Illinois Environmental Protection Agency

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

RCRA FACILITY GROUNDWATER, LEACHATE AND GAS REPORTING FORM

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

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

Facility Name: Equilon Enterprises LLC dba Shell Oil Products US

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

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

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

☐ LPC-160 Forms

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

☑ Groundwater Data (without LPC-160 Forms)

3 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)

_____

_____

URS

October 10, 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 – 3rd 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 1 copies)

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

1001 Highland Plaza Drive West, Suite 300
St. Louis, MO 63110
Phone: 314.429.0100
Fax: 314.429.0462

REPORT

INTERIM GROUNDWATER MONITORING PROGRAM – 3RD QUARTER 2014

Roxana, Illinois

Prepared for:

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

October 2014

URS Corporation
1001 Highlands Plaza Drive West, Suite 300
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(314) 429-0100
Project 21562973.03003

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URS Corporation (URS) is submitting this report on behalf of Shell Oil Products US (SOPUS) for the 3rd Quarter 2014 (3Q14) 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.

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

corrective action efforts within the residential area. The access agreement with the Village was signed on August 12, 2014, and well installation began in September 2014, with anticipated completion in October 2014. Documentation of this work will be provided in the 4th Quarter 2014 (4Q14) report.

Groundwater samples were collected and analyzed during 3Q14 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 3Q14 as part of the interim monitoring well network.

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

2.1 ADDITIONAL ACTIVITIES OR MODIFICATIONS

The following additional work activities or modifications were conducted in the 3Q14 sampling event:

- Repairs to cracked well pads at ROST-4-PZ(A) and ROST-4-PZ(C) were completed in June 2014.
- Installation of four new groundwater monitoring wells began in 3Q14. Wells will be sampled as a part of the Interim Groundwater Monitoring Program beginning in 4Q14.

2.2 GROUNDWATER MONITORING WELL GAUGING AND SAMPLING

Groundwater Monitoring Well Gauging

The comprehensive quarterly groundwater monitoring well gauging event was conducted between July 1 and 3, 2014. The 3Q14 gauging activities were conducted in conjunction with the 3Q14 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 3Q14 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 July 7 through July 18, 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 tubing[3]. The submersible pump, with the proper length of designated polyethylene tubing, was slowly lowered into the groundwater monitoring well to be sampled and the pump intake was set near the midpoint of the groundwater monitoring well screen.

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

For both sampling methods, the tubing from the sampling pump was connected to a flow-through cell, which discharged into a 5-gallon plastic container. Pumping was performed at a low flow rate (≤400 mL/minute) to minimize drawdown of the water level within the groundwater monitoring well. During groundwater purging, water quality parameters (pH, temperature, specific conductivity, turbidity, dissolved oxygen (DO), and oxidation-reduction (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 volatile organic compound (VOC) and semi-volatile organic compound (SVOC) analysis.

Perched groundwater monitoring piezometers ROST-5-PZ, ROST-7-PZ, ROST-10-PZ, and ROST-21-PZ in the Village, and P-60-12S and P-60-13S in the WRR, could not be sampled according to the Standard Operating Procedure (SOP), due to slow recharge rates or lack of water. Groundwater monitoring wells P-55 and P-68, located inside the WRR, contained LNAPL and were not sampled. Groundwater sampling field parameters can be found in **Tables 2a and 2b,** and groundwater 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 July 1, 2014 – December 31, 2014 (URS, 2014), as prepared by URS.

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

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

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

There were no PPE upgrades or exceedances of HASP action levels during the 3Q14 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) and 10% of the data were subjected to a data validation (Level IV data validation). 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 3Q14 groundwater gauging and sampling event.

3.1 GROUNDWATER MONITORING WELL GAUGING RESULTS

Comprehensive quarterly groundwater monitoring well gauging for the 3Q14 event was conducted between July 1 and 3, 2014. This groundwater monitoring well gauging was conducted in accordance with the Interim Groundwater Monitoring Program and the data can be found in **Table 1a**. Groundwater levels in most wells in the Village of Roxana have risen approximately 0.5 to 1 foot since 2nd Quarter 2014 (2Q14). Groundwater levels in most wells in the WRR have risen approximately 1 to 4 feet since 2Q14. Water levels continue to be above the top of the screens in many of the wells gauged during the 3Q14 event. The potentiometric surface observed during the 3Q14 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 3Q14. During the 3Q14 event, groundwater was encountered in P-60-12S, P-60-13S, ROST-7-PZ, and ROST-21-PZ; and groundwater was not encountered in ROST-5-PZ or ROST-10-PZ. The 3Q14 gauging results for perched groundwater monitoring wells and piezometers can be found in **Table 1a**.

During the 3Q14 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)**. In these wells, LNAPL thicknesses ranged from 0.02 to 0.13 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 3Q14, LNAPL was detected in four groundwater monitoring wells located in the WRR (P-55, P-60, P-60-S, and P-68). This routine gauging data can be found in **Table 1b** and is summarized below.

Monitoring Well	Range in LNAPL Thickness (feet)	Comments
P-55	0.08-0.32	Observed each week
P-60	0.02-0.12	Observed in 10 of 13 weeks
P-60-S	0.02	Observed in 1 of 13 weeks
P-68	0.03-0.08	Observed each week

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 along the west fence line and inside the refinery, respectively, during the 3Q14 gauging event.

3.2 DATA QUALITY REVIEW RESULTS

A total of nine sample delivery groups (SDGs) were prepared and sent to Accutest Laboratories in Marlborough, MA for the 3Q14 event. Forty-three different groundwater sample sets were prepared and analyzed for VOCs and SVOCs (including PAHs). This included 35 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 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 nine TB sets were analyzed for groundwater VOCs. Laboratory method blanks were analyzed with every analytical batch.

Based on laboratory control sample/laboratory control sample duplicate (LCS/LCSD), matrix spike/matrix spike duplicate (MS/MSD), surrogate, holding time, and field duplicate criteria, the groundwater results reported were accepted for their intended use. Compounds qualified by URS are specified in the data reviews presented in **Appendix 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 3Q14 sampling event.

