene	ND	250	252	101	250	239	96	5	70-130/30
75-00-3	Chloroethane	ND	250	306	122	250	277	111	10	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND	250	ND	0* a	250	ND	0* a	nc	70-130/30
67-66-3	Chloroform	ND	250	242	97	250	221	88	9	70-130/30
74-87-3	Chloromethane	ND	250	259	104	250	243	97	6	70-130/30
95-49-8	o-Chlorotoluene	ND	250	255	102	250	242	97	5	70-130/30
106-43-4	p-Chlorotoluene	ND	250	263	105	250	248	99	6	70-130/30
124-48-1	Dibromochloromethane	ND	250	232	93	250	218	87	6	70-130/30
95-50-1	1,2-Dichlorobenzene	ND	250	237	95	250	229	92	3	70-130/30
541-73-1	1,3-Dichlorobenzene	ND	250	246	98	250	235	94	5	70-130/30
106-46-7	1,4-Dichlorobenzene	ND	250	249	100	250	236	94	5	70-130/30
75-71-8	Dichlorodifluoromethane	ND	250	258	103	250	242	97	6	70-130/30
75-34-3	1,1-Dichloroethane	ND	250	246	98	250	230	92	7	70-130/30
107-06-2	1,2-Dichloroethane	ND	250	253	101	250	232	93	9	70-130/30
75-35-4	1,1-Dichloroethene	ND	250	251	100	250	235	94	7	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND	250	239	96	250	222	89	7	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	250	239	96	250	223	89	7	70-130/30
78-87-5	1,2-Dichloropropane	ND	250	277	111	250	256	102	8	70-130/30
142-28-9	1,3-Dichloropropane	ND	250	263	105	250	246	98	7	70-130/30
594-20-7	2,2-Dichloropropane	ND	250	245	98	250	223	89	9	70-130/30
563-58-6	1,1-Dichloropropene	ND	250	254	102	250	235	94	8	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29882-1MS	V30513.D	5	05/01/14	AMY	n/a	n/a	MSV1139
MC29882-1MSD	V30514.D	5	05/01/14	AMY	n/a	n/a	MSV1139
MC29882-1	V30496.D	1	05/01/14	AMY	n/a	n/a	MSV1139

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29882-1, MC29882-2, MC29882-3, MC29882-4

CAS No.	Compound	MC29882-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND	250	215	86	250	198	79	8	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND	250	291	116	250	268	107	8	70-130/30
123-91-1	1,4-Dioxane	ND	1250	1100	88	1250	1000	80	10	70-130/30
97-63-2	Ethyl methacrylate	ND	250	236	94	250	216	86	9	72-139/30
100-41-4	Ethylbenzene	ND	250	268	107	250	252	101	6	70-130/30
87-68-3	Hexachlorobutadiene	ND	250	206	82	250	204	82	1	70-130/30
591-78-6	2-Hexanone	ND	250	199	80	250	191	76	4	70-130/30
98-82-8	Isopropylbenzene	ND	250	262	105	250	249	100	5	70-130/30
99-87-6	p-Isopropyltoluene	ND	250	269	108	250	253	101	6	70-130/30
1634-04-4	Methyl Tert Butyl Ether	4.3	250	227	89	250	213	83	6	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	250	234	94	250	217	87	8	70-130/30
74-95-3	Methylene bromide	ND	250	264	106	250	243	97	8	70-130/30
75-09-2	Methylene chloride	ND	250	239	96	250	224	90	6	70-130/30
91-20-3	Naphthalene	ND	250	143	57* a	250	218	87	42* b	70-130/30
103-65-1	n-Propylbenzene	ND	250	264	106	250	249	100	6	70-130/30
100-42-5	Styrene	ND	250	274	110	250	257	103	6	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND	250	269	108	250	258	103	4	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	289	116	250	277	111	4	70-130/30
127-18-4	Tetrachloroethene	ND	250	258	103	250	245	98	5	70-130/30
108-88-3	Toluene	ND	250	274	110	250	255	102	7	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND	250	162	65* a	250	224	90	32* b	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND	250	169	68* a	250	195	78	14	70-130/30
71-55-6	1,1,1-Trichloroethane	ND	250	257	103	250	237	95	8	70-130/30
79-00-5	1,1,2-Trichloroethane	ND	250	286	114	250	262	105	9	70-130/30
79-01-6	Trichloroethene	ND	250	242	97	250	225	90	7	70-130/30
75-69-4	Trichlorofluoromethane	ND	250	311	124	250	277	111	12	70-130/30
96-18-4	1,2,3-Trichloropropane	ND	250	336	134* a	250	316	126	6	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND	250	263	105	250	248	99	6	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND	250	265	106	250	251	100	5	70-130/30
108-05-4	Vinyl Acetate	ND	250	235	94	250	220	88	7	70-130/30
75-01-4	Vinyl chloride	ND	250	283	113	250	265	106	7	70-130/30
	m,p-Xylene	ND	500	539	108	500	510	102	6	70-130/30
95-47-6	o-Xylene	ND	250	266	106	250	251	100	6	70-130/30
1330-20-7	Xylene (total)	ND	750	805	107	750	760	101	6	70-130/30

* = Outside of Control Limits.



Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC29882-1MS	V30513.D	5	05/01/14	AMY	n/a	n/a	MSV1139
MC29882-1MSD	V30514.D	5	05/01/14	AMY	n/a	n/a	MSV1139
MC29882-1	V30496.D	1	05/01/14	AMY	n/a	n/a	MSV1139

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29882-1, MC29882-2, MC29882-3, MC29882-4

6.3.2
6

CAS No.	Surrogate Recoveries	MS	MSD	MC29882-1	Limits
1868-53-7	Dibromofluoromethane	86%	84%	98%	70-130%
2037-26-5	Toluene-D8	93%	90%	88%	70-130%
460-00-4	4-Bromofluorobenzene	91%	90%	92%	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: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSV1137-CC1058	Injection Date:	04/30/14
Lab File ID:	V30448.D	Injection Time:	08:24
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
	AREA		AREA		AREA		AREA		AREA	
Check Std	323603	6.51	458261	7.70	225342	11.05	236581	13.27	45932	3.47
Upper Limit ^a	647206	7.01	916522	8.20	450684	11.55	473162	13.77	91864	3.97
Lower Limit ^b	161802	6.01	229131	7.20	112671	10.55	118291	12.77	22966	2.97

Lab	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
Sample ID	AREA		AREA		AREA		AREA		AREA	
MSV1137-BS	323603	6.51	458261	7.70	225342	11.05	236581	13.27	45932	3.47
MSV1137-MB	203264	6.52	318418	7.71	167183	11.06	152396	13.27	34979	3.47
ZZZZZZ	197485	6.51	313848	7.70	164701	11.06	149126	13.27	33222	3.46
ZZZZZZ	183436	6.51	289201	7.70	153665	11.06	139934	13.27	33220	3.46
MC29882-5	195035	6.52	308728	7.71	164755	11.06	148204	13.27	32787	3.47
ZZZZZZ	271796	6.52	354198	7.71	177634	11.06	154160	13.27	48662	3.48
ZZZZZZ	199586	6.52	340744	7.71	165718	11.06	147960	13.27	33337	3.47
ZZZZZZ	188814	6.52	325323	7.71	158240	11.06	144553	13.27	32209	3.47
ZZZZZZ	194279	6.52	329861	7.71	164747	11.06	146674	13.27	34316	3.47
MC29904-2	188172	6.51	291096	7.70	160175	11.06	140384	13.27	33501	3.46
ZZZZZZ	272446	6.52	362089	7.71	196177	11.06	194669	13.27	41691	3.47
ZZZZZZ	257664	6.52	391012	7.71	190881	11.06	198815	13.27	43696	3.47
ZZZZZZ	248271	6.52	352123	7.71	168120	11.06	181550	13.27	67553	3.48
ZZZZZZ	263118	6.52	391258	7.71	186410	11.06	163641	13.27	44521	3.47
ZZZZZZ	207468	6.52	343567	7.71	169440	11.06	159158	13.28	39019	3.47
ZZZZZZ	281584	6.52	374095	7.71	184949	11.06	187777	13.27	64591	3.48
ZZZZZZ	292025	6.52	389699	7.71	192712	11.06	194478	13.27	59087	3.48
ZZZZZZ	303658	6.52	428230	7.71	205632	11.06	204528	13.27	56912	3.47
ZZZZZZ	444548	6.52	615604	7.71	290641	11.06	270749	13.28	207281 ^c	3.48
ZZZZZZ	339191	6.53	520392	7.71	241917	11.06	230218	13.28	54990	3.48
ZZZZZZ	375524	6.52	507310	7.71	245317	11.06	238511	13.28	63105	3.48
MC29904-2MS	395690	6.53	566626	7.72	265884	11.06	265101	13.28	59093	3.48
MC29904-2MSD	425589	6.53	608809	7.72	281998	11.06	285473	13.28	65375	3.48

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 Internal Standard Area Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSV1139-CC1058	Injection Date:	05/01/14
Lab File ID:	V30491.D	Injection Time:	08:32
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
	AREA		AREA		AREA		AREA		AREA	
Check Std	391848	6.56	560468	7.74	258265	11.08	264559	13.29	63814	3.50
Upper Limit ^a	783696	7.06	1120936	8.24	516530	11.58	529118	13.79	127628	4.00
Lower Limit ^b	195924	6.06	280234	7.24	129133	10.58	132280	12.79	31907	3.00

Lab	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
Sample ID	AREA		AREA		AREA		AREA		AREA	
MSV1139-BS	391848	6.56	560468	7.74	258265	11.08	264559	13.29	63814	3.50
MSV1139-MB	293846	6.57	441329	7.75	208524	11.09	193276	13.30	48373	3.51
MC29882-1	239762	6.57	370547	7.75	178567	11.09	165225	13.30	42246	3.51
MC29882-2	218631	6.57	352665	7.75	166211	11.09	155520	13.30	36429	3.51
MC29882-3	220301	6.57	354283	7.75	168140	11.09	155833	13.30	37284	3.51
MC29882-4	219227	6.57	357201	7.75	167825	11.09	155044	13.30	37340	3.51
ZZZZZZ	210132	6.57	347058	7.75	167583	11.09	168477	13.30	40507	3.51
ZZZZZZ	205277	6.57	335645	7.75	160518	11.09	160872	13.30	40354	3.51
ZZZZZZ	263123	6.57	375389	7.75	174478	11.09	174923	13.30	54774	3.51
ZZZZZZ	302167	6.57	418871	7.75	196502	11.09	193852	13.30	57410	3.52
ZZZZZZ	320501	6.57	442289	7.75	199385	11.09	203450	13.30	63113	3.51
ZZZZZZ	362896	6.57	517192	7.75	239346	11.09	228581	13.30	120834	3.53
ZZZZZZ	269079	6.57	401608	7.76	191563	11.09	179548	13.30	47201	3.51
ZZZZZZ	255909	6.58	391632	7.76	186295	11.09	174673	13.30	45384	3.52
ZZZZZZ	227328	6.58	345971	7.76	169076	11.09	158226	13.30	41788	3.52
ZZZZZZ	221449	6.58	338965	7.76	172619	11.09	161004	13.30	41321	3.52
ZZZZZZ	239654	6.58	362438	7.76	169610	11.09	158097	13.30	42840	3.52
MC29882-1MS	280212	6.58	393317	7.76	191638	11.09	201834	13.30	43891	3.52
MC29882-1MSD	316100	6.58	439388	7.76	206162	11.09	217180	13.30	47949	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.

6.4.2
6

Volatile Surrogate Recovery Summary

Job Number: MC29882

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29882-1	V30496.D	98	88	92
MC29882-2	V30497.D	99	86	88
MC29882-3	V30498.D	103	85	88
MC29882-4	V30499.D	103	86	90
MC29882-5	V30454.D	108	94	90
MC29882-1MS	V30513.D	86	93	91
MC29882-1MSD	V30514.D	84	90	90
MC29904-2MS	V30472.D	82	90	92
MC29904-2MSD	V30473.D	80	91	90
MSV1137-BS	V30448.D	85	93	90
MSV1137-MB	V30451.D	104	93	89
MSV1139-BS	V30491.D	81	90	92
MSV1139-MB	V30494.D	92	87	91

Surrogate Compounds Recovery Limits

S1 = Dibromofluoromethane 70-130%
 S2 = Toluene-D8 70-130%
 S3 = 4-Bromofluorobenzene 70-130%

6.5.1


GC/MS Semi-volatiles

QC Data Summaries

7

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: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37657-MB	R38279.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29882-2, MC29882-3, MC29882-4

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	0.68	5.0	0.17	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

7.1.1
7

Method Blank Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37657-MB	R38279.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29882-2, MC29882-3, MC29882-4

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries	Limits	
367-12-4	2-Fluorophenol	42%	15-110%
4165-62-2	Phenol-d5	28%	15-110%
118-79-6	2,4,6-Tribromophenol	73%	15-110%
4165-60-0	Nitrobenzene-d5	72%	30-130%
321-60-8	2-Fluorobiphenyl	74%	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	

7.1.1
7

Method Blank Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37681-MB	F72497.D	1	04/22/14	WK	04/19/14	OP37681	MSF3224

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29882-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	0.37	5.0	0.17	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

7.1.2
7

Method Blank Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37681-MB	F72497.D	1	04/22/14	WK	04/19/14	OP37681	MSF3224

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29882-1

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	29% 15-110%
4165-62-2	Phenol-d5	19% 15-110%
118-79-6	2,4,6-Tribromophenol	56% 15-110%
4165-60-0	Nitrobenzene-d5	51% 30-130%
321-60-8	2-Fluorobiphenyl	54% 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	

7.1.2
7

Method Blank Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37658-MB	I88679.D	1	04/21/14	MR	04/18/14	OP37658	MSI3303

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29882-2, MC29882-3, MC29882-4

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	ng/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	0.040	0.050	0.013	ug/l	J
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries	Limits	
367-12-4	2-Fluorophenol	35%	15-110%
4165-62-2	Phenol-d5	24%	15-110%
118-79-6	2,4,6-Tribromophenol	78%	15-110%
4165-60-0	Nitrobenzene-d5	72%	30-130%
321-60-8	2-Fluorobiphenyl	66%	30-130%
1718-51-0	Terphenyl-d14	93%	30-130%

7.1.3
7

Method Blank Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37682-MB	I88723.D	1	04/23/14	MR	04/19/14	OP37682	MSI3305

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29882-1

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	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	25%	15-110%
4165-62-2	Pheol-d5	17%	15-110%
118-79-6	2,4,6-Tribromophenol	52%	15-110%
4165-60-0	Nitrobenzene-d5	50%	30-130%
321-60-8	2-Fluorobiphenyl	48%	30-130%
1718-51-0	Terphenyl-d14	89%	30-130%

7.1.4
7

Blank Spike Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37657-BS	R38280.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29882-2, MC29882-3, MC29882-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	10.9	22* a	30-130
95-57-8	2-Chlorophenol	50	38.9	78	30-130
59-50-7	4-Chloro-3-methyl phenol	50	37.0	74	30-130
120-83-2	2,4-Dichlorophenol	50	40.1	80	30-130
105-67-9	2,4-Dimethylphenol	50	32.5	65	30-130
51-28-5	2,4-Dinitrophenol	50	27.8	56	30-130
534-52-1	4,6-Dinitro-o-cresol	50	38.5	77	30-130
95-48-7	2-Methylphenol	50	27.6	55	30-130
	3&4-Methylphenol	100	53.3	53	30-130
88-75-5	2-Nitrophenol	50	40.6	81	30-130
100-02-7	4-Nitrophenol	50	15.8	32	30-130
87-86-5	Pentachlorophenol	50	40.6	81	30-130
108-95-2	Phenol	50	17.6	35	30-130
95-95-4	2,4,5-Trichlorophenol	50	43.4	87	30-130
88-06-2	2,4,6-Trichlorophenol	50	44.1	88	30-130
62-53-3	Aniline	50	32.3	65	40-140
101-55-3	4-Bromophenyl phenyl ether	50	46.6	93	40-140
85-68-7	Butyl benzyl phthalate	50	45.1	90	40-140
100-51-6	Benzyl Alcohol	50	29.4	59	40-140
91-58-7	2-Chloronaphthalene	50	41.1	82	40-140
106-47-8	4-Chloroaniline	50	35.5	71	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	38.2	76	40-140
111-44-4	bis(2-Chloroethyl)ether	50	42.3	85	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	44.6	89	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	43.1	86	40-140
122-66-7	1,2-Diphenylhydrazine	50	39.9	80	40-140
121-14-2	2,4-Dinitrotoluene	50	45.7	91	40-140
606-20-2	2,6-Dinitrotoluene	50	44.0	88	40-140
91-94-1	3,3'-Dichlorobenzidine	50	36.1	72	40-140
132-64-9	Dibenzofuran	50	39.9	80	40-140
84-74-2	Di-n-butyl phthalate	50	43.5	87	40-140
117-84-0	Di-n-octyl phthalate	50	47.3	95	40-140
84-66-2	Diethyl phthalate	50	44.0	88	40-140
131-11-3	Dimethyl phthalate	50	44.1	88	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	45.9	92	40-140
118-74-1	Hexachlorobenzene	50	45.0	90	40-140

* = Outside of Control Limits.

7.2.1
7

Blank Spike Summary

Job Number: MC29882

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37657-BS	R38280.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29882-2, MC29882-3, MC29882-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	22.9	46	40-140
67-72-1	Hexachloroethane	50	24.0	48	40-140
78-59-1	Isophorone	50	36.2	72	40-140
88-74-4	2-Nitroaniline	50	43.7	87	40-140
99-09-2	3-Nitroaniline	50	39.6	79	40-140
100-01-6	4-Nitroaniline	50	41.3	83	40-140
98-95-3	Nitrobenzene	50	36.6	73	40-140
62-75-9	n-Nitrosodimethylamine	50	28.7	57	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	36.7	73	40-140
86-30-6	N-Nitrosodiphenylamine	50	40.9	82	40-140
110-86-1	Pyridine	50	27.1	54	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	55%	15-110%
4165-62-2	Phenol-d5	33%	15-110%
118-79-6	2,4,6-Tribromophenol	91%	15-110%
4165-60-0	Nitrobenzene-d5	79%	30-130%
321-60-8	2-Fluorobiphenyl	83%	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: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37681-BS	F72498.D	1	04/22/14	WK	04/19/14	OP37681	MSF3224

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29882-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	8.9	18* a	30-130
95-57-8	2-Chlorophenol	50	35.3	71	30-130
59-50-7	4-Chloro-3-methyl phenol	50	35.5	71	30-130
120-83-2	2,4-Dichlorophenol	50	37.0	74	30-130
105-67-9	2,4-Dimethylphenol	50	33.1	66	30-130
51-28-5	2,4-Dinitrophenol	50	23.3	47	30-130
534-52-1	4,6-Dinitro-o-cresol	50	40.6	81	30-130
95-48-7	2-Methylphenol	50	32.4	65	30-130
	3&4-Methylphenol	100	56.7	57	30-130
88-75-5	2-Nitrophenol	50	39.1	78	30-130
100-02-7	4-Nitrophenol	50	11.8	24* a	30-130
87-86-5	Pentachlorophenol	50	35.9	72	30-130
108-95-2	Phenol	50	13.4	27* a	30-130
95-95-4	2,4,5-Trichlorophenol	50	39.9	80	30-130
88-06-2	2,4,6-Trichlorophenol	50	38.2	76	30-130
62-53-3	Aniline	50	26.3	53	40-140
101-55-3	4-Bromophenyl phenyl ether	50	39.9	80	40-140
85-68-7	Butyl benzyl phthalate	50	44.0	88	40-140
100-51-6	Benzyl Alcohol	50	25.0	50	40-140
91-58-7	2-Chloronaphthalene	50	38.2	76	40-140
106-47-8	4-Chloroaniline	50	31.7	63	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	38.3	77	40-140
111-44-4	bis(2-Chloroethyl)ether	50	38.1	76	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	46.5	93	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	37.2	74	40-140
122-66-7	1,2-Diphenylhydrazine	50	39.7	79	40-140
121-14-2	2,4-Dinitrotoluene	50	40.3	81	40-140
606-20-2	2,6-Dinitrotoluene	50	39.4	79	40-140
91-94-1	3,3'-Dichlorobenzidine	50	40.0	80	40-140
132-64-9	Dibenzofuran	50	34.9	70	40-140
84-74-2	Di-n-butyl phthalate	50	41.4	83	40-140
117-84-0	Di-n-octyl phthalate	50	44.6	89	40-140
84-66-2	Diethyl phthalate	50	40.3	81	40-140
131-11-3	Dimethyl phthalate	50	40.4	81	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	46.0	92	40-140
118-74-1	Hexachlorobenzene	50	40.7	81	40-140

* = Outside of Control Limits.

7.2.2
7

Blank Spike Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37681-BS	F72498.D	1	04/22/14	WK	04/19/14	OP37681	MSF3224

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29882-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	22.1	44	40-140
67-72-1	Hexachloroethane	50	32.6	65	40-140
78-59-1	Isophorone	50	34.7	69	40-140
88-74-4	2-Nitroaniline	50	38.2	76	40-140
99-09-2	3-Nitroaniline	50	36.4	73	40-140
100-01-6	4-Nitroaniline	50	39.3	79	40-140
98-95-3	Nitrobenzene	50	36.1	72	40-140
62-75-9	n-Nitrosodimethylamine	50	23.7	47	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	40.0	80	40-140
86-30-6	N-Nitrosodiphenylamine	50	37.8	76	40-140
110-86-1	Pyridine	50	21.1	42	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	41%	15-110%
4165-62-2	Phenol-d5	27%	15-110%
118-79-6	2,4,6-Trihromophenol	81%	15-110%
4165-60-0	Nitrobenzene-d5	71%	30-130%
321-60-8	2-Fluorobiphenyl	73%	30-130%
1718-51-0	Terphenyl-d14	89%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

7.2.2
7

Blank Spike Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37658-BS	188680.D	1	04/21/14	MR	04/18/14	OP37658	MSI3303

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29882-2, MC29882-3, MC29882-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	36.9	74	40-140
208-96-8	Acenaphthylene	50	34.0	68	40-140
120-12-7	Anthracene	50	37.4	75	40-140
56-55-3	Benzo(a)anthracene	50	41.3	83	40-140
50-32-8	Benzo(a)pyrene	50	39.5	79	40-140
205-99-2	Benzo(b)fluoranthene	50	41.4	83	40-140
191-24-2	Benzo(g,h,i)perylene	50	45.0	90	40-140
207-08-9	Benzo(k)fluoranthene	50	42.8	86	40-140
218-01-9	Chrysene	50	39.3	79	40-140
53-70-3	Dibenzo(a,h)anthracene	50	47.7	95	40-140
206-44-0	Fluoranthene	50	42.5	85	40-140
86-73-7	Fluorene	50	39.9	80	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	45.9	92	40-140
90-12-0	1-Methylnaphthalene	50	33.5	67	40-140
91-57-6	2-Methylnaphthalene	50	32.4	65	40-140
85-01-8	Phenanthrene	50	38.4	77	40-140
129-00-0	Pyrene	50	40.9	82	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	39%	15-110%
4165-62-2	Phenol-d5	25%	15-110%
118-79-6	2,4,6-Tribromophenol	87%	15-110%
4165-60-0	Nitrobenzene-d5	77%	30-130%
321-60-8	2-Fluorobiphenyl	75%	30-130%
1718-51-0	Terphenyl-d14	96%	30-130%

* = Outside of Control Limits.

7.2.3



Blank Spike Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37682-BS	I88724.D	1	04/23/14	MR	04/19/14	OP37682	MSI3305

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29882-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	32.4	65	40-140
208-96-8	Acenaphthylene	50	30.4	61	40-140
120-12-7	Anthracene	50	34.2	68	40-140
56-55-3	Benzo(a)anthracene	50	38.6	77	40-140
50-32-8	Benzo(a)pyrene	50	37.0	74	40-140
205-99-2	Benzo(b)fluoranthene	50	39.7	79	40-140
191-24-2	Benzo(g,h,i)perylene	50	42.4	85	40-140
207-08-9	Benzo(k)fluoranthene	50	39.5	79	40-140
218-01-9	Chrysene	50	37.4	75	40-140
53-70-3	Dibenzo(a,h)anthracene	50	44.7	89	40-140
206-44-0	Fluoranthene	50	37.8	76	40-140
86-73-7	Fluorene	50	34.8	70	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	43.1	86	40-140
90-12-0	1-Methylnaphthalene	50	31.2	62	40-140
91-57-6	2-Methylnaphthalene	50	31.2	62	40-140
85-01-8	Phenanthrene	50	34.3	69	40-140
129-00-0	Pyrene	50	37.8	76	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	34%	15-110%
4165-62-2	Phenol-d5	22%	15-110%
118-79-6	2,4,6-Tribromophenol	77%	15-110%
4165-60-0	Nitrobenzene-d5	68%	30-130%
321-60-8	2-Fluorobiphenyl	66%	30-130%
1718-51-0	Terphenyl-d14	88%	30-130%

* = Outside of Control Limits.

7.2.4
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37657-MS	R38281.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411
OP37657-MSD	R38282.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411
MC29400-19	R38283.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29882-2, MC29882-3, MC29882-4

CAS No.	Compound	MC29400-19 Spike		MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
		ug/l	Q ug/l							
65-85-0	Benzoic Acid	ND	50	12.7	25* a	50	12.9	26* a	2	30-130/20
95-57-8	2-Chlorophenol	ND	50	36.2	72	50	34.3	69	5	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND	50	39.3	79	50	36.7	73	7	30-130/20
120-83-2	2,4-Dichlorophenol	ND	50	41.7	83	50	39.0	78	7	30-130/20
105-67-9	2,4-Dimethylphenol	ND	50	33.8	68	50	30.1	60	12	30-130/20
51-28-5	2,4-Dinitrophenol	ND	50	30.7	61	50	30.9	62	1	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND	50	41.6	83	50	41.0	82	1	30-130/20
95-48-7	2-Methylphenol	ND	50	30.6	61	50	28.3	57	8	30-130/20
	3&4-Methylphenol	ND	100	60.6	61	100	54.5	55	11	30-130/20
88-75-5	2-Nitrophenol	ND	50	43.2	86	50	39.0	78	10	30-130/20
100-02-7	4-Nitrophenol	ND	50	16.1	32	50	15.7	31	3	30-130/20
87-86-5	Pentachlorophenol	ND	50	41.5	83	50	40.0	80	4	30-130/20
108-95-2	Phenol	ND	50	15.5	31	50	14.7	29* b	5	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND	50	44.6	89	50	41.6	83	7	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND	50	44.9	90	50	42.6	85	5	30-130/20
62-53-3	Aniline	ND	50	29.4	59	50	28.4	57	3	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND	50	47.5	95	50	46.1	92	3	40-140/20
85-68-7	Butyl benzyl phthalate	ND	50	46.0	92	50	44.7	89	3	40-140/20
100-51-6	Benzyl Alcohol	ND	50	33.9	68	50	30.8	62	10	40-140/20
91-58-7	2-Chloronaphthalene	ND	50	44.0	88	50	40.5	81	8	40-140/20
106-47-8	4-Chloroaniline	ND	50	37.5	75	50	34.4	69	9	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND	50	39.8	80	50	37.1	74	7	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND	50	37.1	74	50	36.8	74	1	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND	50	47.7	95	50	46.5	93	3	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND	50	44.7	89	50	42.6	85	5	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND	50	41.1	82	50	40.1	80	2	40-140/20
121-14-2	2,4-Dinitrotoluene	ND	50	47.6	95	50	45.5	91	5	40-140/20
606-20-2	2,6-Dinitrotoluene	ND	50	45.3	91	50	43.5	87	4	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND	50	38.1	76	50	37.7	75	1	40-140/20
132-64-9	Dibenzofuran	ND	50	40.9	82	50	39.3	79	4	40-140/20
84-74-2	Di-n-butyl phthalate	0.73	J	50	44.7	88	43.1	85	4	40-140/20
117-84-0	Di-n-octyl phthalate	ND	50	47.4	95	50	45.6	91	4	40-140/20
84-66-2	Diethyl phthalate	ND	50	45.5	91	50	44.3	89	3	40-140/20
131-11-3	Dimethyl phthalate	ND	50	45.9	92	50	44.3	89	4	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND	50	46.9	94	50	45.5	91	3	40-140/20
118-74-1	Hexachlorobenzene	ND	50	46.3	93	50	44.6	89	4	40-140/20

* = Outside of Control Limits.

7.3.1
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37657-MS	R38281.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411
OP37657-MSD	R38282.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411
MC29400-19	R38283.D	1	04/21/14	WK	04/18/14	OP37657	MSR1411

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29882-2, MC29882-3, MC29882-4

7.3.1
7

CAS No.	Compound	MC29400-19 Spike		MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
		ug/l	Q ug/l							
77-47-4	Hexachlorocyclopentadiene	ND	50	24.0	48	50	22.1	44	8	40-140/20
67-72-1	Hexachloroethane	ND	50	27.4	55	50	26.3	53	4	40-140/20
78-59-1	Isophorone	ND	50	38.0	76	50	36.4	73	4	40-140/20
88-74-4	2-Nitroaniline	ND	50	45.4	91	50	43.8	88	4	40-140/20
99-09-2	3-Nitroaniline	ND	50	41.5	83	50	39.2	78	6	40-140/20
100-01-6	4-Nitroaniline	ND	50	41.9	84	50	40.4	81	4	40-140/20
98-95-3	Nitrobenzene	ND	50	37.9	76	50	36.1	72	5	40-140/20
62-75-9	n-Nitrosodimethylamine	ND	50	31.0	62	50	30.3	61	2	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND	50	41.4	83	50	37.7	75	9	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND	50	41.8	84	50	40.2	80	4	40-140/20
110-86-1	Pyridine	ND	50	29.2	58	50	28.9	58	1	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29400-19 Limits	
367-12-4	2-Fluorophenol	45%	47%	38%	15-110%
4165-62-2	Phenol-d5	30%	28%	24%	15-110%
118-79-6	2,4,6-Tribromophenol	91%	89%	74%	15-110%
4165-60-0	Nitrobenzene-d5	76%	74%	72%	30-130%
321-60-8	2-Fluorobiphenyl	84%	78%	64%	30-130%
1718-51-0	Terphenyl-d14	93%	91%	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: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37681-MS	F72499.D	1	04/22/14	WK	04/19/14	OP37681	MSF3224
OP37681-MSD	F72500.D	1	04/22/14	WK	04/19/14	OP37681	MSF3224
MC29400-26	F72501.D	1	04/22/14	WK	04/19/14	OP37681	MSF3224