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

SVOCs	
Acenaphthene	Indeno(1,2,3-cd)pyrene
Acenaphthylene	1-Methylnaphthalene
Anthracene	2-Methylnaphthalene
Benzo(a)anthracene	2-Methylphenol(o-Cresol)
Bis(2-Ethylhexyl)phthalate	3&4-Methylphenol (m&p-Cresol)
Chrysene (1,2-Benzphenanthracene)	Nitrobenzene
2,4-Dimethylphenol	Phenanthrene
Fluoranthene	Phenol
Fluorene	Pyrene

One SVOC (nitrobenzene) was detected in this event but was not detected in previous events. Analytical detections were compared to the concentration limits as provided in Condition IV(E) of the Permit for the WRB Refining LP Wood River Refinery[5]. These concentration limits include the Groundwater Quality Standards for Class I: Potable Resource Groundwater (35 IAC 620, Subpart D), the IEPA Tiered Approach to Corrective Action Objectives (TACO) Tier 1 Groundwater Remediation Objectives for the Groundwater Component of the Groundwater Ingestion Route (35 IAC 742 Appendix B, Table E), and the IEPA Toxicity Assessment Unit (Chemicals not in TACO, Tier 1 Tables). The results of this comparison are presented in **Table 3**. IEPA-published screening values were not available for the following detected VOCs: sec-butylbenzene, tert-butylbenzene, cymene (p-isopropyltoluene), and 1,2,4-trimethylbenzene.

Laboratory analytical results for the following VOCs exceeded their respective groundwater screening criteria in one or more samples this event: benzene, ethylbenzene,

[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.

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

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 3Q14 Roxana Interim Groundwater Monitoring Program, and the following conclusions are based on the data and information collected as part of this program.

- During 3Q14, 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 to 1 foot higher than in the previous quarter. Groundwater levels observed in the WRR were approximately 1 to 4 feet higher than in the previous quarter.
- Perched groundwater was evaluated at groundwater monitoring wells P-60-12S, P-60-13S, ROST-5-PZ, ROST-7-PZ, ROST-10-PZ, and ROST-21-PZ. During the evaluation, groundwater sampling could not be performed because slow recharge, insufficient amounts of water, or lack of water prevented sampling per the SOP.
- The analytical results from 3Q14 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											
4Q11	442.86	10/5/2011	NE	35.48	NA	NA	NA	407.38	399.45 - 384.45 (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	*
3Q14		7/1/2014	NE	42.22	NA	NA	NA	400.43		1.3	*
MW-02											
4Q11	443.93	10/5/2011	NE	36.65	NA	NA	NA	407.28	396.74 - 381.74 (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	*
3Q14		7/1/2014	NE	43.45	NA	NA	NA	400.32		119.0	*
MW-03											
4Q11	430.36	10/5/2011	NE	22.76	NA	NA	NA	407.60	399.38 - 384.38 (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	*
3Q14		7/1/2014	NE	29.26	NA	NA	NA	400.82		1.2	*
MW-04											
4Q11	441.58	10/5/2011	NE	33.99	NA	NA	NA	407.59	398.95 - 383.95 (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	*
3Q14		7/1/2014	NE	40.50	NA	NA	NA	400.64		97.2	*
MW-05											
4Q11	429.73	10/5/2011	NE	22.06	NA	NA	NA	407.67	398.60 - 383.60 (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	*
3Q14		7/2/2014	NE	28.93	NA	NA	NA	400.87		0.3	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
MW-06A											
4Q11	432.42	10/5/2011	NE	24.44	NA	NA	NA	407.98	400.44 - 385.44 (31.98 - 46.98)	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	*
3Q14		7/1/2014	NE	30.90	NA	NA	NA	401.24		1.4	*
MW-06B											
4Q11	432.29	10/5/2011	NE	24.28	NA	NA	NA	408.01	368.24 - 363.24 (64.05 - 69.05)	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	*
3Q14		7/1/2014	NE	30.93	NA	NA	NA	401.36		2.1	*
MW-06C											
4Q11	432.11	10/5/2011	NE	24.03	NA	NA	NA	408.08	347.16 - 342.16 (84.95 - 89.95)	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	*
3Q14		7/1/2014	NE	30.74	NA	NA	NA	401.37		2.1	*
MW-06D											
4Q11	431.99	10/5/2011	NE	23.95	NA	NA	NA	408.04	327.27 - 322.27 (104.72 - 109.72)	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	*
3Q14		7/1/2014	NE	30.58	NA	NA	NA	401.41		13.3	*
MW-07											
4Q11	443.10	10/5/2011	NE	25.52	NA	NA	NA	417.58	400.18 - 390.18 (42.92 - 52.92)	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	
3Q14		7/1/2014	NE	42.39	NA	NA	NA	400.71		170.1	*
MW-08											
4Q11	434.11	10/5/2011	NE	26.57	NA	NA	NA	407.54	400.51 - 390.51 (33.60 - 43.60)	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	
3Q14		7/2/2014	NE	33.35	NA	NA	NA	400.76		13.2	*

SEE LAST PAGE OF TABLE FOR NOTES

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-09											
4Q11	445.20	10/5/2011	NE	37.56	NA	NA	NA	407.64	398.75 - 388.75 (46.45 - 56.45)	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	*
3Q14		7/1/2014	NE	44.49	NA	NA	NA	400.71		0.0	*
MW-10											
4Q11	445.03	10/5/2011	NE	37.47	NA	NA	NA	407.56	400.60 - 390.60 (44.43 - 54.43)	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	
3Q14		7/1/2014	NE	44.55	NA	NA	NA	400.48		0.0	
MW-11											
4Q11	442.33	10/5/2011	NE	34.07	NA	NA	NA	408.26	400.67 - 390.67 (41.66 - 51.66)	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	
3Q14		7/1/2014	NE	41.92	NA	NA	NA	400.41		0.0	
MW-12											
4Q11	442.60	10/5/2011	NE	35.20	NA	NA	NA	407.40	400.68 - 390.68 (41.92 - 51.92)	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	
3Q14		7/1/2014	NE	42.10	NA	NA	NA	400.50		1.1	
MW-13											
4Q11	430.27	10/6/2011	NE	21.20	NA	NA	NA	409.07	404.70 - 394.70 (25.57 - 35.57)	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	
3Q14		7/2/2014	NE	28.72	NA	NA	NA	401.55		1.1	
MW-14											
1Q12	434.44	1/1/2012	NM	NM	NA	NA	NA	NA	401.02 - 391.02 (33.42 - 43.42)	NM	
2Q12		5/10/2012	NM	NM	NA	NA	NA	NA		NM	
3Q12		7/5/2012	NE	29.87	NA	NA	NA	404.57		0.0	*
4Q12		10/2/2012	NE	31.86	NA	NA	NA	402.58		17.8	*
1Q13		1/7/2013	NE	32.71	NA	NA	NA	401.73		26.0	*
2Q13		4/2/2013	NE	33.68	NA	NA	NA	400.76		44.3	
3Q13		7/2/2013	NE	30.69	NA	NA	NA	403.75		7.4	*
4Q13		10/2/2013	NE	30.58	NA	NA	NA	403.86		20.5	*
1Q14		2/11/2014	NE	33.67	NA	NA	NA	400.77		45.1	
2Q14		4/4/2014	NE	34.21	NA	NA	NA	400.23		50.2	
3Q14		7/2/2014	NE	33.03	NA	NA	NA	401.41		52.0	*
MW-16											
1Q13	443.39	1/23/2013	NE	43.05	NA	NA	NA	400.34	406.33 - 396.33 (37.06 - 47.06)	0.0	Installed during 4Q12
2Q13		4/1/2013	NE	43.55	NA	NA	NA	399.84		0.0	
3Q13		7/1/2013	NE	40.86	NA	NA	NA	402.53		0.0	
4Q13		10/1/2013	NE	41.43	NA	NA	NA	401.96		0.0	
1Q14		2/10/2014	NE	43.76	NA	NA	NA	399.63		0.5	
2Q14		4/1/2014	NE	44.19	NA	NA	NA	399.20		0.6	
3Q14		7/1/2014	NE	43.45	NA	NA	NA	399.94		0.0	