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29882-1

CAS No.	Compound	MC29400-26 Spike		MS	MS	Spike	MSD	MSD	RPD	Limits
		ug/l	Q ug/l	ug/l	%	ug/l	ug/l	%		Rec/RPD
65-85-0	Benzoic Acid	ND	50	8.1	16* a	50	8.7	17* a	7	30-130/20
95-57-8	2-Chlorophenol	ND	50	30.6	61	50	32.4	65	6	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND	50	31.7	63	50	33.7	67	6	30-130/20
120-83-2	2,4-Dichlorophenol	ND	50	31.9	64	50	33.7	67	5	30-130/20
105-67-9	2,4-Dimethylphenol	ND	50	28.0	56	50	30.4	61	8	30-130/20
51-28-5	2,4-Dinitrophenol	ND	50	22.7	45	50	23.8	48	5	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND	50	38.6	77	50	40.8	82	6	30-130/20
95-48-7	2-Methylphenol	ND	50	27.6	55	50	29.8	60	8	30-130/20
	3&4-Methylphenol	ND	100	49.8	50	100	53.6	54	7	30-130/20
88-75-5	2-Nitrophenol	ND	50	32.9	66	50	35.6	71	8	30-130/20
100-02-7	4-Nitrophenol	ND	50	11.7	23* a	50	12.8	26* a	9	30-130/20
87-86-5	Pentachlorophenol	ND	50	34.0	68	50	34.1	68	0	30-130/20
108-95-2	Phenol	ND	50	11.6	23* a	50	13.1	26* a	12	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND	50	34.6	69	50	38.2	76	10	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND	50	33.6	67	50	35.4	71	5	30-130/20
62-53-3	Aniline	ND	50	22.7	45	50	24.0	48	6	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND	50	36.4	73	50	38.3	77	5	40-140/20
85-68-7	Butyl benzyl phthalate	ND	50	42.3	85	50	42.6	85	1	40-140/20
100-51-6	Benzyl Alcohol	ND	50	22.3	45	50	23.5	47	5	40-140/20
91-58-7	2-Chloronaphthalene	ND	50	34.7	69	50	36.3	73	5	40-140/20
106-47-8	4-Chloroaniline	ND	50	28.1	56	50	29.3	59	4	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND	50	33.4	67	50	34.6	69	4	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND	50	33.2	66	50	34.6	69	4	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND	50	40.4	81	50	42.7	85	6	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND	50	34.3	69	50	36.3	73	6	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND	50	35.9	72	50	38.4	77	7	40-140/20
121-14-2	2,4-Dinitrotoluene	ND	50	39.0	78	50	40.4	81	4	40-140/20
606-20-2	2,6-Dinitrotoluene	ND	50	35.8	72	50	38.6	77	8	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND	50	39.3	79	50	41.3	83	5	40-140/20
132-64-9	Dibenzofuran	ND	50	31.9	64	50	33.6	67	5	40-140/20
84-74-2	Di-n-butyl phthalate	0.33	J 50	39.6	79	50	40.9	81	3	40-140/20
117-84-0	Di-n-octyl phthalate	ND	50	42.9	86	50	44.2	88	3	40-140/20
84-66-2	Diethyl phthalate	ND	50	38.1	76	50	39.7	79	4	40-140/20
131-11-3	Dimethyl phthalate	ND	50	36.8	74	50	39.0	78	6	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND	50	43.8	88	50	45.1	90	3	40-140/20
118-74-1	Hexachlorobenzene	ND	50	37.4	75	50	39.3	79	5	40-140/20

* = Outside of Control Limits.

7.3.2
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37681-MS	F72499.D	1	04/22/14	WK	04/19/14	OP37681	MSF3224
OP37681-MSD	F72500.D	1	04/22/14	WK	04/19/14	OP37681	MSF3224
MC29400-26	F72501.D	1	04/22/14	WK	04/19/14	OP37681	MSF3224

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29882-1

CAS No.	Compound	MC29400-26 Spike		MS	MS	Spike	MSD	MSD	RPD	Limits
		ug/l	Q ug/l	ug/l	%	ug/l	ug/l	%		Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND	50	19.6	39* ^b	50	20.7	41	5	40-140/20
67-72-1	Hexachloroethane	ND	50	27.8	56	50	29.4	59	6	40-140/20
78-59-1	Isophorone	ND	50	30.2	60	50	31.8	64	5	40-140/20
88-74-4	2-Nitroaniline	ND	50	35.5	71	50	37.2	74	5	40-140/20
99-09-2	3-Nitroaniline	ND	50	34.7	69	50	36.8	74	6	40-140/20
100-01-6	4-Nitroaniline	ND	50	38.6	77	50	39.0	78	1	40-140/20
98-95-3	Nitrobenzene	ND	50	31.4	63	50	32.4	65	3	40-140/20
62-75-9	n-Nitrosodimethylamine	ND	50	21.1	42	50	22.4	45	6	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND	50	34.7	69	50	36.5	73	5	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND	50	35.1	70	50	37.1	74	6	40-140/20
110-86-1	Pyridine	ND	50	17.8	36* ^b	50	19.6	39* ^b	10	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29400-26 Limits	
367-12-4	2-Fluorophenol	35%	37%	39%	15-110%
4165-62-2	Phenol-d5	23%	25%	25%	15-110%
118-79-6	2,4,6-Tribromophenol	74%	77%	69%	15-110%
4165-60-0	Nitrobenzene-d5	58%	62%	68%	30-130%
321-60-8	2-Fluorobiphenyl	64%	66%	71%	30-130%
1718-51-0	Terphenyl-d14	83%	84%	88%	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.

7.3.2
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37658-MS	I88681.D	1	04/21/14	MR	04/18/14	OP37658	MSI3303
OP37658-MSD	I88682.D	1	04/21/14	MR	04/18/14	OP37658	MSI3303
MC29400-20	I88683.D	1	04/21/14	MR	04/18/14	OP37658	MSI3303

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29882-2, MC29882-3, MC29882-4

CAS No.	Compound	MC29400-20 Spike		MS	MS	Spike	MSD	MSD	RPD	Limits
		ug/l	Q ug/l	ug/l	%	ug/l	ug/l	%		Rec/RPD
83-32-9	Acenaphthene	ND	50	38.0	76	50	36.3	73	5	40-140/20
208-96-8	Acenaphthylene	ND	50	34.9	70	50	33.4	67	4	40-140/20
120-12-7	Anthracene	ND	50	37.4	75	50	36.8	74	2	40-140/20
56-55-3	Benzo(a)anthracene	ND	50	42.1	84	50	41.1	82	2	40-140/20
50-32-8	Benzo(a)pyrene	ND	50	39.6	79	50	38.6	77	3	40-140/20
205-99-2	Benzo(b)fluoranthene	ND	50	43.4	87	50	41.8	84	4	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND	50	45.4	91	50	44.3	89	2	40-140/20
207-08-9	Benzo(k)fluoranthene	ND	50	42.0	84	50	41.3	83	2	40-140/20
218-01-9	Chrysene	ND	50	40.2	80	50	39.5	79	2	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND	50	48.0	96	50	46.7	93	3	40-140/20
206-44-0	Fluoranthene	ND	50	43.1	86	50	41.7	83	3	40-140/20
86-73-7	Fluorene	ND	50	40.2	80	50	39.3	79	2	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND	50	46.2	92	50	45.0	90	3	40-140/20
90-12-0	1-Methylnaphthalene	ND	50	35.4	71	50	33.5	67	6	40-140/20
91-57-6	2-Methylnaphthalene	ND	50	34.2	68	50	32.5	65	5	40-140/20
85-01-8	Phenanthrene	ND	50	38.2	76	50	37.1	74	3	40-140/20
129-00-0	Pyrene	ND	50	42.0	84	50	40.4	81	4	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29400-20 Limits	
367-12-4	2-Fluorophenol	38%	38%	33%	15-110%
4165-62-2	Phenol-d5	26%	24%	22%	15-110%
118-79-6	2,4,6-Tribromophenol	85%	83%	76%	15-110%
4165-60-0	Nitrobenzene-d5	76%	73%	67%	30-130%
321-60-8	2-Fluorobiphenyl	75%	72%	61%	30-130%
1718-51-0	Terphenyl-d14	94%	92%	89%	30-130%

* = Outside of Control Limits.

7.3.3
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37682-MS	I88725.D	1	04/23/14	MR	04/19/14	OP37682	MSI3305
OP37682-MSD	I88726.D	1	04/23/14	MR	04/19/14	OP37682	MSI3305
MC29400-27	I88727.D	1	04/23/14	MR	04/19/14	OP37682	MSI3305

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29882-1

CAS No.	Compound	MC29400-27 Spike		MS	MS	Spike	MSD	MSD	RPD	Limits
		ug/l	Q ug/l	ug/l	%	ug/l	ug/l	%		Rec/RPD
83-32-9	Acenaphthene	ND	50	29.0	58	50	30.4	61	5	40-140/20
208-96-8	Acenaphthylene	ND	50	27.1	54	50	28.2	56	4	40-140/20
120-12-7	Anthracene	ND	50	31.8	64	50	33.1	66	4	40-140/20
56-55-3	Benzo(a)anthracene	ND	50	37.2	74	50	37.9	76	2	40-140/20
50-32-8	Benzo(a)pyrene	ND	50	35.1	70	50	36.2	72	3	40-140/20
205-99-2	Benzo(b)fluoranthene	ND	50	37.5	75	50	40.2	80	7	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND	50	40.4	81	50	41.4	83	2	40-140/20
207-08-9	Benzo(k)fluoranthene	ND	50	37.6	75	50	37.2	74	1	40-140/20
218-01-9	Chrysene	ND	50	35.5	71	50	36.5	73	3	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND	50	42.6	85	50	43.5	87	2	40-140/20
206-44-0	Fluoranthene	ND	50	36.2	72	50	37.5	75	4	40-140/20
86-73-7	Fluorene	ND	50	31.4	63	50	32.9	66	5	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND	50	41.2	82	50	42.0	84	2	40-140/20
90-12-0	1-Methylnaphthalene	ND	50	27.6	55	50	29.4	59	6	40-140/20
91-57-6	2-Methylnaphthalene	ND	50	27.4	55	50	28.3	57	3	40-140/20
85-01-8	Phenanthrene	0.021	J 50	32.3	65	50	33.7	67	4	40-140/20
129-00-0	Pyrene	ND	50	36.1	72	50	37.6	75	4	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29400-27 Limits	
367-12-4	2-Fluorophenol	29%	31%	33%	15-110%
4165-62-2	Phenol-d5	19%	20%	22%	15-110%
118-79-6	2,4,6-Tribromophenol	69%	74%	67%	15-110%
4165-60-0	Nitrobenzene-d5	58%	60%	64%	30-130%
321-60-8	2-Fluorobiphenyl	55%	59%	63%	30-130%
1718-51-0	Terphenyl-d14	82%	84%	88%	30-130%

* = Outside of Control Limits.

7.3.4
7

Semivolatiles Internal Standard Area Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSF3224-CC3181	Injection Date:	04/22/14
Lab File ID:	F72496.D	Injection Time:	16:51
Instrument ID:	GCM5F	Method:	SW846 8270D

Check Std	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Upper Limit ^a	1296662	4.56	4753604	5.61	2859190	7.12	4879286	8.42	5436434	10.95	5369362	12.62
Lower Limit ^b	324166	3.56	1188401	4.61	714798	6.12	1219822	7.42	1359109	9.95	1342341	11.62

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37681-MB	675412	4.06	2481230	5.10	1476616	6.62	2525372	7.91	2791721	10.44	2726880	12.12
OP37681-BS	655741	4.06	2438744	5.11	1457379	6.62	2471853	7.92	2684057	10.45	2691641	12.12
OP37681-MS	701088	4.06	2582474	5.11	1526956	6.62	2643954	7.92	2851850	10.45	2853260	12.12
OP37681-MSD	612552	4.06	2276523	5.10	1344134	6.62	2332731	7.91	2562398	10.45	2534684	12.12
MC29400-26	636534	4.06	2358291	5.11	1414416	6.62	2419108	7.91	2661529	10.44	2581224	12.12
ZZZZZZ	650285	4.06	2374355	5.11	1416948	6.62	2428646	7.92	2699018	10.44	2554667	12.12
ZZZZZZ	662189	4.06	2438542	5.10	1465571	6.62	2471203	7.91	2749899	10.45	2657355	12.11
MC29882-1	670736	4.06	2453552	5.10	1454869	6.62	2484949	7.91	2803868	10.44	2772859	12.12
ZZZZZZ	637070	4.06	2381538	5.11	1428650	6.62	2468991	7.92	2996752	10.45	2839163	12.12
OP37690-MB	756680	4.06	2805994	5.11	1655638	6.62	2746623	7.92	2915363	10.44	2847121	12.12
OP37690-BS	749572	4.06	2711990	5.11	1623078	6.62	2695819	7.92	2779034	10.45	2647790	12.12
OP37690-MS	879503	4.06	3161536	5.11	1864842	6.62	3037187	7.92	3102986	10.45	3020466	12.12
OP37690-MSD	788924	4.06	2923192	5.11	1718484	6.62	2834073	7.92	2873827	10.45	2721331	12.12
MC29921-2	744833	4.06	2753757	5.11	1627521	6.62	2666273	7.91	2778525	10.44	2633341	12.12
ZZZZZZ	819157	4.07	3015626	5.11	1801170	6.62	2968911	7.91	3093986	10.45	2911084	12.12
ZZZZZZ	831793	4.06	3057207	5.10	1802229	6.62	3004437	7.91	3022326	10.45	2901054	12.12
ZZZZZZ	811388	4.06	2993489	5.11	1766115	6.62	2886362	7.92	2963697	10.45	2815086	12.12
ZZZZZZ	738856	4.06	2728624	5.11	1609926	6.62	2634393	7.92	2751668	10.44	2550156	12.12
ZZZZZZ	808545	4.06	2952241	5.11	1729123	6.62	2856689	7.92	2937272	10.45	2829983	12.12
ZZZZZZ	799283	4.06	2941472	5.10	1740887	6.62	2877333	7.91	2957562	10.45	2796825	12.12
ZZZZZZ	611150	4.06	2196997	5.10	1324937	6.62	2205912	7.91	2459515	10.45	2469499	12.11
ZZZZZZ	882131	4.07	3195683	5.11	1845006	6.62	2972580	7.91	3117992	10.45	3150675	12.12
ZZZZZZ	827091	4.06	2997675	5.11	1772597	6.62	2880914	7.92	2931546	10.45	2890266	12.12
ZZZZZZ	637127	4.06	2344045	5.11	1372053	6.62	2290494	7.92	2691615	10.45	2856859	12.12

- 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
7

Semivolatiles Internal Standard Area Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSI3303-CC3238	Injection Date:	04/21/14
Lab File ID:	I88677.D	Injection Time:	15:37
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	263580	3.97	615489	5.02	360317	6.54	617721	7.91	446343	10.69	1103240	12.16
Upper Limit ^a	527160	4.47	1230978	5.52	720634	7.04	1235442	8.41	892686	11.19	2206480	12.66
Lower Limit ^b	131790	3.47	307745	4.52	180159	6.04	308861	7.41	223172	10.19	551620	11.66

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
ZZZZZZ	296697	3.97	681645	5.02	409354	6.54	692527	7.91	498806	10.69	1246718	12.17
OP37658-MB	305575	3.97	715366	5.02	422793	6.54	710683	7.91	520447	10.69	1298502	12.17
OP37658-BS	299871	3.98	693087	5.02	401596	6.55	670124	7.92	489040	10.69	1170448	12.17
OP37658-MS	288985	3.97	683969	5.02	397025	6.54	667934	7.92	481210	10.69	1168091	12.17
OP37658-MSD	295308	3.98	689546	5.02	402201	6.54	673506	7.92	489209	10.69	1187613	12.17
MC29400-20	283311	3.97	670168	5.02	390149	6.54	658059	7.91	471554	10.69	1168718	12.16
ZZZZZZ	290645	3.97	685599	5.02	397290	6.54	672085	7.91	480521	10.69	1196916	12.16
ZZZZZZ	302113	3.97	711607	5.02	410128	6.54	688701	7.91	493553	10.69	1215626	12.17
ZZZZZZ	286241	3.97	682797	5.02	394750	6.54	669422	7.91	478585	10.69	1182887	12.16
ZZZZZZ	295642	3.98	696807	5.02	398930	6.54	666871	7.91	476789	10.69	1182312	12.17
ZZZZZZ	285543	3.98	672895	5.02	382809	6.54	629632	7.91	454825	10.69	1115295	12.16
ZZZZZZ	315665	3.98	737174	5.02	419700	6.54	693089	7.91	488621	10.69	1204401	12.16
MC29882-2	292439	3.97	676938	5.02	398787	6.54	667728	7.91	482467	10.69	1190658	12.17
MC29882-3	277505	3.98	649163	5.02	375932	6.54	632184	7.91	446466	10.69	1105543	12.16
MC29882-4	281677	3.98	653540	5.02	382818	6.54	642708	7.91	464204	10.69	1120329	12.16