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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-17											
1Q13		2/11/2013	NE	41.75	NA	NA	NA	399.82		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	441.57	10/1/2013	NE	40.18	NA	NA	NA	401.39	407.28 - 392.28 (34.29 - 49.29)	0.0	
1Q14		2/10/2014	NE	42.25	NA	NA	NA	399.32		0.0	
2Q14		4/3/2014	NE	42.76	NA	NA	NA	398.81		2.1	
3Q14		7/1/2014	NE	41.92	NA	NA	NA	399.65		0.0	
MW-18											
1Q13		2/11/2013	NE	42.25	NA	NA	NA	399.79		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	442.04	10/1/2013	NE	40.85	NA	NA	NA	401.19	407.12 - 392.12 (34.92 - 49.92)	0.0	
1Q14		2/11/2014	NE	42.85	NA	NA	NA	399.19		0.0	
2Q14		4/1/2014	NE	43.41	NA	NA	NA	398.63		0.0	
3Q14		7/1/2014	NE	42.49	NA	NA	NA	399.55		0.9	
MW-19											
1Q13		2/11/2013	NE	42.88	NA	NA	NA	399.89		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	442.77	10/2/2013	NE	41.24	NA	NA	NA	401.53	406.43 - 391.43 (36.34 - 51.34)	0.0	
1Q14		2/10/2014	NE	43.41	NA	NA	NA	399.36		0.9	
2Q14		4/1/2014	NE	43.92	NA	NA	NA	398.85		0.0	
3Q14		7/1/2014	NE	42.92	NA	NA	NA	399.85		0.6	
MW-20											
1Q13		2/11/2013	NE	43.66	NA	NA	NA	400.01		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	443.67	10/1/2013	NE	41.77	NA	NA	NA	401.90	407.79 - 392.79 (35.88 - 50.88)	0.0	
1Q14		2/10/2014	NE	44.09	NA	NA	NA	399.58		1.4	
2Q14		4/2/2014	NE	44.65	NA	NA	NA	399.02		0.0	
3Q14		7/1/2014	NE	43.64	NA	NA	NA	400.03		1.3	
MW-21											
1Q13		2/11/2013	NE	43.53	NA	NA	NA	400.28		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	443.81	10/2/2013	NE	41.40	NA	NA	NA	402.41	408.80 - 393.80 (35.01 - 50.01)	0.0	
1Q14		2/10/2014	NE	43.91	NA	NA	NA	399.90		32.5	
2Q14		4/3/2014	NE	44.38	NA	NA	NA	399.43		1.8	
3Q14		7/2/2014	NE	43.38	NA	NA	NA	400.43		0.0	
MW-22											
1Q13		1/23/2013	NE	41.80	NA	NA	NA	400.36		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	442.16	10/1/2013	NE	40.23	NA	NA	NA	401.93	404.28 - 394.28 (37.88 - 47.88)	0.0	
1Q14		2/10/2014	NE	42.49	NA	NA	NA	399.67		0.3	
2Q14		4/3/2014	NE	42.90	NA	NA	NA	399.26		0.2	
3Q14		7/1/2014	NE	42.18	NA	NA	NA	399.98		0.1	
MW-24											
2Q13		4/1/2013	NE	43.44	NA	NA	NA	399.98		0.5	Installed during 1Q13
3Q13		7/3/2013	NE	40.59	NA	NA	NA	402.83		0.0	
4Q13	443.42	10/1/2013	NE	41.08	NA	NA	NA	402.34	404.53 - 394.53 (38.89 - 48.89)	134.4	
1Q14		2/10/2014	NE	43.47	NA	NA	NA	399.95		14.2	
2Q14		4/1/2014	NE	43.86	NA	NA	NA	399.56		4.9	
3Q14		7/1/2014	NE	43.15	NA	NA	NA	400.27		0.0	
P-01											
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	442.56	1/3/2013	NE	33.96	NA	NA	NA	408.60	380.61 - 375.61 (61.95 - 66.95)	0.0	*
2Q13		4/1/2013	NE	33.68	NA	NA	NA	408.88		0.4	*
3Q13		7/3/2013	NE	30.60	NA	NA	NA	411.96		0.0	*
4Q13		10/1/2013	NE	33.13	NA	NA	NA	409.43		0.6	*
1Q14		2/12/2014	NE	35.21	NA	NA	NA	407.35		0.1	*
2Q14		4/2/2014	NE	35.61	NA	NA	NA	406.95		0.0	*
3Q14		7/3/2014	NE	34.33	NA	NA	NA	408.23		0.2	*
P-4U											
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	442.50	1/3/2013	NE	35.10	NA	NA	NA	407.40	361.35 - 359.35 (81.15 - 83.15)	0.0	*
2Q13		4/1/2013	NE	35.95	NA	NA	NA	406.55		0.5	*
3Q13		7/3/2013	NE	32.80	NA	NA	NA	409.70		0.0	*
4Q13		10/1/2013	NE	34.72	NA	NA	NA	407.78		0.2	*
1Q14		2/12/2014	NE	36.76	NA	NA	NA	405.74		51.0	*
2Q14		4/4/2014	NE	39.91	NA	NA	NA	402.59		0.2	*
3Q14		7/3/2014	NE	36.64	NA	NA	NA	405.86		0.0	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-5L											
4Q11	443.79	10/6/2011	NE	29.16	NA	NA	NA	414.63	303.39 - 301.39 (140.40 - 142.40)	NA	*
1Q12		1/3/2012	NE	30.42	NA	NA	NA	413.37		NA	*
2Q12		4/2/2012	NE	30.56	NA	NA	NA	413.23		0.9	*
3Q12		7/2/2012	NE	31.60	NA	NA	NA	412.19		0.0	*
4Q12		10/1/2012	NE	33.60	NA	NA	NA	410.19		0.0	*
1Q13		1/3/2013	NE	35.17	NA	NA	NA	408.62		0.0	*
2Q13		4/1/2013	NE	35.84	NA	NA	NA	407.95		0.0	*
3Q13		7/3/2013	NE	31.51	NA	NA	NA	412.28		0.0	*
4Q13		10/1/2013	NE	34.35	NA	NA	NA	409.44		0.4	*
1Q14		2/12/2014	NE	36.88	NA	NA	NA	406.91		0.2	*
2Q14		4/4/2014	NE	41.40	NA	NA	NA	402.39		2.0	*
3Q14		7/3/2014	NE	36.65	NA	NA	NA	407.14		0.0	*
P-5U											
4Q11	444.15	10/6/2011	NE	30.41	NA	NA	NA	413.74	313.52 - 311.52 (130.63 - 132.63)	NA	*
1Q12		1/3/2012	NE	30.42	NA	NA	NA	413.73		NA	*
2Q12		4/2/2012	NE	31.96	NA	NA	NA	412.19		0.9	*
3Q12		7/2/2012	NE	32.80	NA	NA	NA	411.35		0.8	*
4Q12		10/1/2012	NE	35.00	NA	NA	NA	409.15		0.8	*
1Q13		1/3/2013	NE	36.41	NA	NA	NA	407.74		0.0	*
2Q13		4/1/2013	NE	37.24	NA	NA	NA	406.91		0.0	*
3Q13		7/3/2013	NE	33.53	NA	NA	NA	410.62		0.0	*
4Q13		10/1/2013	NE	35.88	NA	NA	NA	408.27		0.0	*
1Q14		2/12/2014	NE	38.00	NA	NA	NA	406.15		0.5	*
2Q14		4/4/2014	NE	50.04	NA	NA	NA	394.11		0.2	*
3Q14		7/3/2014	NE	37.95	NA	NA	NA	406.20		0.0	*
P-6L											
4Q11	443.20	10/6/2011	NE	28.92	NA	NA	NA	414.28	353.20 - 351.20 (90.00 - 92.00)	NA	*
1Q12		1/3/2012	NE	30.21	NA	NA	NA	412.99		NA	*
2Q12		4/2/2012	NE	30.38	NA	NA	NA	412.82		0.0	*
3Q12		7/2/2012	NE	31.18	NA	NA	NA	412.02		0.0	*
4Q12		10/1/2012	NE	33.45	NA	NA	NA	409.75		0.2	*
1Q13		1/3/2013	NE	35.00	NA	NA	NA	408.20		0.0	*
2Q13		4/1/2013	NE	35.19	NA	NA	NA	408.01		0.0	*
3Q13		7/3/2013	NE	31.66	NA	NA	NA	411.54		0.0	*
4Q13		10/1/2013	NE	33.97	NA	NA	NA	409.23		0.1	*
1Q14		2/12/2014	NE	36.27	NA	NA	NA	406.93		21.8	*
2Q14		4/4/2014	NE	36.88	NA	NA	NA	406.32		0.2	*
3Q14		7/3/2014	NE	36.04	NA	NA	NA	407.16		0.0	*
P-6U											
4Q11	443.35	10/6/2011	NE	29.78	NA	NA	NA	413.57	362.85 - 360.85 (80.50 - 82.50)	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	*
3Q14		7/3/2014	NE	37.52	NA	NA	NA	405.83		0.1	*
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	*
3Q14		7/3/2014	NE	36.97	NA	NA	NA	406.45		0.0	*
P-7U											
4Q11	443.80	10/6/2011	NE	30.02	NA	NA	NA	413.78	382.72 - 380.72 (61.08 - 63.08)	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	*
3Q14		7/3/2014	NE	37.81	NA	NA	NA	405.99		0.3	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-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	*
3Q14		7/1/2014	NE	37.00	NA	NA	NA	406.10		0.0	*
P-8U											
4Q11	441.87	10/6/2011	NE	29.86	NA	NA	NA	412.01	382.35 - 380.35 (59.52 - 61.52)	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	*
3Q14		7/1/2014	NE	38.00	NA	NA	NA	403.87		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	*
3Q14		7/2/2014	NE	41.59	NA	NA	NA	402.82		0.0	*
P-9U											
4Q11	444.91	10/6/2011	NE	34.56	NA	NA	NA	410.35	344.32 - 342.32 (100.59 - 102.59)	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	*
3Q14		7/2/2014	NE	42.07	NA	NA	NA	402.84		0.0	*
P-11L											
4Q11	442.80	10/6/2011	NE	30.67	NA	NA	NA	412.13	332.59 - 330.59 (110.21 - 112.21)	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	*
3Q14		7/1/2014	NE	38.58	NA	NA	NA	404.22		0.0	*
P-11U											
4Q11	443.09	10/6/2011	NE	31.12	NA	NA	NA	411.97	343.17 - 341.17 (99.92 - 101.92)	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	*
3Q14		7/1/2014	NE	39.18	NA	NA	NA	403.91		0.0	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-14											
4Q11	442.65	10/6/2011	NE	28.20	NA	NA	NA	414.45	395.32 - 385.32 (47.33 - 57.33)	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	*
3Q14		7/3/2014	NE	34.40	NA	NA	NA	408.25		25.7	*
P-15											
4Q11	443.35	10/6/2011	NE	29.93	NA	NA	NA	413.42	397.90 - 387.90 (45.45 - 55.45)	NA	*
1Q12		1/3/2012	31.05	31.06	412.29	412.30	0.01	412.30		NA	*
2Q12		4/2/2012	NE	31.55	NA	NA	NA	411.80		0.0	*
3Q12		7/2/2012	NE	32.40	NA	NA	NA	410.95		0.0	*
4Q12		10/1/2012	NE	34.35	NA	NA	NA	409.00		0.6	*
1Q13		1/3/2013	NE	35.81	NA	NA	NA	407.54		0.0	*
2Q13		4/1/2013	NE	36.46	NA	NA	NA	406.89		0.0	*
3Q13		7/3/2013	NE	33.48	NA	NA	NA	409.87		0.0	*
4Q13		10/1/2013	NE	35.03	NA	NA	NA	408.32		0.2	*
1Q14		2/12/2014	NE	37.08	NA	NA	NA	406.27		1.5	*
2Q14		4/4/2014	NE	39.02	NA	NA	NA	404.33		0.3	*
3Q14		7/3/2014	NE	37.04	NA	NA	NA	406.31		0.0	*
P-16											
4Q11	442.31	10/6/2011	NE	28.77	NA	NA	NA	413.54	396.57 - 386.57 (45.74 - 55.74)	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	*
3Q14		7/3/2014	NE	36.15	NA	NA	NA	406.16		0.7	*
P-43											
4Q11	444.07	10/6/2011	NE	32.18	NA	NA	NA	411.89	380.51 - 370.51 (63.56 - 73.56)	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	*
3Q14		7/1/2014	NE	39.73	NA	NA	NA	404.34		0.0	*
P-53											
4Q11	446.23	10/5/2011	NE	37.58	NA	NA	NA	408.65	407.73 - 382.73 (38.50 - 63.50)	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	
3Q14		7/1/2014	NE	44.49	NA	NA	NA	401.74		0.0	
P-54											
4Q11	442.18	10/5/2011	NE	35.01	NA	NA	NA	407.17	404.18 - 379.18 (38.00 - 63.00)	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	
3Q14		7/1/2014	NE	41.88	NA	NA	NA	400.30		0.0	