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

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

7.4.2
7

Semivolatiles Internal Standard Area Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSI3305-CC3238	Injection Date:	04/23/14
Lab File ID:	I88719.D	Injection Time:	08:07
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	262938	3.96	613173	5.01	359756	6.53	607103	7.89	448501	10.67	1119205	12.15
Upper Limit ^a	525876	4.46	1226346	5.51	719512	7.03	1214206	8.39	897002	11.17	2238410	12.65
Lower Limit ^b	131469	3.46	306587	4.51	179878	6.03	303552	7.39	224251	10.17	559603	11.65

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37700-MB	257731	3.96	605476	5.01	349264	6.53	596558	7.89	451473	10.67	1128041	12.15
OP37700-BS	256773	3.96	596664	5.01	347066	6.53	582130	7.90	433621	10.68	1066923	12.15
ZZZZZZ	258252	3.96	602202	5.01	348655	6.53	588111	7.89	424525	10.67	1063752	12.15
OP37682-MB	300843	3.96	704924	5.01	406807	6.53	681203	7.89	503355	10.67	1242458	12.15
OP37682-BS	307280	3.96	714948	5.01	415168	6.53	692613	7.90	512497	10.68	1222162	12.15
OP37682-MS	304678	3.96	719865	5.01	420074	6.53	706452	7.90	525139	10.68	1284348	12.15
OP37682-MSD	290498	3.96	676185	5.01	393513	6.53	654689	7.90	478907	10.68	1145694	12.15
MC29400-27	281268	3.96	664178	5.01	382473	6.53	649279	7.89	477387	10.67	1174262	12.15
ZZZZZZ	283527	3.96	659026	5.01	384677	6.53	643701	7.89	476195	10.67	1147012	12.15
ZZZZZZ	288114	3.96	669603	5.01	392926	6.53	667911	7.89	489913	10.67	1192540	12.15
MC29882-1	301066	3.96	696948	5.01	409886	6.53	684078	7.90	501727	10.68	1227610	12.15
OP37694-MB	270059	3.96	639088	5.01	369932	6.53	624408	7.89	461213	10.67	1145258	12.15
OP37694-BS	254238	3.96	607523	5.01	342511	6.53	562779	7.90	421966	10.68	1023268	12.15
OP37694-BSD	271771	3.96	632173	5.01	367386	6.53	597559	7.90	439640	10.68	1055335	12.15
OP37694-MS	254460	3.96	600660	5.01	346959	6.53	577449	7.90	433503	10.68	1050852	12.15
OP37694-MSD	265536	3.96	615382	5.01	355481	6.53	584611	7.90	427406	10.68	1037223	12.15
MC29800-4	252860	3.96	586926	5.00	340433	6.53	577722	7.89	429508	10.67	1082117	12.14
ZZZZZZ	258336	3.96	599121	5.01	346548	6.53	580667	7.89	411359	10.67	1018408	12.14
ZZZZZZ	249714	3.96	587004	5.01	335983	6.53	563142	7.89	413163	10.67	1013800	12.14
ZZZZZZ	265945	3.96	627280	5.01	356718	6.53	589041	7.89	427988	10.67	1050830	12.14
ZZZZZZ	252247	3.95	580605	5.01	336068	6.53	554739	7.89	406046	10.67	1004184	12.14
OP37713-MB	234641	3.96	549832	5.00	318124	6.53	536456	7.89	395995	10.67	993000	12.14
OP37713-BS	276435	3.96	634903	5.01	357737	6.53	579544	7.90	413062	10.68	998519	12.15
ZZZZZZ	258019	3.95	597353	5.01	338696	6.53	556026	7.89	395918	10.67	975836	12.15
ZZZZZZ	263063	3.96	621973	5.00	362958	6.53	620835	7.89	454635	10.67	1095914	12.14
ZZZZZZ	293982	3.96	700850	5.00	402149	6.53	682235	7.89	502001	10.67	1227566	12.14
ZZZZZZ	259709	3.96	618024	5.00	353452	6.53	603412	7.89	435420	10.67	1061611	12.14
ZZZZZZ	272872	3.96	648710	5.01	374794	6.53	638282	7.89	456763	10.67	1088785	12.14

- 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: MC29882
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSI3305-CC3238	Injection Date:	04/23/14
Lab File ID:	188719.D	Injection Time:	08:07
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

- (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

Semivolatiles Internal Standard Area Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSR1411-CC1410	Injection Date:	04/21/14
Lab File ID:	R38278.D	Injection Time:	09:41
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	119472	5.41	428450	6.51	266822	8.04	473515	9.35	453402	11.94	394254	13.65
Upper Limit ^a	238944	5.91	856900	7.01	533644	8.54	947030	9.85	906804	12.44	788508	14.15
Lower Limit ^b	59736	4.91	214225	6.01	133411	7.54	236758	8.85	226701	11.44	197127	13.15

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
OP37657-MB	135006	5.41	489741	6.50	305204	8.04	538899	9.34	507315	11.94	444856	13.64
OP37657-BS	140201	5.41	472614	6.51	294251	8.04	514369	9.34	489336	11.94	421199	13.64
OP37657-MS	129939	5.41	469854	6.51	292550	8.04	512441	9.35	493469	11.94	427015	13.64
OP37657-MSD	130477	5.41	462134	6.51	290257	8.04	506022	9.34	486758	11.94	428401	13.64
MC29400-19	163993	5.41	581099	6.50	337715	8.04	570831	9.34	548258	11.94	487442	13.64
ZZZZZZ	140523	5.41	451574	6.50	276508	8.04	492814	9.34	472387	11.94	415079	13.64
ZZZZZZ	152519	5.41	538696	6.50	346124	8.04	551955	9.34	493276	11.94	446137	13.64
ZZZZZZ	172189	5.41	615115	6.50	384310	8.04	672587	9.34	537100	11.94	481945	13.64
ZZZZZZ	167452	5.41	605031	6.50	343233	8.04	578386	9.34	551960	11.93	472241	13.64
ZZZZZZ	167281	5.41	605849	6.50	380770	8.04	667012	9.34	610631	11.94	483373	13.64
ZZZZZZ	175930	5.41	631190	6.50	393521	8.04	658956	9.34	560351	11.94	472653	13.64
ZZZZZZ	176994	5.41	635207	6.50	402564	8.04	700721	9.34	641216	11.94	558555	13.64
ZZZZZZ	137173	5.41	488477	6.50	303663	8.04	535300	9.34	519084	11.94	466318	13.64
ZZZZZZ	121079	5.41	439990	6.50	279915	8.04	487787	9.34	465322	11.94	413815	13.64

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

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

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

7.4.4
7

Semivolatiles Internal Standard Area Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSR1412-CC1410	Injection Date:	04/21/14
Lab File ID:	R38295.D	Injection Time:	16:50
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	108969	5.39	390162	6.49	245323	8.02	417932	9.33	386213	11.92	336580	13.62
Upper Limit ^a	217938	5.89	780324	6.99	490646	8.52	835864	9.83	772426	12.42	673160	14.12
Lower Limit ^b	54485	4.89	195081	5.99	122662	7.52	208966	8.83	193107	11.42	168290	13.12

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
ZZZZZZ	124878	5.39	454855	6.49	282716	8.02	489002	9.32	432077	11.92	350188	13.62
ZZZZZZ	124065	5.39	447101	6.49	275307	8.02	478695	9.33	432923	11.92	367604	13.63
MC29882-2	123473	5.39	445567	6.49	289388	8.02	477879	9.33	426917	11.92	361512	13.62
MC29882-3	116216	5.39	413020	6.49	261650	8.02	447856	9.32	403149	11.92	349531	13.62
MC29882-4	118266	5.39	426754	6.49	271135	8.02	465376	9.32	423384	11.92	363725	13.62
OP37647-MB	122623	5.39	443338	6.49	281856	8.02	487842	9.32	439716	11.92	381642	13.62
OP37647-BS	118453	5.39	422078	6.49	264494	8.02	457601	9.33	433499	11.92	368414	13.63
OP37647-MS	119478	5.39	426660	6.49	262517	8.02	449249	9.33	426668	11.92	356648	13.63
OP37647-MSD	133540	5.39	478225	6.49	291731	8.02	509000	9.33	475370	11.93	407670	13.63
MC29400-14	121482	5.39	441238	6.49	281084	8.02	490707	9.32	452062	11.92	396999	13.62
ZZZZZZ	126570	5.39	455516	6.49	288399	8.02	499141	9.32	453741	11.92	393969	13.62
ZZZZZZ	126416	5.39	458855	6.49	287506	8.02	501009	9.32	458511	11.92	399962	13.62
ZZZZZZ	118569	5.39	429228	6.49	273953	8.02	463907	9.33	427885	11.92	378382	13.62
ZZZZZZ	122886	5.39	436465	6.49	279594	8.02	473367	9.33	437527	11.92	379873	13.62
ZZZZZZ	111278	5.39	403294	6.49	258703	8.02	446860	9.32	412819	11.92	338100	13.62
ZZZZZZ	127800	5.39	463391	6.49	463170	8.03	494540	9.34	459054	11.92	388057	13.63
ZZZZZZ	131829	5.39	469904	6.49	289127	8.02	495694	9.32	460686	11.92	407632	13.62
ZZZZZZ	126249	5.39	443885	6.49	284180	8.02	474828	9.33	437349	11.92	381788	13.62
OP37644-MB	110748	5.39	401099	6.49	249308	8.02	439802	9.32	410696	11.92	368819	13.62
OP37644-BS	105268	5.39	375575	6.49	235737	8.02	408798	9.33	388638	11.92	352997	13.62
OP37644-MS	105636	5.39	382859	6.49	245663	8.02	433762	9.33	418540	11.92	365411	13.63
OP37644-MSD	111306	5.39	399156	6.49	243195	8.02	417146	9.33	398248	11.92	352512	13.62
MC29400-13	110456	5.39	400461	6.49	252634	8.02	443503	9.32	419708	11.92	365003	13.62
ZZZZZZ	107274	5.39	382153	6.49	244234	8.02	434929	9.32	409182	11.92	369770	13.62
ZZZZZZ	115152	5.39	410079	6.49	258296	8.02	453076	9.32	415034	11.92	377209	13.62

- 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.

7.4.5



Semivolatile Surrogate Recovery Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29882-1	F72504.D	24	16	76	39	41	83
MC29882-2	R38298.D	48	30	100	70	73	100
MC29882-3	R38299.D	46	29	99	72	79	97
MC29882-4	R38300.D	43	28	98	70	76	96
OP37657-BS	R38280.D	55	33	91	79	83	96
OP37657-MB	R38279.D	42	28	73	72	74	94
OP37657-MS	R38281.D	45	30	91	76	84	93
OP37657-MSD	R38282.D	47	28	89	74	78	91
OP37681-BS	F72498.D	41	27	81	71	73	89
OP37681-MB	F72497.D	29	19	56	51	54	87
OP37681-MS	F72499.D	35	23	74	58	64	83
OP37681-MSD	F72500.D	37	25	77	62	66	84

Surrogate Compounds Recovery Limits

S1 = 2-Fluorophenol 15-110%
 S2 = Phenol-d5 15-110%
 S3 = 2,4,6-Tribromophenol 15-110%
 S4 = Nitrobenzene-d5 30-130%
 S5 = 2-Fluorobiphenyl 30-130%
 S6 = Terphenyl-d14 30-130%

7.5.1
7

Semivolatiles Surrogate Recovery Summary

Job Number: MC29882

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29882-1	I88730.D	39	35	87
MC29882-2	I88690.D	70	69	97
MC29882-3	I88691.D	71	72	98
MC29882-4	I88692.D	69	70	96
OP37658-BS	I88680.D	77	75	96
OP37658-MB	I88679.D	72	66	93
OP37658-MS	I88681.D	76	75	94
OP37658-MSD	I88682.D	73	72	92
OP37682-BS	I88724.D	68	66	88
OP37682-MB	I88723.D	50	48	89
OP37682-MS	I88725.D	58	55	82
OP37682-MSD	I88726.D	60	59	84

Surrogate Compounds Recovery Limits

S1 = Nitrobenzene-d5 30-130%

S2 = 2-Fluorobiphenyl 30-130%

S3 = Terphenyl-d14 30-130%

7.5.2

7



New England
ACCUATEST
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: MC29882
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37671-MB	BB55406.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222

The QC reported here applies to the following samples:

Method: SW846 8011

MC29882-1, MC29882-2, MC29882-3, MC29882-4, MC29882-6

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)	85%	36-173%
460-00-4	Bromofluorobenzene (S)	87%	36-173%

8.1.1
8

Blank Spike Summary

Job Number: MC29882
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37671-BS	BB55407.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222

The QC reported here applies to the following samples:

Method: SW846 8011

MC29882-1, MC29882-2, MC29882-3, MC29882-4, MC29882-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.063	89	60-140
106-93-4	1,2-Dibromoethane	0.071	0.064	90	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	93%	36-173%
460-00-4	Bromofluorobenzene (S)	96%	36-173%

8.2.1
8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37671-MS	BB55408.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222
OP37671-MSD	BB55409.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222
MC29400-22	BB55410.D	1	04/21/14	SZ	04/18/14	OP37671	GBB3222

The QC reported here applies to the following samples:

Method: SW846 8011

MC29882-1, MC29882-2, MC29882-3, MC29882-4, MC29882-6

CAS No.	Compound	MC29400-22 Spike		MS	MS	Spike	MSD	MSD	RPD	Limits
		ug/l	Q ug/l	ug/l	%	ug/l	ug/l	%		Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.071	0.065	92	0.071	0.082	115	23	64-141/29
106-93-4	1,2-Dibromoethane	ND	0.071	0.068	96	0.071	0.081	114	17	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC29400-22 Limits
460-00-4	Bromofluorobenzene (S)	92%	111%	105% 36-173%
460-00-4	Bromofluorobenzene (S)	95%	115%	109% 36-173%

8.3.1
8

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC29882

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29882-1	BB55424.D	82	86
MC29882-2	BB55425.D	79	88
MC29882-3	BB55426.D	79	89
MC29882-4	BB55428.D	90	101
MC29882-6	BB55429.D	100	108
OP37671-BS	BB55407.D	93	96
OP37671-MB	BB55406.D	85	87
OP37671-MS	BB55408.D	92	95
OP37671-MSD	BB55409.D	111	115

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: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	GBB3222-ICC3222	Injection Date:	04/21/14
Lab File ID:	BB55402.D	Injection Time:	15:30
Instrument ID:	GCBB	Method:	SW846 8011

S1^a S1^b
 RT RT

Check Std	4.30	4.60
-----------	------	------

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
OP37671-MB	BB55406.D	04/21/14	17:09	4.30	4.60
OP37671-BS	BB55407.D	04/21/14	17:34	4.30	4.60
OP37671-MS	BB55408.D	04/21/14	17:59	4.30	4.60
OP37671-MSD	BB55409.D	04/21/14	18:23	4.30	4.60
MC29400-22	BB55410.D	04/21/14	18:48	4.30	4.60
ZZZZZZ	BB55411.D	04/21/14	19:13	4.30	4.60
ZZZZZZ	BB55412.D	04/21/14	19:38	4.30	4.60
ZZZZZZ	BB55413.D	04/21/14	20:03	4.30	4.60
ZZZZZZ	BB55414.D	04/21/14	20:29	4.30	4.60
ZZZZZZ	BB55415.D	04/21/14	20:56	4.30	4.60

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: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	GBB3222-CC3222	Injection Date:	04/21/14
Lab File ID:	BB55416.D	Injection Time:	21:25
Instrument ID:	GCB	Method:	SW846 8011

S1^a S1^b
 RT RT

Check Std	4.30	4.60
-----------	------	------

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
ZZZZZZ	BB55417.D	04/21/14	21:54	4.30	4.60
ZZZZZZ	BB55418.D	04/21/14	22:24	4.30	4.60
ZZZZZZ	BB55419.D	04/21/14	22:53	4.30	4.60
ZZZZZZ	BB55420.D	04/21/14	23:22	4.30	4.60
ZZZZZZ	BB55421.D	04/21/14	23:51	4.30	4.60
ZZZZZZ	BB55422.D	04/22/14	00:21	4.30	4.60
ZZZZZZ	BB55423.D	04/22/14	00:49	4.30	4.60
MC29882-1	BB55424.D	04/22/14	01:18	4.30	4.60
MC29882-2	BB55425.D	04/22/14	01:46	4.30	4.60
MC29882-3	BB55426.D	04/22/14	02:14	4.30	4.60

Surrogate
Compounds

S1 = Bromofluorobenzene (S)

- (a) Retention time from GC signal #2
- (b) Retention time from GC signal #1

8.5.2
8

GC Surrogate Retention Time Summary

Job Number: MC29882
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	GBB3222-CC3222	Injection Date:	04/22/14
Lab File ID:	BB55427.D	Injection Time:	02:42
Instrument ID:	GCBB	Method:	SW846 8011

SI^a SI^b
 RT RT

Check Std	4.30	4.60
-----------	------	------

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	SI ^a RT	SI ^b RT
MC29882-4	BB55428.D	04/22/14	03:11	4.30	4.60
MC29882-6	BB55429.D	04/22/14	03:39	4.30	4.60
GBB3222-ECC322	BB55430.D	04/22/14	04:07	4.30	4.60

Surrogate
 Compounds

SI = Bromofluorobenzene (S)

- (a) Retention time from GC signal #2
- (b) Retention time from GC signal #1

8.5.3

Roxana Groundwater Quarterly – 2nd Quarter 2014 Data Review

Laboratory SDG: MC29957

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 5/28/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2013

Sample Identification	Sample Identification
P114-ROX-042114	TB-ROX-042114-ST
TB-ROX-042114-HCL	

1.0 Data Package Completeness

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

No, although the COC inadvertently requests analysis VOC 8260C analysis on sodium thiosulfate preserved TB-ROX-042114-ST and VOC 8011 analysis on hydrochloric acid preserved TB-ROX-042114-HCL, correct analysis was performed per project requirements.

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated di-n-butyl phthalate and phenanthrene were detected in the method blank. SVOC LCS recoveries were outside evaluation criteria. These issues are addressed further in the appropriate sections below.

The cooler receipt form indicated that one of one cooler was received by the laboratory at a temperature of 1.5°C, which is outside the 4°C ± 2°C criteria. Samples were received in good condition; therefore, no qualification of data was required. Additionally, although the COC inadvertently lists two sodium thiosulfate preserved TB-ROX-042114-HCL VOAs and two hydrochloric acid preserved TB-ROX-042114-ST VOAs, the cooler receipt form states correct sample containers were sent and analyzed per project requirements.

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
OP37729-MB	SVOCs	Di-n-butyl phthalate	0.44 µg/L
OP37730-MB	PAHs	Phenanthrene	0.026 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 ID	Parameter	Analyte	LCS Recovery	LCS Criteria
OP37729-BS	SVOCs	Benzoic acid	23	30-130
OP37729-BS	SVOCs	2,4-Dinitrophenol	18	30-130
OP37729-BS	SVOCs	4-Nitrophenol	16	30-130
OP37729-BS	SVOCs	Pentachlorophenol	27	30-130

Analytical data that required qualification based on LCS data are included in the table below.

Sample ID	Parameter	Analyte	Qualification
P114-ROX-042114	SVOCs	Benzoic acid	UJ
P114-ROX-042114	SVOCs	2,4-Dinitrophenol	UJ
P114-ROX-042114	SVOCs	4-Nitrophenol	UJ
P114-ROX-042114	SVOCs	Pentachlorophenol	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

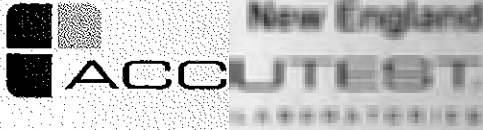
For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; samples analyzed did not require dilution.

12.0 Additional Qualifications

Were additional qualifications applied?

No



Technical Report for

Shell Oil

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana,

Accutest Job Number: MC29957

Sampling Date: 04/21/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: 56



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
5/28/2014
MM*

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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Sample Summary

Shell Oil

Job No: MC29957

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
MC29957-1	04/21/14	10:35	CWKH04/22/14	AQ Ground Water	P114-ROX-042114 ✓
MC29957-2	04/21/14	00:00	CWKH04/22/14	AQ Trip Blank Water	TB-ROX-042114 ST ✓
MC29957-3	04/21/14	00:00	CWKH04/22/14	AQ Trip Blank Water	TB-ROX-042114 HCL ✓



SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Shell Oil

Job No MC29957

Site: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central

Report Date 5/6/2014 1:29:38 PM

1 Sample and 2 Trip Blank(s) were collected on 04/21/2014 and were received at Accutest on 04/22/2014 properly preserved, at 1.5 Deg. C and intact. These Samples received an Accutest job number of MC29957. 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: MSV1144
-----------	-------------------

- ☒ All samples were analyzed within the recommended method holding time.
- ☒ Sample(s) MC30206-11MS, MC30206-11MSD were used as the QC samples indicated.
- ☒ All method blanks for this batch meet method specific criteria.
- ☒ MC30206-11MS/MSD Recovery(s) for cis-1,2-Dichloroethene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- ☒ MC30206-11MS/MSD Recovery(s) for 2-Butanone (MEK), 2-Chloroethyl vinyl ether are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.

Extractables by GCMS By Method SW846 8270D

Matrix AQ	Batch ID: OP37729
-----------	-------------------

- ☒ All samples were extracted within the recommended method holding time.
- ☒ All samples were analyzed within the recommended method holding time.
- ☒ Sample(s) MC29800-13MS, MC29800-13MSD were used as the QC samples indicated.
- ☒ Sample(s) MC29957-1 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- ☒ Blank Spike Recovery(s) for 2,4-Dinitrophenol, 4-Nitrophenol, Benzoic Acid, Pentachlorophenol are outside control limits. Blank Spike meets program technical requirements.
- ☒ Matrix Spike Recovery(s) for 2,4-Dinitrophenol, 4-Nitrophenol, Benzoic Acid, Pyridine are outside control limits. Blank Spike meets program technical requirements.
- ☒ Matrix Spike Duplicate Recovery(s) for 2,4-Dinitrophenol, 4-Nitrophenol, Benzoic Acid, Pentachlorophenol, Pyridine are outside control limits. Blank Spike meets program technical requirements.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ	Batch ID: OP37730
-----------	-------------------

- ☒ All samples were extracted within the recommended method holding time.
- ☒ All samples were analyzed within the recommended method holding time.
- ☒ Sample(s) MC29800-14MS, MC29800-14MSD 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:	OP37779
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2

- 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) MC30000-2MS, MC30000-2MSD were used as the QC samples indicated.
- OP37779-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(MC29957).

Summary of Hits

Job Number: MC29957

Account: Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Collected: 04/21/14



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

MC29957-1 P114-ROX-042114

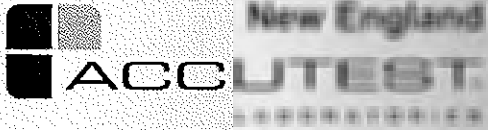
Methyl Tert Butyl Ether	9.3	1.0	0.51	ug/l	SW846 8260C
Di-n-butyl phthalate	2.6 JB	5.1	0.18	ug/l	SW846 8270D
Acenaphthene	0.11	0.10	0.070	ug/l	SW846 8270D BY SIM
Anthracene	0.10	0.10	0.094	ug/l	SW846 8270D BY SIM

MC29957-2 TB-ROX-042114 ST

No hits reported in this sample.

MC29957-3 TB-ROX-042114 HCL

No hits reported in this sample.



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: P114-ROX-042114	Date Sampled: 04/21/14
Lab Sample ID: MC29957-1	Date Received: 04/22/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30659.D	1	05/05/14	AMY	n/a	n/a	MSV1144
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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

Report of Analysis

Client Sample ID:	P114-ROX-042114	Date Sampled:	04/21/14
Lab Sample ID:	MC29957-1	Date Received:	04/22/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobntadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	9.3	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID:	P114-ROX-042114	Date Sampled:	04/21/14
Lab Sample ID:	MC29957-1	Date Received:	04/22/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		70-130%
2037-26-5	Toluene-D8	92%		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 J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P114-ROX-042114	Date Sampled:	04/21/14
Lab Sample ID:	MC29957-1	Date Received:	04/22/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R38735.D	1	05/03/14	WK	04/23/14	OP37729	MSR1426
Run #2							

Run #	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	2.6	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.1	0.32	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.84	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.57	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.6	ug/l	UJ
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.48	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.55	ug/l	UJ
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	UJ
108-95-2	Phenol	ND	5.1	0.31	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.38	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.65	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.1	0.48	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.1	0.54	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.1	0.32	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.57	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	0.36	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.1	0.34	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.1	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.47	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.31	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.1	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	2.6	5.1	0.18	ug/l	JB
117-84-0	Di-n-octyl phthalate	ND	5.1	0.29	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:	P114-ROX-042114	Date Sampled:	04/21/14
Lab Sample ID:	MC29957-1	Date Received:	04/22/14
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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	5.1	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.1	0.35	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.34	ug/l	
118-74-1	Hexachlorobenzene	ND	5.1	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.1	0.31	ug/l	
78-59-1	Isophorone	ND	5.1	0.46	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.1	0.40	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.1	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	0.41	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	0.20	ug/l	
110-86-1	Pyridine	ND	10	0.53	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenul	31%		15-110%
4165-62-2	Phenol-d5	22%		15-110%
118-79-6	2,4,6-Tribromophenol	70%		15-110%
4165-60-0	Nitrobenzene-d5	51%		30-130%
321-60-8	2-Fluorobiphenyl	59%		30-130%
1718-51-0	Terphenyl-d14	75%		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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J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID: P114-ROX-042114	Date Sampled: 04/21/14
Lab Sample ID: MC29957-1	Date Received: 04/22/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270D BY SIM SW846 3510C	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I88904.D	1	05/05/14	MR	04/23/14	OP37730	MSI3312
Run #2							

Run #	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	0.11	0.10	0.070	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.051	ug/l	
120-12-7	Anthracene	0.10	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	55%		30-130%
321-60-8	2-Fluorobiphenyl	56%		30-130%
1718-51-0	Terphenyl-d14	77%		30-130%

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

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

Report of Analysis

Client Sample ID: P114-ROX-042114	Date Sampled: 04/21/14
Lab Sample ID: MC29957-1	Date Received: 04/22/14
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89471.D	1	04/27/14	SZ	04/24/14	OP37779	GYZ7549
Run #2							

Run #	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)	92%		36-173%
460-00-4	Bromofluorobenzene (S)	101%		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

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Report of Analysis

Client Sample ID: TB-ROX-042114 ST	Date Sampled: 04/21/14
Lab Sample ID: MC29957-2	Date Received: 04/22/14
Matrix: AQ - Trip Blank Water	Percent Solids: n/a
Method: SW846 8011 SW846 8011	
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ89472.D	1	04/27/14	SZ	04/24/14	OP37779	GYZ7549
Run #2							

Run #	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)	109%		36-173%
460-00-4	Bromofluorobenzene (S)	121%		36-173%

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

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

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Report of Analysis

Client Sample ID:	TB-ROX-042114 HCL	Date Sampled:	04/21/14
Lab Sample ID:	MC29957-3	Date Received:	04/22/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C	Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30658.D	1	05/05/14	AMY	n/a	n/a	MSV1144
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-042114 HCL	Date Sampled:	04/21/14
Lab Sample ID:	MC29957-3	Date Received:	04/22/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanoue	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ng/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB-ROX-042114 HCL	Date Sampled:	04/21/14
Lab Sample ID:	MC29957-3	Date Received:	04/22/14
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL		

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VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		70-130%
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	91%		70-130%

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

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates 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



Shell Oil Products Chain Of Custody Record

URS

LAB (LOCATION) W/NO CALS/CLERK CHEMIST/LEAD 455 Technology Dr W, Marlborough, MA 01752 (508-481-6200) OTHER VENDOR # _____

Lab Vendor # _____

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

Print Bill To Contact Name: Bob Birman
 INCIDENT # (ENV SERVICES) 9 7 2 1 6 8 4 0
 DATE: 4/21/14
 PO # _____ SAP # _____
 STATE: 3 4 0 0 0 6 1 LOCAL (CITY) _____
 CITY ADDRESS: Street and City: 900 South Central Ave; ROXANA, IL
 ZIP: 60070
 CONSULTANT PROJECT NO: Roxana Quarterly GW / 21562973.03052
 SAMPLE LABEL(S): C. Williams / K. Huest LAB USE ONLY: MC29957

TURNAROUND TIME (CALC IN WORKING DAYS)
 STANDARD (10 DAY) 5 DAYS 3 DAYS 7 DAYS 24 HOURS RESERVS NEEDED WEEKEND

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.
 CHECK CONTRACT RATE APPLIES
 STATE REPAIR/REMIT RATE APPLIES
 COO NOT NEEDED
 RECEIPT VERIFICATION REQUESTED
 PAYABLE LEAD LASK

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE						NO. OF CONT.	VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL	PID (ppm)	FIELD NOTES: TEMPERATURE ON RECEIPT C° Container PID Readings or Laboratory Notes
		DATE	TIME		NCL	LNDS	MSDN	NONE	OTHER								
-1	P114-Rox-042114 ✓	4/21/14	1035	WATER					2	2	6	2	2	1	1		
-2	TB-Rox-042114 ST ✓								2			2	4				
-3	TB-Rox-042114 HCC ✓								2			2	4				

19A, 1F3
15.3

Received by (Signature): Kelly D... Date: 4/21/14 Time: 1130
 Received by (Signature): [Signature] Date: 4/22/14 Time: 9:30
 Received by (Signature): [Signature]

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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC29957 Client: URS Immediate Client Services Action Required: No
 Date / Time Received: 4/22/2014 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: Infrared 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 -2 Only two Na2S2O3 preserved vials rec'd
 -3 Only two HCL preserved vials rec'd

Accutest Laboratories
 V:508.481.6200

495 Technology Center West, Bldg One
 F: 508.481.7753

Marlborough, MA
 www.accutest.com

5.1

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC29957

URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

5.2
5

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC29957-1 Collected: 21-APR-14 10:35 By: CWKH Received: 22-APR-14 By: AF P114-ROX-042114						
MC29957-1	SW846 8011	27-APR-14 22:20	SZ	24-APR-14	MT	V8011SL
MC29957-1	SW846 8270D	03-MAY-14 20:07	WK	23-APR-14	BJ	AB8270SL+
MC29957-1	SW846 8270D BY SIM	05-MAY-14 10:26	MR	23-APR-14	BJ	B8270SIMSL
MC29957-1	SW846 8260C	05-MAY-14 12:41	AMY			V8260SL+
MC29957-2 Collected: 21-APR-14 00:00 By: CWKH Received: 22-APR-14 By: AF TB-ROX-042114 ST						
MC29957-2	SW846 8011	27-APR-14 22:46	SZ	24-APR-14	MT	V8011SL
MC29957-3 Collected: 21-APR-14 00:00 By: CWKH Received: 22-APR-14 By: AF TB-ROX-042114 HCL						
MC29957-3	SW846 8260C	05-MAY-14 12:15	AMY			V8260SL+