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-55											
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	445.95	4/2/2012	NE	42.04	NA	NA	NA	403.91	406.13 - 381.13	0.0	
3Q12		7/2/2012	NE	42.33	NA	NA	NA	403.62	(39.82 - 64.82)	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	443.78	10/2/2013	NE	41.58	NA	NA	NA	402.20	403.35 - 393.35	52.4	
1Q14		2/13/2014	43.24	43.37	400.41	400.54	0.13	400.51	(40.43 - 50.43)	93.3	
2Q14		4/4/2014	44.32	44.37	399.41	399.46	0.05	399.45		29.1	
3Q14		7/1/2014	43.63	43.76	400.02	400.15	0.13	400.12		192.0	
P-56											
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	446.02	1/4/2013	NE	45.65	NA	NA	NA	400.37	405.20 - 380.20	0.6	
2Q13		4/2/2013	NE	46.40	NA	NA	NA	399.62	(40.82 - 65.82)	0.0	
3Q13		7/5/2013	NE	43.60	NA	NA	NA	402.42		0.0	
4Q13		10/2/2013	NE	44.29	NA	NA	NA	401.73		0.1	
1Q14		2/13/2014	NE	46.35	NA	NA	NA	399.67		0.0	
2Q14		4/4/2014	NE	47.32	NA	NA	NA	398.70		0.3	
3Q14		7/1/2014	NE	46.14	NA	NA	NA	399.88		0.0	
P-57											
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	446.53	1/4/2013	NE	45.82	NA	NA	NA	400.71	406.07 - 381.07	0.0	
2Q13		4/2/2013	NE	46.63	NA	NA	NA	399.90	(40.46 - 65.46)	0.0	
3Q13		7/5/2013	NE	43.70	NA	NA	NA	402.83		0.0	
4Q13		10/2/2013	NE	44.12	NA	NA	NA	402.41		1.8	
1Q14		2/12/2014	NE	46.57	NA	NA	NA	399.96		2.0	
2Q14		4/7/2014	NE	47.27	NA	NA	NA	399.26		4.1	
3Q14		7/1/2014	NE	46.12	NA	NA	NA	400.41		0.0	
P-58											
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	444.92	1/4/2013	NE	43.80	NA	NA	NA	401.12	404.70 - 379.70	0.0	
2Q13		4/2/2013	NE	44.75	NA	NA	NA	400.17	(40.21 - 65.21)	0.0	
3Q13		7/5/2013	NE	41.85	NA	NA	NA	403.07		0.0	
4Q13		10/2/2013	NE	41.97	NA	NA	NA	402.95		4.9	
1Q14		2/12/2014	NE	44.66	NA	NA	NA	400.26		3.6	
2Q14		4/4/2014	NE	45.39	NA	NA	NA	399.53		0.3	
3Q14		7/2/2014	NE	44.25	NA	NA	NA	400.67		0.0	
P-59											
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	446.78	1/4/2013	NE	46.54	NA	NA	NA	400.24	398.87 - 373.87	417.0	*
2Q13		4/2/2013	NE	47.20	NA	NA	NA	399.58	(47.91 - 72.91)	116.0	*
3Q13		7/5/2013	NE	44.47	NA	NA	NA	402.31		186.4	*
4Q13		10/2/2013	NE	45.37	NA	NA	NA	401.41		131.4	*
1Q14		2/13/2014	NE	47.35	NA	NA	NA	399.43		111.4	*
2Q14		4/4/2014	NE	49.04	NA	NA	NA	397.74		0.3	
3Q14		7/1/2014	NE	47.17	NA	NA	NA	399.61		292.1	*
P-60											
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	446.57	1/4/2013	NE	46.19	NA	NA	NA	400.38	403.12 - 383.12	9.9	
2Q13		4/2/2013	46.96	47.04	399.53	399.61	0.08	399.60	(43.45 - 63.45)	8.8	
3Q13		7/5/2013	44.41	44.46	402.11	402.16	0.05	402.15		42.7	
4Q13		10/2/2013	44.91	44.99	401.58	401.66	0.08	401.65		28.3	
1Q14		2/13/2014	46.68	46.79	399.78	399.89	0.11	399.87		2.4	
2Q14		4/4/2014	47.74	47.77	398.80	398.83	0.03	398.83		25.1	
3Q14		7/1/2014	46.85	46.93	399.64	399.72	0.08	399.71		309.3	

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-60-11											
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	446.18	1/4/2013	NE	45.06	NA	NA	NA	401.12	413.03 - 383.03	2.0	
2Q13		4/2/2013	NE	45.72	NA	NA	NA	400.46	(33.15 - 63.15)	0.0	
3Q13		7/5/2013	NE	43.81	NA	NA	NA	402.37		0.0	
4Q13		10/2/2013	NE	43.43	NA	NA	NA	402.75		0.0	
1Q14		2/13/2014	NE	44.99	NA	NA	NA	401.19		0.0	
2Q14		4/4/2014	NE	45.58	NA	NA	NA	400.60		0.2	
3Q14		7/1/2014	NE	45.74	NA	NA	NA	400.44		1.3	
P-60-12											
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	443.31	1/4/2013	NE	42.97	NA	NA	NA	400.34	383.31 - 373.31	2.4	*
2Q13		4/2/2013	NE	43.77	NA	NA	NA	399.54	(60.00 - 70.00)	0.0	*
3Q13		7/5/2013	NE	41.20	NA	NA	NA	402.11		0.0	*
4Q13		10/2/2013	NE	41.72	NA	NA	NA	401.59		1.1	*
1Q14		2/13/2014	NE	43.45	NA	NA	NA	399.86		72.6	*
2Q14		4/4/2014	NE	44.54	NA	NA	NA	398.77		43.5	*
3Q14		7/1/2014	NE	43.66	NA	NA	NA	399.65		46.2	*
P-60-12S											
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	443.33	1/4/2013	NE	19.35	NA	NA	NA	423.98	429.49 - 419.49	3.5	
2Q13		4/2/2013	NM	NM	NA	NA	NA	NA	(13.84 - 23.84)	NM	
3Q13		7/5/2013	NE	17.73	NA	NA	NA	425.60		0.0	
4Q13		10/2/2013	NE	19.03	NA	NA	NA	424.30		0.3	
1Q14		2/13/2014	NE	19.02	NA	NA	NA	424.31		0.0	
2Q14		4/4/2014	NE	19.03	NA	NA	NA	424.30		0.5	
3Q14		7/1/2014	NE	18.00	NA	NA	NA	425.33		1.6	
P-60-13											
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	442.43	1/4/2013	NE	41.55	NA	NA	NA	400.88	402.43 - 382.43	0.7	
2Q13		4/2/2013	NM	NM	NA	NA	NA	NA	(40.00 - 60.00)	NM	
3Q13		7/5/2013	NE	40.53	NA	NA	NA	401.90		0.0	
4Q13		10/2/2013	NE	39.98	NA	NA	NA	402.45		0.6	*
1Q14		2/13/2014	NM	NM	NA	NA	NA	NA		NM	
2Q14		4/4/2014	NE	42.81	NA	NA	NA	399.62		0.7	
3Q14		7/1/2014	NE	42.31	NA	NA	NA	400.12		0.0	
P-60-13S											
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	442.39	1/4/2013	NM	NM	NA	NA	NA	NA	432.39 - 422.39	NM	
2Q13		4/2/2013	NM	NM	NA	NA	NA	NA	(10.00 - 20.00)	NM	
3Q13		7/5/2013	NE	15.66	NA	NA	NA	426.73		8.2	
4Q13		10/2/2013	NE	17.60	NA	NA	NA	424.79		2.8	
1Q14		2/13/2014	NM	NM	NA	NA	NA	NA		NM	
2Q14		4/4/2014	NE	17.16	NA	NA	NA	425.23		0.3	
3Q14		7/1/2014	NE	17.16	NA	NA	NA	425.23		0.0	
P-60-S											
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA		NM	
1Q12		1/4/2012	41.39	41.90	405.08	405.59	0.51	405.49		1.8	
2Q12		4/3/2012	42.85	43.28	403.70	404.13	0.43	404.04		1.2	
3Q12		7/5/2012	43.12	43.26	403.72	403.86	0.14	403.83		0.7	
4Q12		10/4/2012	43.94	45.84	401.14	403.04	1.90	402.66		0.3	
1Q13	446.98	1/4/2013	45.34	45.95	401.03	401.64	0.61	401.52	410.50 - 395.50	0.0	
2Q13		4/2/2013	46.33	46.39	400.59	400.65	0.06	400.64	(36.48 - 51.48)	0.1	
3Q13		7/5/2013	NE	44.45	NA	NA	NA	402.53		0.0	
4Q13		10/2/2013	43.56	44.49	402.49	403.42	0.93	403.23		0.2	
1Q14		2/13/2014	45.48	45.86	401.12	401.50	0.38	401.42		0.3	
2Q14		4/4/2014	46.38	46.57	400.41	400.60	0.19	400.56		0.2	
3Q14		7/1/2014	46.35	46.37	400.61	400.63	0.02	400.63		0.1	