Accutest Internal Chain of Custody

Job Number: MC29957
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL
 Received: 04/22/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC29957-1.1	Walk In Ref #22	Alireza Zeighami	04/23/14 07:41	Retrieve from Storage
MC29957-1.1	Alireza Zeighami		04/24/14 07:17	Depleted
MC29957-1.3	VOC Ref #1	Amy Min Yang	05/03/14 09:52	Retrieve from Storage
MC29957-1.3	Amy Min Yang	GCMSV	05/03/14 09:52	Load on Instrument
MC29957-1.3	GCMSV	Amy Min Yang	05/05/14 08:50	Unload from Instrument
MC29957-1.3	Amy Min Yang	VOC Ref #1	05/05/14 08:50	Return to Storage
MC29957-1.4	VOC Ref #1	Amy Min Yang	05/05/14 10:09	Retrieve from Storage
MC29957-1.4	Amy Min Yang	GCMSV	05/05/14 10:09	Load on Instrument
MC29957-1.4	GCMSV	Amy Min Yang	05/06/14 12:28	Unload from Instrument
MC29957-1.4	Amy Min Yang	VOC Ref #1	05/06/14 12:29	Return to Storage
MC29957-1.6	VOC Ref #1	Marc Tahtamoni	04/24/14 20:03	Retrieve from Storage
MC29957-2.2	VOC Ref #1	Marc Tahtamoni	04/24/14 20:03	Retrieve from Storage
MC29957-3.1	VOC Ref #1	Amy Min Yang	05/03/14 09:52	Retrieve from Storage
MC29957-3.1	Amy Min Yang	GCMSV	05/03/14 09:52	Load on Instrument
MC29957-3.1	GCMSV	Amy Min Yang	05/05/14 08:50	Unload from Instrnment
MC29957-3.1	Amy Min Yang	VOC Ref #1	05/05/14 08:50	Return to Storage
MC29957-3.2	VOC Ref #1	Amy Min Yang	05/05/14 10:09	Retrieve from Storage
MC29957-3.2	Amy Min Yang	GCMSV	05/05/14 10:09	Load on Instrument
MC29957-3.2	GCMSV	Amy Min Yang	05/06/14 12:28	Unload from Instrument
MC29957-3.2	Amy Min Yang	VOC Ref #1	05/06/14 12:29	Return to 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: MC29957
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1144-MB	V30654.D	1	05/05/14	AMY	n/a	n/a	MSV1144

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29957-1, MC29957-3

6.1.1

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CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC29957

Account: SHELLWIC Shell Oil

Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1144-MB	V30654.D	1	05/05/14	AMY	n/a	n/a	MSV1144

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29957-1, MC29957-3

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ng/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ng/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ng/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

6.1.1

6

Method Blank Summary

Job Number: MC29957

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1144-MB	V30654.D	1	05/05/14	AMY	n/a	n/a	MSV1144

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29957-1, MC29957-3

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	104% 70-130%
2037-26-5	Toluene-D8	91% 70-130%
460-00-4	4-Bromofluorobenzene	89% 70-130%

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

6.1.1



Blank Spike Summary

Job Number: MC29957
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1144-BS	V30651.D	1	05/05/14	AMY	n/a	n/a	MSV1144

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29957-1, MC29957-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	40.9	82	70-130
107-02-8	Acrolein	250	256	102	70-130
107-13-1	Acrylonitrile	50	49.3	99	70-130
71-43-2	Benzene	50	50.2	100	70-130
108-86-1	Bromobenzene	50	52.0	104	70-130
74-97-5	Bromochloromethane	50	51.0	102	70-130
75-27-4	Bromodichloromethane	50	55.1	110	70-130
75-25-2	Bromoform	50	47.0	94	70-130
74-83-9	Bromomethane	50	51.9	104	70-130
78-93-3	2-Butanone (MEK)	50	46.7	93	70-130
104-51-8	n-Butylbenzene	50	52.1	104	70-130
135-98-8	sec-Butylbenzene	50	52.5	105	70-130
98-06-6	tert-Butylbenzene	50	51.2	102	70-130
75-15-0	Carbon disulfide	50	46.5	93	70-130
56-23-5	Carbon tetrachloride	50	59.1	118	70-130
108-90-7	Chlorobenzene	50	50.9	102	70-130
75-00-3	Chloroethane	50	60.2	120	70-130
110-75-8	2-Chloroethyl vinyl ether	50	39.1	78	70-130
67-66-3	Chloroform	50	51.2	102	70-130
74-87-3	Chloromethane	50	51.3	103	70-130
95-49-8	o-Chlorotoluene	50	50.2	100	70-130
106-43-4	p-Chlorotoluene	50	52.7	105	70-130
124-48-1	Dibromochloromethane	50	50.0	100	70-130
95-50-1	1,2-Dichlorobenzene	50	49.5	99	70-130
541-73-1	1,3-Dichlorobenzene	50	50.7	101	70-130
106-46-7	1,4-Dichlorobenzene	50	51.8	104	70-130
75-71-8	Dichlorodifluoromethane	50	46.4	93	70-130
75-34-3	1,1-Dichloroethane	50	51.0	102	70-130
107-06-2	1,2-Dichloroethane	50	55.0	110	70-130
75-35-4	1,1-Dichloroethene	50	52.1	104	70-130
156-59-2	cis-1,2-Dichloroethene	50	49.9	100	70-130
156-60-5	trans-1,2-Dichloroethene	50	50.3	101	70-130
78-87-5	1,2-Dichloropropane	50	54.9	110	70-130
142-28-9	1,3-Dichloropropane	50	53.1	106	70-130
594-20-7	2,2-Dichloropropane	50	54.2	108	70-130
563-58-6	1,1-Dichloropropene	50	53.0	106	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC29957
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1144-BS	V30651.D	1	05/05/14	AMY	n/a	n/a	MSV1144

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29957-1, MC29957-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	49.0	98	70-130
10061-02-6	trans-1,3-Dichloropropene	50	63.3	127	70-130
123-91-1	1,4-Dioxane	250	224	90	70-130
97-63-2	Ethyl methacrylate	50	50.0	100	77-137
100-41-4	Ethylbenzene	50	53.7	107	70-130
87-68-3	Hexachlorobutadiene	50	45.5	91	70-130
591-78-6	2-Hexanone	50	48.0	96	70-130
98-82-8	Isopropylbenzene	50	50.7	101	70-130
99-87-6	p-Isopropyltoluene	50	52.4	105	70-130
1634-04-4	Methyl Tert Butyl Ether	50	50.6	101	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	51.0	102	70-130
74-95-3	Methylene bromide	50	54.9	110	70-130
75-09-2	Methylene chloride	50	49.6	99	70-130
91-20-3	Naphthalene	50	53.5	107	70-130
103-65-1	n-Propylbenzene	50	51.1	102	70-130
100-42-5	Styrene	50	56.0	112	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	56.8	114	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	56.0	112	70-130
127-18-4	Tetrachloroethene	50	53.0	106	70-130
108-88-3	Toluene	50	54.7	109	70-130
87-61-6	1,2,3-Trichlorobenzene	50	58.2	116	70-130
120-82-1	1,2,4-Trichlorobenzene	50	46.1	92	70-130
71-55-6	1,1,1-Trichloroethane	50	55.1	110	70-130
79-00-5	1,1,2-Trichloroethane	50	56.7	113	70-130
79-01-6	Trichloroethene	50	50.8	102	70-130
75-69-4	Trichlorofluoromethane	50	61.4	123	70-130
96-18-4	1,2,3-Trichloropropane	50	53.8	108	70-130
95-63-6	1,2,4-Trimethylbenzene	50	51.8	104	70-130
108-67-8	1,3,5-Trimethylbenzene	50	52.2	104	70-130
108-05-4	Vinyl Acetate	50	48.5	97	70-130
75-01-4	Vinyl chloride	50	57.2	114	70-130
	m,p-Xylene	100	108	108	70-130
95-47-6	o-Xylene	50	53.0	106	70-130
1330-20-7	Xylene (total)	150	161	107	70-130

* = Outside of Control Limits.

6.2.1
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Blank Spike Summary

Job Number: MC29957

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1144-BS	V30651.D	1	05/05/14	AMY	n/a	n/a	MSV1144

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29957-1, MC29957-3

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	87%	70-130%
2037-26-5	Toluene-D8	90%	70-130%
460-00-4	4-Bromofluorobenzene	89%	70-130%

* = Outside of Control Limits.

6.2.1

6

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29957
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC30206-11MS	V30673.D	5	05/05/14	AMY	n/a	n/a	MSV1144
MC30206-11MSD	V30674.D	5	05/05/14	AMY	n/a	n/a	MSV1144
MC30206-11	V30664.D	1	05/05/14	AMY	n/a	n/a	MSV1144
MC30206-11	V30676.D	10	05/05/14	AMY	n/a	n/a	MSV1144

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29957-1, MC29957-3

CAS No.	Compound	MC30206-11 Spike		MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
		ug/l	Q							
67-64-1	Acetone	ND	250	296	118	250	257	103	14	70-130/30
107-02-8	Acrolein	ND	1250	1140	91	1250	1130	90	1	70-130/30
107-13-1	Acrylonitrile	ND	250	248	99	250	242	97	2	70-130/30
71-43-2	Benzene	0.63	250	253	101	250	244	97	4	70-130/30
108-86-1	Bromobenzene	ND	250	263	105	250	255	102	3	70-130/30
74-97-5	Bromochloromethane	ND	250	252	101	250	244	98	3	70-130/30
75-27-4	Bromodichloromethane	ND	250	274	110	250	265	106	3	70-130/30
75-25-2	Bromoform	ND	250	241	96	250	236	94	2	70-130/30
74-83-9	Bromomethane	ND	250	249	100	250	236	94	5	70-130/30
78-93-3	2-Butanone (MEK)	ND	250	577	231* a	250	571	228* a	1	70-130/30
104-51-8	n-Butylbenzene	ND	250	264	106	250	253	101	4	70-130/30
135-98-8	sec-Butylbenzene	ND	250	265	106	250	250	100	6	70-130/30
98-06-6	tert-Butylbenzene	ND	250	259	104	250	242	97	7	70-130/30
75-15-0	Carbon disulfide	ND	250	235	94	250	225	90	4	70-130/30
56-23-5	Carbon tetrachloride	ND	250	305	122	250	294	118	4	70-130/30
108-90-7	Chlorobenzene	ND	250	257	103	250	248	99	4	70-130/30
75-00-3	Chloroethane	ND	250	294	118	250	287	115	2	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND	250	ND	0* a	250	ND	0* a	nc	70-130/30
67-66-3	Chloroform	ND	250	260	104	250	247	99	5	70-130/30
74-87-3	Chloromethane	ND	250	248	99	250	234	94	6	70-130/30
95-49-8	o-Chlorotoluene	ND	250	251	100	250	239	96	5	70-130/30
106-43-4	p-Chlorotolene	ND	250	265	106	250	253	101	5	70-130/30
124-48-1	Dibromochloromethane	ND	250	252	101	250	246	98	2	70-130/30
95-50-1	1,2-Dichlorobenzene	ND	250	250	100	250	240	96	4	70-130/30
541-73-1	1,3-Dichlorobenzene	ND	250	256	102	250	244	98	5	70-130/30
106-46-7	1,4-Dichlorobenzene	ND	250	260	104	250	250	100	4	70-130/30
75-71-8	Dichlorodifluoromethane	ND	250	212	85	250	194	78	9	70-130/30
75-34-3	1,1-Dichloroethane	ND	250	256	102	250	248	99	3	70-130/30
107-06-2	1,2-Dichloroethane	ND	250	278	111	250	268	107	4	70-130/30
75-35-4	1,1-Dichloroethene	0.70	J 250	263	105	250	255	102	3	70-130/30
156-59-2	cis-1,2-Dichloroethene	819 c	250	1660	336* b	250	1610	316* b	3	70-130/30
156-60-5	trans-1,2-Dichloroethene	8.5	250	259	100	250	248	96	4	70-130/30
78-87-5	1,2-Dichloropropane	ND	250	274	110	250	268	107	2	70-130/30
142-28-9	1,3-Dichloropropane	ND	250	271	108	250	262	105	3	70-130/30
594-20-7	2,2-Dichloropropane	ND	250	269	108	250	257	103	5	70-130/30
563-58-6	1,1-Dichloropropene	ND	250	269	108	250	257	103	5	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29957

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC30206-11MS	V30673.D	5	05/05/14	AMY	n/a	n/a	MSV1144
MC30206-11MSD	V30674.D	5	05/05/14	AMY	n/a	n/a	MSV1144
MC30206-11	V30664.D	1	05/05/14	AMY	n/a	n/a	MSV1144
MC30206-11	V30676.D	10	05/05/14	AMY	n/a	n/a	MSV1144

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29957-1, MC29957-3

6.3.1



CAS No.	Compound	MC30206-11 Spike		MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
		ug/l	Q							
10061-01-5	cis-1,3-Dichloropropene	ND	250	231	92	250	227	91	2	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND	250	317	127	250	317	127	0	70-130/30
123-91-1	1,4-Dioxane	ND	1250	1180	94	1250	1030	82	14	70-130/30
97-63-2	Ethyl methacrylate	ND	250	286	114	250	293	117	2	72-139/30
100-41-4	Ethylbenzene	ND	250	270	108	250	259	104	4	70-130/30
87-68-3	Hexachlorobutadiene	ND	250	242	97	250	236	94	3	70-130/30
591-78-6	2-Hexanone	ND	250	262	105	250	254	102	3	70-130/30
98-82-8	Isopropylbenzene	ND	250	257	103	250	242	97	6	70-130/30
99-87-6	p-Isopropyltoluene	ND	250	267	107	250	250	100	7	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	250	264	106	250	258	103	2	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	250	301	120	250	298	119	1	70-130/30
74-95-3	Methylene bromide	ND	250	275	110	250	268	107	3	70-130/30
75-09-2	Methylene chloride	ND	250	247	99	250	237	95	4	70-130/30
91-20-3	Naphthalene	ND	250	280	112	250	285	114	2	70-130/30
103-65-1	n-Propylbenzene	ND	250	253	101	250	243	97	4	70-130/30
100-42-5	Styrene	ND	250	278	111	250	269	108	3	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND	250	289	116	250	274	110	5	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	284	114	250	276	110	3	70-130/30
127-18-4	Tetrachloroethene	ND	250	263	105	250	251	100	5	70-130/30
108-88-3	Toluene	ND	250	272	109	250	266	106	2	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND	250	285	114	250	285	114	0	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND	250	236	94	250	230	92	3	70-130/30
71-55-6	1,1,1-Trichloroethane	ND	250	283	113	250	274	110	3	70-130/30
79-00-5	1,1,2-Trichloroethane	ND	250	285	114	250	286	114	0	70-130/30
79-01-6	Trichloroethene	3.4	250	261	103	250	253	100	3	70-130/30
75-69-4	Trichlorofluoromethane	ND	250	284	114	250	263	105	8	70-130/30
96-18-4	1,2,3-Trichloropropane	ND	250	255	102	250	251	100	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND	250	261	104	250	248	99	5	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND	250	261	104	250	248	99	5	70-130/30
108-05-4	Vinyl Acetate	ND	250	254	102	250	248	99	2	70-130/30
75-01-4	Vinyl chloride	8.4	250	280	109	250	264	102	6	70-130/30
	m,p-Xylene	ND	500	538	108	500	515	103	4	70-130/30
95-47-6	o-Xylene	ND	250	264	106	250	253	101	4	70-130/30
1330-20-7	Xylene (total)	ND	750	801	107	750	768	102	4	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29957

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC30206-11MS	V30673.D	5	05/05/14	AMY	n/a	n/a	MSV1144
MC30206-11MSD	V30674.D	5	05/05/14	AMY	n/a	n/a	MSV1144
MC30206-11	V30664.D	1	05/05/14	AMY	n/a	n/a	MSV1144
MC30206-11	V30676.D	10	05/05/14	AMY	n/a	n/a	MSV1144

The QC reported here applies to the following samples:

Method: SW846 8260C

MC29957-1, MC29957-3

6.3.1



CAS No.	Surrogate Recoveries	MS	MSD	MC30206-11	MC30206-11	Limits
1868-53-7	Dibromofluoromethane	86%	85%	99%	93%	70-130%
2037-26-5	Toluene-D8	89%	89%	93%	90%	70-130%
460-00-4	4-Bromofluorobenzene	91%	89%	92%	90%	70-130%

- (a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
- (b) Outside control limits due to high level in sample relative to spike amount.
- (c) Result is from Run #2.