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-61											
4Q11	444.27	10/6/2011	NE	37.63	NA	NA	NA	406.64	398.59 - 373.59 (45.68 - 70.68)	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	
3Q14		7/2/2014	44.75	45.49	398.78	399.52	0.74	399.37		150.6	*
P-62											
4Q11	442.32	10/6/2011	NE	35.64	NA	NA	NA	406.68	400.85 - 375.85 (41.47 - 66.47)	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	
3Q14		7/2/2014	42.58	43.69	398.63	399.74	1.11	399.52		0.0	
P-63											
4Q11	445.75	10/6/2011	NE	39.20	NA	NA	NA	406.55	398.46 - 373.46 (47.29 - 72.29)	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	
3Q14		7/2/2014	46.80	46.82	398.93	398.95	0.02	398.95		47.5	*
P-64											
4Q11	446.52	10/6/2011	40.35	40.53	405.99	406.17	0.18	406.13	399.29 - 374.29 (47.23 - 72.23)	NA	*
1Q12		1/3/2012	41.68	41.75	404.77	404.84	0.07	404.83		NA	*
2Q12		4/3/2012	43.18	43.19	403.33	403.34	0.01	403.34		0.0	*
3Q12		7/3/2012	44.40	44.41	402.11	402.12	0.01	402.12		0.0	*
4Q12		10/1/2012	45.62	45.68	400.84	400.90	0.06	400.89		34.5	*
1Q13		1/4/2013	NE	47.84	NA	NA	NA	398.68		103.0	
2Q13		4/1/2013	NE	48.23	NA	NA	NA	398.29		0.0	
3Q13		7/5/2013	46.95	46.97	399.55	399.57	0.02	399.57		96.5	*
4Q13		10/2/2013	46.25	46.31	400.21	400.27	0.06	400.26		41.4	*
1Q14		2/12/2014	47.93	47.94	398.58	398.59	0.01	398.59		114.2	
2Q14		4/4/2014	49.60	49.68	396.84	396.92	0.08	396.90		6.8	
3Q14		7/2/2014	48.08	48.36	398.16	398.44	0.28	398.38		0.0	
P-65											
4Q11	444.53	10/6/2011	NE	37.67	NA	NA	NA	406.86	396.91 - 371.91 (47.62 - 72.62)	NA	*
1Q12		1/3/2012	NE	39.15	NA	NA	NA	405.38		NA	*
2Q12		4/3/2012	NE	40.76	NA	NA	NA	403.77		0.0	*
3Q12		7/3/2012	NE	41.76	NA	NA	NA	402.77		0.0	*
4Q12		10/1/2012	NE	43.00	NA	NA	NA	401.53		0.5	*
1Q13		1/4/2013	NE	44.61	NA	NA	NA	399.92		0.0	*
2Q13		4/1/2013	NM	NM	NA	NA	NA	NA		NM	Well damaged
3Q13		7/3/2013	NM	NM	NA	NA	NA	NA		NM	Well damaged
4Q13	444.60	10/2/2013	NE	43.11	NA	NA	NA	401.49	397.58 - 372.58 (47.02 - 72.02)	21.2	* Well repaired during 3Q13; Well surveyed during 4Q13
1Q14		2/12/2014	NE	44.91	NA	NA	NA	399.69		2.3	*
2Q14		4/4/2014	NE	46.68	NA	NA	NA	397.92		0.6	*
3Q14		7/2/2014	NE	45.37	NA	NA	NA	399.23		0.0	*
P-66											
4Q11	436.70	10/5/2011	NE	28.92	NA	NA	NA	407.78	401.98 - 376.98 (34.72 - 59.72)	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	
3Q14		7/2/2014	NE	35.80	NA	NA	NA	400.90		0.9	