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC29957
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSV1144-CC1058	Injection Date:	05/05/14
Lab File ID:	V30651.D	Injection Time:	09:13
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	266459	6.57	363828	7.75	179036	11.09	199425	13.30	44497	3.51
Upper Limit ^a	532918	7.07	727656	8.25	358072	11.59	398850	13.80	88994	4.01
Lower Limit ^b	133230	6.07	181914	7.25	89518	10.59	99713	12.80	22249	3.01

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
MSV1144-BS	266459	6.57	363828	7.75	179036	11.09	199425	13.30	44497	3.51
MSV1144-MB	170863	6.57	252948	7.75	137013	11.09	130206	13.30	32697	3.51
ZZZZZZ	168560	6.57	251714	7.75	141167	11.09	131104	13.30	30270	3.51
ZZZZZZ	166467	6.57	249133	7.75	134422	11.09	127468	13.30	30417	3.51
ZZZZZZ	166014	6.57	256144	7.75	142502	11.09	145753	13.30	31234	3.51
MC29957-3	153866	6.57	232976	7.75	128135	11.09	119332	13.30	29876	3.51
MC29957-1	151941	6.57	228921	7.75	127798	11.09	136683	13.30	30111	3.51
ZZZZZZ	152014	6.57	234563	7.75	126643	11.09	123167	13.30	27778	3.51
ZZZZZZ	154745	6.57	233567	7.75	127152	11.09	123819	13.30	27403	3.51
ZZZZZZ	137918	6.57	207545	7.75	121866	11.09	112961	13.30	23800	3.51
MC30206-6	165313	6.57	229730	7.75	124529	11.09	114926	13.30	25341	3.50
MC30206-11	183109	6.57	241148	7.75	130687	11.09	124576	13.30	30831	3.51
ZZZZZZ	153969	6.57	230010	7.75	129471	11.09	122065	13.30	29422	3.51
ZZZZZZ	145344	6.57	222134	7.75	127830	11.09	120005	13.30	29016	3.51
ZZZZZZ	154435	6.57	229302	7.75	131778	11.09	123593	13.30	28730	3.51
ZZZZZZ	207339	6.56	255868	7.75	152875	11.09	160840	13.30	41345	3.51
ZZZZZZ	195114	6.57	283116	7.75	155780	11.09	149957	13.30	40199	3.51
ZZZZZZ	197933	6.57	276815	7.75	150407	11.09	138080	13.30	38225	3.51
MC30206-GMS	235666	6.57	319997	7.75	162774	11.09	185708	13.30	38710	3.51
MC30206-GMSD	240164	6.56	325735	7.75	163097	11.09	180464	13.30	40707	3.51
MC30206-11MS	258998	6.56	352425	7.75	174770	11.09	193396	13.30	47818	3.51
MC30206-11MSD	268645	6.57	364498	7.75	186044	11.08	206352	13.30	47851	3.51
MC30206-6	211897	6.56	297391	7.75	156500	11.08	154676	13.30	41363	3.50
MC30206-11	209699	6.57	287805	7.75	153190	11.08	145223	13.30	39153	3.51
MSV1144-ECC1058	236468	6.56	316543	7.74	160437	11.08	180216	13.30	37973	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
6

Volatile Surrogate Recovery Summary

Job Number: MC29957

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Method: SW846 8260C

Matrix: AQ

Samples and QC shown here apply to the above method

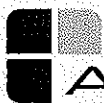
Lab Sample ID	Lab File ID	S1	S2	S3
MC29957-1	V30659.D	111	92	105
MC29957-3	V30658.D	113	92	91
MC30206-11MS	V30673.D	86	89	91
MC30206-11MSD	V30674.D	85	89	89
MSV1144-BS	V30651.D	87	90	89
MSV1144-MB	V30654.D	104	91	89

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

6.5.1

6



GC/MS Semi-volatiles

QC Data Summaries

7

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: MC29957
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37729-MB	R38729.D	1	05/03/14	WK	04/23/14	OP37729	MSR1426

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29957-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	0.44	5.0	0.17	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

7.1.1



Method Blank Summary

Job Number: MC29957
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37729-MB	R38729.D	1	05/03/14	WK	04/23/14	OP37729	MSR1426

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29957-1

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	37% 15-110%
4165-62-2	Phenol-d5	24% 15-110%
118-79-6	2,4,6-Tribromophenol	56% 15-110%
4165-60-0	Nitrobenzene-d5	60% 30-130%
321-60-8	2-Fluorobiphenyl	65% 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	

7.1.1



Method Blank Summary

Job Number: MC29957
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37730-MB	I88899.D	1	05/05/14	MR	04/23/14	OP37730	MSI3312

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29957-1

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	0.026	0.050	0.013	ug/l	J
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries	Limits	
4165-60-0	Nitrobenzene-d5	62%	30-130%
321-60-8	2-Fluorobiphenyl	59%	30-130%
1718-51-0	Terphenyl-d14	73%	30-130%

7.1.2



Blank Spike Summary

Job Number: MC29957

Account: SHELLWIC Shell Oil

Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37729-BS	R38730.D	1	05/03/14	WK	04/23/14	OP37729	MSR1426

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29957-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	11.7	23* a	30-130
95-57-8	2-Chlorophenol	50	34.7	69	30-130
59-50-7	4-Chloro-3-methyl phenol	50	32.8	66	30-130
120-83-2	2,4-Dichlorophenol	50	30.8	62	30-130
105-67-9	2,4-Dimethylphenol	50	29.1	58	30-130
51-28-5	2,4-Dinitrophenol	50	8.8	18* a	30-130
534-52-1	4,6-Dinitro-o-cresol	50	21.3	43	30-130
95-48-7	2-Methylphenol	50	41.9	84	30-130
	3&4-Methylphenol	100	57.1	57	30-130
88-75-5	2-Nitrophenol	50	31.7	63	30-130
100-02-7	4-Nitrophenol	50	8.1	16* a	30-130
87-86-5	Pentachlorophenol	50	13.6	27* a	30-130
108-95-2	Phenol	50	16.2	32	30-130
95-95-4	2,4,5-Trichlorophenol	50	31.9	64	30-130
88-06-2	2,4,6-Trichlorophenol	50	31.7	63	30-130
62-53-3	Aniline	50	28.2	56	40-140
101-55-3	4-Bromophenyl phenyl ether	50	39.0	78	40-140
85-68-7	Butyl benzyl phthalate	50	45.9	92	40-140
100-51-6	Benzyl Alcohol	50	24.2	48	40-140
91-58-7	2-Chloronaphthalene	50	38.5	77	40-140
106-47-8	4-Chloroaniline	50	34.4	69	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	36.6	73	40-140
111-44-4	bis(2-Chloroethyl)ether	50	37.5	75	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	48.3	97	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	34.9	70	40-140
122-66-7	1,2-Diphenylhydrazine	50	42.3	85	40-140
121-14-2	2,4-Dinitrotoluene	50	39.5	79	40-140
606-20-2	2,6-Dinitrotoluene	50	37.7	75	40-140
91-94-1	3,3'-Dichlorobenzidine	50	36.9	74	40-140
132-64-9	Dibenzofuran	50	36.1	72	40-140
84-74-2	Di-n-butyl phthalate	50	43.3	87	40-140
117-84-0	Di-n-octyl phthalate	50	48.0	96	40-140
84-66-2	Diethyl phthalate	50	42.1	84	40-140
131-11-3	Dimethyl phthalate	50	39.4	79	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	47.6	95	40-140
118-74-1	Hexachlorobenzene	50	35.7	71	40-140

* = Outside of Control Limits.

7.2.1



Blank Spike Summary

Job Number: MC29957
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37729-BS	R38730.D	1	05/03/14	WK	04/23/14	OP37729	MSR1426

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29957-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	20.9	42	40-140
67-72-1	Hexachloroethane	50	35.7	71	40-140
78-59-1	Isophorone	50	34.0	68	40-140
88-74-4	2-Nitroaniline	50	41.9	84	40-140
99-09-2	3-Nitroaniline	50	40.7	81	40-140
100-01-6	4-Nitroaniline	50	35.2	70	40-140
98-95-3	Nitrobenzene	50	32.9	66	40-140
62-75-9	n-Nitrosodimethylamine	50	21.6	43	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	40.9	82	40-140
86-30-6	N-Nitrosodiphenylamine	50	40.0	80	40-140
110-86-1	Pyridine	50	20.1	40	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	39%	15-110%
4165-62-2	Phenol-d5	28%	15-110%
118-79-6	2,4,6-Tribromophenol	62%	15-110%
4165-60-0	Nitrobenzene-d5	63%	30-130%
321-60-8	2-Fluorobiphenyl	67%	30-130%
1718-51-0	Terphenyl-d14	72%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

7.2.1


Blank Spike Summary

Job Number: MC29957
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37730-BS	I88900.D	1	05/05/14	MR	04/23/14	OP37730	MSI3312

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29957-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	34.5	69	40-140
208-96-8	Acenaphthylene	50	32.5	65	40-140
120-12-7	Anthracene	50	34.0	68	40-140
56-55-3	Benzo(a)anthracene	50	37.2	74	40-140
50-32-8	Benzo(a)pyrene	50	35.4	71	40-140
205-99-2	Benzo(h)fluoranthene	50	38.1	76	40-140
191-24-2	Benzo(g,h,i)perylene	50	40.2	80	40-140
207-08-9	Benzo(k)fluoranthene	50	37.8	76	40-140
218-01-9	Chrysene	50	35.3	71	40-140
53-70-3	Dihenzo(a,h)anthracene	50	42.2	84	40-140
206-44-0	Fluoranthene	50	37.7	75	40-140
86-73-7	Fluorene	50	35.6	71	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	41.3	83	40-140
90-12-0	1-Methylnaphthalene	50	33.6	67	40-140
91-57-6	2-Methylnaphthalene	50	32.8	66	40-140
85-01-8	Phenanthrene	50	34.7	69	40-140
129-00-0	Pyrene	50	37.2	74	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	67%	30-130%
321-60-8	2-Fluorobiphenyl	63%	30-130%
1718-51-0	Terphenyl-d14	73%	30-130%

* = Outside of Control Limits.

7.2.2



Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29957
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37729-MS	R38731.D	1	05/03/14	WK	04/23/14	OP37729	MSR1426
OP37729-MSD	R38732.D	1	05/03/14	WK	04/23/14	OP37729	MSR1426
MC29800-13	R38733.D	1	05/03/14	WK	04/23/14	OP37729	MSR1426

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29957-1

CAS No.	Compound	MC29800-13 Spike		MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
		ug/l	Q ug/l							
65-85-0	Benzoic Acid	ND	50	12.0	24* a	50	12.3	25* a	2	30-130/20
95-57-8	2-Chlorophenol	ND	50	32.5	65	50	34.8	70	7	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND	50	33.1	66	50	34.7	69	5	30-130/20
120-83-2	2,4-Dichlorophenol	ND	50	30.3	61	50	32.1	64	6	30-130/20
105-67-9	2,4-Dimethylphenol	ND	50	25.9	52	50	28.7	57	10	30-130/20
51-28-5	2,4-Dinitrophenol	ND	50	10.6	21* a	50	10.7	21* a	1	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND	50	25.9	52	50	25.6	51	1	30-130/20
95-48-7	2-Methylphenol	ND	50	36.1	72	50	38.9	78	7	30-130/20
	3&4-Methylphenol	ND	100	53.9	54	100	57.9	58	7	30-130/20
88-75-5	2-Nitrophenol	ND	50	30.8	62	50	32.9	66	7	30-130/20
100-02-7	4-Nitrophenol	ND	50	9.4	19* a	50	9.6	19* a	2	30-130/20
87-86-5	Pentachlorophenol	ND	50	15.9	32	50	14.6	29* a	9	30-130/20
108-95-2	Phenol	ND	50	15.2	30	50	16.3	33	7	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND	50	33.2	66	50	33.7	67	1	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND	50	32.5	65	50	34.8	70	7	30-130/20
62-53-3	Aniline	ND	50	26.2	52	50	27.3	55	4	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND	50	40.7	81	50	42.2	84	4	40-140/20
85-68-7	Butyl benzyl phthalate	ND	50	50.7	101	50	49.9	100	2	40-140/20
100-51-6	Benzyl Alcohol	ND	50	23.0	46	50	25.5	51	10	40-140/20
91-58-7	2-Chloronaphthalene	ND	50	37.4	75	50	40.3	81	7	40-140/20
106-47-8	4-Chloroaniline	ND	50	34.4	69	50	35.6	71	3	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND	50	33.4	67	50	36.6	73	9	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND	50	34.3	69	50	37.1	74	8	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND	50	43.7	87	50	47.7	95	9	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND	50	35.2	70	50	36.9	74	5	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND	50	44.0	88	50	45.6	91	4	40-140/20
121-14-2	2,4-Dinitrotoluene	ND	50	41.1	82	50	42.7	85	4	40-140/20
606-20-2	2,6-Dinitrotoluene	ND	50	39.7	79	50	40.9	82	3	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND	50	43.7	87	50	41.3	83	6	40-140/20
132-64-9	Dibenzofuran	ND	50	35.9	72	50	38.3	77	6	40-140/20
84-74-2	Di-n-butyl phthalate	0.36	JB 50	49.2	98	50	47.3	94	4	40-140/20
117-84-0	Di-n-octyl phthalate	ND	50	53.0	106	50	52.2	104	2	40-140/20
84-66-2	Diethyl phthalate	ND	50	44.2	88	50	45.4	91	3	40-140/20
131-11-3	Dimethyl phthalate	ND	50	40.3	81	50	42.1	84	4	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND	50	52.8	106	50	52.0	104	2	40-140/20
118-74-1	Hexachlorobenzene	ND	50	37.9	76	50	38.6	77	2	40-140/20

* = Outside of Control Limits.

7.3.1
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29957
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37729-MS	R38731.D	1	05/03/14	WK	04/23/14	OP37729	MSR1426
OP37729-MSD	R38732.D	1	05/03/14	WK	04/23/14	OP37729	MSR1426
MC29800-13	R38733.D	1	05/03/14	WK	04/23/14	OP37729	MSR1426

The QC reported here applies to the following samples:

Method: SW846 8270D

MC29957-1

CAS No.	Compound	MC29800-13 Spike		MS	MS	Spike	MSD	MSD	RPD	Limits
		ug/l	Q ug/l	ug/l	%	ug/l	ug/l	%		Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND	50	19.8	40	50	21.7	43	9	40-140/20
67-72-1	Hexachloroethane	ND	50	32.9	66	50	34.8	70	6	40-140/20
78-59-1	Isophorone	ND	50	32.4	65	50	35.1	70	8	40-140/20
88-74-4	2-Nitroaniline	ND	50	42.7	85	50	45.2	90	6	40-140/20
99-09-2	3-Nitroaniline	ND	50	44.0	88	50	39.9	80	10	40-140/20
100-01-6	4-Nitroaniline	ND	50	38.7	77	50	38.4	77	1	40-140/20
98-95-3	Nitrobenzene	ND	50	30.9	62	50	33.4	67	8	40-140/20
62-75-9	n-Nitrosodimethylamine	ND	50	20.2	40	50	21.4	43	6	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND	50	38.0	76	50	40.9	82	7	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND	50	41.9	84	50	42.5	85	1	40-140/20
110-86-1	Pyridine	ND	50	18.5	37* a	50	19.0	38* a	3	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29800-13 Limits	
367-12-4	2-Fluorophenol	38%	38%	38%	15-110%
4165-62-2	Phenol-d5	27%	28%	26%	15-110%
118-79-6	2,4,6-Tribromophenol	70%	70%	56%	15-110%
4165-60-0	Nitrobenzene-d5	63%	66%	62%	30-130%
321-60-8	2-Fluorobiphenyl	69%	73%	65%	30-130%
1718-51-0	Terphenyl-d14	85%	83%	78%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

7.3.1


Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29957
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37730-MS	188901.D	1	05/05/14	MR	04/23/14	OP37730	MSI3312
OP37730-MSD	188902.D	1	05/05/14	MR	04/23/14	OP37730	MSI3312
MC29800-14	188903.D	1	05/05/14	MR	04/23/14	OP37730	MSI3312

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC29957-1

CAS No.	Compound	MC29800-14 Spike		MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
		ug/l	Q							
83-32-9	Acenaphthene	ND	50	34.7	69	50	36.6	73	5	40-140/20
208-96-8	Acenaphthylene	ND	50	32.6	65	50	34.4	69	5	40-140/20
120-12-7	Anthracene	ND	50	35.9	72	50	37.1	74	3	40-140/20
56-55-3	Benzo(a)anthracene	ND	50	40.3	81	50	40.4	81	0	40-140/20
50-32-8	Benzo(a)pyrene	ND	50	38.9	78	50	38.6	77	1	40-140/20
205-99-2	Benzo(b)fluoranthene	ND	50	40.8	82	50	40.2	80	1	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND	50	44.2	88	50	43.9	88	1	40-140/20
207-08-9	Benzo(k)fluoranthene	ND	50	42.1	84	50	42.5	85	1	40-140/20
218-01-9	Chrysene	ND	50	38.7	77	50	38.5	77	1	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND	50	45.8	92	50	45.6	91	0	40-140/20
206-44-0	Fluoranthene	ND	50	40.7	81	50	40.3	81	1	40-140/20
86-73-7	Fluorene	ND	50	36.8	74	50	37.7	75	2	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND	50	44.7	89	50	44.6	89	0	40-140/20
90-12-0	1-Methylnaphthalene	0.059	J 50	31.9	64	50	34.8	69	9	40-140/20
91-57-6	2-Methylnaphthalene	0.090	J 50	31.2	62	50	33.9	68	8	40-140/20
85-01-8	Phenanthrene	0.039	J 50	36.9	74	50	37.7	75	2	40-140/20
129-00-0	Pyrene	ND	50	41.0	82	50	40.4	81	1	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC29800-14 Limits
4165-60-0	Nitrobenzene-d5	66%	70%	65% 30-130%
321-60-8	2-Fluorobiphenyl	65%	68%	59% 30-130%
1718-51-0	Terphenyl-d14	86%	85%	80% 30-130%

* = Outside of Control Limits.



Semivolatile Internal Standard Area Summary

Job Number: MC29957
 Account: SHELLWIC Shell Oil
 Project: URMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSI3312-CC3238	Injection Date:	05/05/14
Lab File ID:	I88898.D	Injection Time:	08:06
Instrument ID:	GCSI	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	331019	3.92	760358	4.97	436391	6.49	736588	7.86	505551	10.63	1266134	12.10
Upper Limit ^a	662038	4.42	1520716	5.47	872782	6.99	1473176	8.36	1011102	11.13	2532268	12.60
Lower Limit ^b	165510	3.42	380179	4.47	218196	5.99	368294	7.36	252776	10.13	633067	11.60

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37730-MB	334876	3.92	783519	4.97	444710	6.49	729996	7.86	530309	10.63	1300485	12.10
OP37730-BS	353893	3.92	821010	4.97	469560	6.49	769022	7.86	555577	10.64	1338732	12.10
OP37730-MS	345156	3.92	795573	4.97	450152	6.49	742497	7.86	527682	10.64	1279002	12.10
OP37730-MSD	372645	3.92	859970	4.97	487097	6.49	784876	7.86	561339	10.64	1346172	12.10
MC29800-14	322281	3.92	761585	4.97	436914	6.49	707748	7.86	499328	10.63	1253156	12.10
MC29957-1	322020	3.92	748758	4.97	419877	6.49	690023	7.86	483525	10.64	1194112	12.10
OP37871-MB	301203	3.92	688854	4.97	385118	6.49	619849	7.85	406503	10.63	992146	12.10
OP37871-BS	280377	3.92	645417	4.97	356222	6.49	564124	7.86	388732	10.64	948119	12.10
OP37871-BSD	325663	3.93	723427	4.97	405456	6.49	624978	7.86	411440	10.64	978155	12.10
ZZZZZZ	304981	3.92	687221	4.97	369555	6.49	591488	7.85	376678	10.63	910369	12.09
ZZZZZZ	313642	3.93	721916	4.97	388015	6.49	603224	7.86	367165	10.63	912485	12.10
ZZZZZZ	308035	3.92	715209	4.97	385806	6.49	616678	7.85	387413	10.63	971939	12.10
ZZZZZZ	317708	3.92	741081	4.97	394498	6.49	614572	7.86	390291	10.63	927866	12.10
OP37785-MB	623476	3.92	1439986	4.97	797907	6.50	1283568	7.86	858145	10.64	2138438	12.10
OP37785-BS	585272	3.92	1351885	4.97	747697	6.49	1209206	7.86	818508	10.64	1996779	12.11
OP37785-BSD	581052	3.92	1345330	4.97	743450	6.49	1198420	7.86	822207	10.64	2013115	12.11
ZZZZZZ	539815	3.92	1215509	4.97	677851	6.49	1078484	7.86	746220	10.64	1838250	12.10
ZZZZZZ	542548	3.92	1233479	4.97	681702	6.49	1113615	7.86	740334	10.64	1867091	12.10
ZZZZZZ	541364	3.92	1226174	4.97	669838	6.49	1076997	7.86	726599	10.64	1807005	12.10
ZZZZZZ	554349	3.92	1283499	4.97	706092	6.49	1155802	7.86	781290	10.64	1965373	12.10

- 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: MC29957
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	MSR1426-CC1410	Injection Date:	05/03/14
Lab File ID:	R38708.D	Injection Time:	08:52
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	205395	5.33	785150	6.43	453319	7.97	770949	9.27	736243	11.87	643107	13.57
Upper Limit ^a	410790	5.83	1570300	6.93	906638	8.47	1541898	9.77	1472486	12.37	1286214	14.07
Lower Limit ^b	102698	4.83	392575	5.93	226660	7.47	385475	8.77	368122	11.37	321554	13.07

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP37843-MB	201759	5.33	774282	6.43	445290	7.96	739691	9.27	718773	11.86	651005	13.56
OP37843-BS	223845	5.33	854124	6.43	492610	7.97	817769	9.27	782172	11.86	677957	13.57
ZZZZZZ	201364	5.33	772616	6.43	454905	7.96	750148	9.27	727118	11.86	648502	13.56
ZZZZZZ	191503	5.33	732585	6.43	428175	7.96	707123	9.27	679036	11.86	613710	13.56
ZZZZZZ	205520	5.33	792652	6.43	461731	7.97	763263	9.27	736464	11.86	670399	13.57
ZZZZZZ	180177	5.33	708329	6.43	406820	7.97	685808	9.27	665564	11.86	620610	13.56
ZZZZZZ	203696	5.33	778969	6.43	446017	7.97	714203	9.27	649638	11.86	594263	13.56
ZZZZZZ	203573	5.33	781404	6.43	453395	7.97	736698	9.27	695609	11.86	630810	13.57
ZZZZZZ	209236	5.33	807327	6.43	466309	7.97	752066	9.27	670332	11.86	604940	13.56
OP37843-MS1	210362	5.33	805645	6.43	463893	7.97	754364	9.27	699561	11.86	623345	13.57
OP37843-MSD1	206368	5.33	781806	6.43	445989	7.97	726500	9.27	669334	11.86	586689	13.57
MC30145-1	204264	5.33	781916	6.43	445261	7.97	716813	9.27	663248	11.86	599766	13.56
ZZZZZZ	194461	5.33	743135	6.43	429469	7.97	712073	9.27	642413	11.86	576768	13.56
ZZZZZZ	214889	5.33	824813	6.43	480315	7.97	771151	9.27	682894	11.86	608681	13.56
ZZZZZZ	197375	5.33	754189	6.43	445703	7.97	728240	9.27	645730	11.86	579127	13.56
ZZZZZZ	207154	5.33	803108	6.43	460137	7.97	758258	9.27	704015	11.86	630449	13.56
ZZZZZZ	194464	5.33	756526	6.43	442691	7.97	756257	9.27	751940	11.86	685124	13.56
OP37729-MB	209585	5.33	819776	6.43	476393	7.97	799735	9.27	742624	11.86	642110	13.56
OP37729-BS	225780	5.33	885490	6.43	517110	7.97	845681	9.27	785543	11.86	678627	13.57
OP37729-MS	225144	5.34	874659	6.43	511558	7.97	826015	9.27	755740	11.86	652329	13.57
OP37729-MSD	223545	5.33	868283	6.43	501997	7.97	820184	9.27	765450	11.86	666660	13.57
MC29800-13	197987	5.33	779152	6.43	457606	7.96	757510	9.27	724916	11.85	645418	13.56
ZZZZZZ	199892	5.33	787949	6.43	458644	7.96	767930	9.27	699056	11.86	621562	13.56
MC29957-1	205987	5.33	799801	6.43	467826	7.97	773044	9.27	705365	11.86	641877	13.57

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

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

7.4.2
7

Semivolatile Surrogate Recovery Summary

Job Number: MC29957

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Method: SW846 8270D	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC29957-1	R38735.D	31	22	70	51	59	75
OP37729-BS	R38730.D	39	28	62	63	67	72
OP37729-MB	R38729.D	37	24	56	60	65	74
OP37729-MS	R38731.D	38	27	70	63	69	85
OP37729-MSD	R38732.D	38	28	70	66	73	83

Surrogate Compounds Recovery Limits

S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

7.5.1



Semivolatile Surrogate Recovery Summary

Job Number: MC29957

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29957-1	I88904.D	55	56	77
OP37730-BS	I88900.D	67	63	73
OP37730-MB	I88899.D	62	59	73
OP37730-MS	I88901.D	66	65	86
OP37730-MSD	I88902.D	70	68	85

Surrogate Compounds	Recovery Limits
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S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

7.5.2





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: MC29957
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37779-MB	YZ89456A.D	1	04/27/14	SZ	04/24/14	OP37779	GYZ7549

The QC reported here applies to the following samples:

Method: SW846 8011

MC29957-1, MC29957-2

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)	132% 36-173%
460-00-4	Bromofluorobenzene (S)	142% 36-173%

8.1.1



Blank Spike Summary

Job Number: MC29957
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37779-BS	YZ89457A.D	1	04/27/14	SZ	04/24/14	OP37779	GYZ7549

The QC reported here applies to the following samples: Method: SW846 8011

MC29957-1, MC29957-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.086	121*	60-140
106-93-4	1,2-Dibromoethane	0.071	0.085	120*	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	113%*	36-173%
460-00-4	Bromofluorobenzene (S)	126%*	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC29957
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP37779-MS	YZ89460A.D	1	04/27/14	SZ	04/24/14	OP37779	GYZ7549
OP37779-MSD	YZ89461A.D	1	04/27/14	SZ	04/24/14	OP37779	GYZ7549
MC30000-2	YZ89462A.D	1	04/27/14	SZ	04/24/14	OP37779	GYZ7549

The QC reported here applies to the following samples: Method: SW846 8011

MC29957-1, MC29957-2

CAS No.	Compound	MC30000-2 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0686	0.10	146* ^a	0.0683	0.11	161* ^a	10	64-141/29
106-93-4	1,2-Dibromoethane	ND	0.0686	0.092	134	0.0683	0.10	146	8	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC30000-2	Limits
460-00-4	Bromofluorobenzene (S)	126%	118%	125%	36-173%
460-00-4	Bromofluorobenzene (S)	131%	131%	135%	36-173%

(a) Outside control limits due to possible matrix interference.

8.3.1



* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC29957

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 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
MC29957-1	YZ89471.D	92	101
MC29957-2	YZ89472.D	109	121
OP37779-BS	YZ89457A.D	113	126
OP37779-MB	YZ89456A.D	132	142
OP37779-MS	YZ89460A.D	126	131
OP37779-MSD	YZ89461A.D	118	131

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: MC29957
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7549-ICC7549	Injection Date:	04/27/14
Lab File ID:	YZ89452.D	Injection Time:	14:02
Instrument ID:	GCRYZ	Method:	SW846 8011

S1^a S1^b
 RT RT

Check Std	4.01	4.57
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Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
OP37779-MB	YZ89456A.D	04/27/14	15:48	4.01	4.57
OP37778-MB	YZ89456.D	04/27/14	15:48	4.01	4.57
OP37779-BS	YZ89457A.D	04/27/14	16:14	4.00	4.57
OP37778-BS	YZ89457.D	04/27/14	16:14	4.00	4.57
ZZZZZZ	YZ89459.D	04/27/14	17:05	4.01	4.57
OP37778-MS	YZ89460.D	04/27/14	17:32	4.00	4.57
OP37779-MS	YZ89460A.D	04/27/14	17:32	4.00	4.57
OP37779-MSD	YZ89461A.D	04/27/14	17:59	4.01	4.57
OP37778-MSD	YZ89461.D	04/27/14	17:59	4.01	4.57
MC30000-2	YZ89462A.D	04/27/14	18:24	4.00	4.57
MC29889-4	YZ89462.D	04/27/14	18:24	4.00	4.57
ZZZZZZ	YZ89463.D	04/27/14	18:51	4.00	4.57
ZZZZZZ	YZ89464.D	04/27/14	19:16	4.00	4.57
ZZZZZZ	YZ89465.D	04/27/14	19:42	4.00	4.57

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: MC29957
 Account: SHELLWIC Shell Oil
 Project: URSMOSTL:Roxana 2Q14 GW/ 21562973.03002 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7549-CC7549	Injection Date:	04/27/14
Lab File ID:	YZ89466.D	Injection Time:	20:09
Instrument ID:	GCYZ	Method:	SW846 8011

S1^a S1^b
 RT RT

Check Std	4.00	4.57
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Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S1 ^b RT
ZZZZZZ	YZ89467.D	04/27/14	20:35	4.00	4.57
ZZZZZZ	YZ89468.D	04/27/14	21:02	4.00	4.57
ZZZZZZ	YZ89469.D	04/27/14	21:28	4.00	4.57
ZZZZZZ	YZ89470.D	04/27/14	21:54	4.00	4.57
MC29957-1	YZ89471.D	04/27/14	22:20	4.00	4.57
MC29957-2	YZ89472.D	04/27/14	22:46	4.00	4.57
GYZ7549-ECC7549	YZ89473.D	04/27/14	23:12	4.00	4.57

Surrogate
 Compounds

S1 = Bromofluorobenzene (S)

- (a) Retention time from GC signal #2
- (b) Retention time from GC signal #1

8.5.2
8