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-67											
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	444.13	1/2/2013	NE	41.69	NA	NA	NA	402.44	402.16 - 377.16	11.1	*
2Q13		4/2/2013	42.79	42.80	401.33	401.34	0.01	401.34	(41.98 - 66.98)	46.5	
3Q13		7/2/2013	NE	40.29	NA	NA	NA	403.84		0.0	*
4Q13		10/2/2013	39.78	39.80	404.33	404.35	0.02	404.35		17.3	*
1Q14		2/11/2014	42.60	42.63	401.50	401.53	0.03	401.52		60.9	
2Q14		4/4/2014	NE	43.35	NA	NA	NA	400.78		1.2	
3Q14		7/3/2014	NE	42.39	NA	NA	NA	401.74		1.8	
P-68											
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	445.07	1/4/2013	NM	NM	NA	NA	NA	NA	399.81 - 374.81	NM	
2Q13		4/2/2013	45.40	45.54	399.53	399.67	0.14	399.64	(45.26 - 70.26)	74.3	
3Q13		7/5/2013	43.05	43.12	401.95	402.02	0.07	402.01		197.0	*
4Q13		10/2/2013	43.42	43.52	401.55	401.65	0.10	401.63		101.6	*
1Q14		2/13/2014	45.18	45.29	399.78	399.89	0.11	399.87		172.6	*
2Q14		4/7/2014	45.94	46.28	398.79	399.13	0.34	399.06		9.3	
3Q14		7/2/2014	45.27	45.32	399.75	399.80	0.05	399.79		215.5	
P-69											
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	443.18	1/4/2013	NE	43.85	NA	NA	NA	399.33	402.36 - 377.36	0.0	
2Q13		4/2/2013	NE	43.94	NA	NA	NA	399.24	(40.82 - 65.82)	0.0	
3Q13		7/5/2013	NE	41.36	NA	NA	NA	401.82		0.0	
4Q13		10/2/2013	NE	42.17	NA	NA	NA	401.01		0.5	
1Q14		2/13/2014	NE	43.85	NA	NA	NA	399.33		79.9	
2Q14		4/7/2014	NE	44.88	NA	NA	NA	398.30		0.2	
3Q14		7/2/2014	NE	44.00	NA	NA	NA	399.18		0.0	
P-70											
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	442.83	1/4/2013	NE	42.72	NA	NA	NA	400.11	398.16 - 373.16	1.7	*
2Q13		4/2/2013	NE	43.59	NA	NA	NA	399.24	(44.67 - 69.67)	211.0	*
3Q13		7/5/2013	NE	41.06	NA	NA	NA	401.77		134.2	*
4Q13		10/2/2013	NE	41.52	NA	NA	NA	401.31		99.1	*
1Q14		2/12/2014	NE	43.28	NA	NA	NA	399.55		85.0	*
2Q14		4/4/2014	44.21	45.35	397.48	398.62	1.14	398.39		200.7	*
3Q14		7/2/2014	43.22	43.88	398.95	399.61	0.66	399.48		319.6	*
P-71											
4Q11		10/6/2011	NE	47.31	NA	NA	NA	397.52		NA	
1Q12		1/3/2012	NE	38.91	NA	NA	NA	405.92		NA	*
2Q12		4/3/2012	NE	40.34	NA	NA	NA	404.49		0.0	*
3Q12		7/3/2012	NE	40.90	NA	NA	NA	403.93		0.0	*
4Q12		10/2/2012	42.69	42.75	402.08	402.14	0.06	402.13		23.0	
1Q13	444.83	1/4/2013	NE	43.83	NA	NA	NA	401.00	402.22 - 377.22	1.1	
2Q13		4/2/2013	NE	44.54	NA	NA	NA	400.29	(42.61 - 67.61)	1.2	
3Q13		7/5/2013	NE	42.65	NA	NA	NA	402.18		82.5	
4Q13		10/2/2013	NE	42.53	NA	NA	NA	402.30		53.0	*
1Q14		2/13/2014	NE	44.35	NA	NA	NA	400.48		0.0	
2Q14		4/4/2014	NE	45.48	NA	NA	NA	399.35		0.8	
3Q14		7/3/2014	NE	44.61	NA	NA	NA	400.22		3.9	
P-72											
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	444.43	1/4/2013	NE	43.27	NA	NA	NA	401.16	398.66 - 373.66	2.2	*
2Q13		4/1/2013	NE	44.23	NA	NA	NA	400.20	(45.77 - 70.77)	0.3	*
3Q13		7/5/2013	NE	42.36	NA	NA	NA	402.07		2.0	*
4Q13		10/2/2013	NE	41.88	NA	NA	NA	402.55		2.7	*
1Q14		2/12/2014	NE	43.86	NA	NA	NA	400.57		37.2	*
2Q14		4/4/2014	NE	45.12	NA	NA	NA	399.31		2.2	*
3Q14		7/2/2014	NE	44.19	NA	NA	NA	400.24		6.5	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-73											
4Q11	443.76	10/6/2011	NE	36.68	NA	NA	NA	407.08	402.17 - 377.17 (41.60 - 66.60)	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	
3Q14		7/2/2014	NE	43.54	NA	NA	NA	400.22		0.0	
P-74											
4Q11	442.63	10/6/2011	NE	36.26	NA	NA	NA	406.37	398.20 - 373.20 (44.43 - 69.43)	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	*
3Q14		7/2/2014	NE	43.25	NA	NA	NA	399.38		0.1	*
P-75											
4Q11	446.32	10/5/2011	38.52	38.53	407.79	407.80	0.01	407.80	403.19 - 378.19 (43.13 - 68.13)	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	
3Q14		7/3/2014	NE	45.59	NA	NA	NA	400.73		0.0	
P-82A											
4Q11	434.69	10/5/2011	NE	24.00	NA	NA	NA	410.69	401.48 - 386.48 (33.21 - 48.21)	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	*
3Q14		7/2/2014	NE	30.08	NA	NA	NA	404.61		0.6	*
P-82B											
4Q11	434.44	10/5/2011	NE	23.73	NA	NA	NA	410.71	370.84 - 368.84 (63.60 - 65.60)	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	*
3Q14		7/2/2014	NE	29.79	NA	NA	NA	404.65		0.7	*
P-82C											
4Q11	434.16	10/5/2011	NE	23.81	NA	NA	NA	410.35	351.39 - 349.39 (82.77 - 84.77)	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	*
3Q14		7/2/2014	NE	29.65	NA	NA	NA	404.51		0.7	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-82D											
4Q11	434.85	10/5/2011	NE	24.56	NA	NA	NA	410.29	323.43 - 321.43 (111.42 - 113.42)	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	*
3Q14		7/2/2014	NE	30.61	NA	NA	NA	404.24		0.4	*
P-83A											
4Q11	445.23	10/6/2011	NE	37.41	NA	NA	NA	407.82	398.58 - 383.58 (46.65 - 61.65)	NA	*
1Q12		1/3/2012	NE	38.31	NA	NA	NA	406.92		NA	*
2Q12		4/2/2012	NE	39.85	NA	NA	NA	405.38		0.0	*
3Q12		7/2/2012	NE	40.50	NA	NA	NA	404.73		0.0	*
4Q12		10/1/2012	NE	42.29	NA	NA	NA	402.94		0.0	*
1Q13		1/3/2013	NE	43.85	NA	NA	NA	401.38		0.0	*
2Q13		4/2/2013	NE	44.75	NA	NA	NA	400.48		0.0	*
3Q13		7/3/2013	NE	43.44	NA	NA	NA	401.79		0.0	*
4Q13		10/1/2013	NE	43.55	NA	NA	NA	401.68		0.2	*
1Q14		2/11/2014	NE	44.72	NA	NA	NA	400.51		0.6	*
2Q14		4/1/2014	NE	45.74	NA	NA	NA	399.49		0.0	*
3Q14		7/1/2014	NE	45.12	NA	NA	NA	400.11		0.0	*
P-83B											
4Q11	445.47	10/6/2011	NE	37.68	NA	NA	NA	407.79	375.82 - 373.82 (69.65 - 71.65)	NA	*
1Q12		1/3/2012	NE	38.58	NA	NA	NA	406.89		NA	*
2Q12		4/2/2012	NE	40.13	NA	NA	NA	405.34		0.0	*
3Q12		7/2/2012	NE	40.85	NA	NA	NA	404.62		0.0	*
4Q12		10/1/2012	NE	42.57	NA	NA	NA	402.90		0.0	*
1Q13		1/3/2013	NE	44.13	NA	NA	NA	401.34		0.0	*
2Q13		4/2/2013	NE	44.99	NA	NA	NA	400.48		0.0	*
3Q13		7/3/2013	NE	43.71	NA	NA	NA	401.76		0.0	*
4Q13		10/1/2013	NE	43.80	NA	NA	NA	401.67		0.2	*
1Q14		2/11/2014	NE	44.97	NA	NA	NA	400.50		0.3	*
2Q14		4/1/2014	NE	46.01	NA	NA	NA	399.46		0.0	*
3Q14		7/1/2014	NE	45.39	NA	NA	NA	400.08		0.0	*
P-83C											
4Q11	445.64	10/6/2011	NE	38.15	NA	NA	NA	407.49	353.25 - 351.25 (92.39 - 94.39)	NA	*
1Q12		1/3/2012	NE	39.05	NA	NA	NA	406.59		NA	*
2Q12		4/2/2012	NE	40.61	NA	NA	NA	405.03		0.0	*
3Q12		7/2/2012	NE	40.96	NA	NA	NA	404.68		0.0	*
4Q12		10/1/2012	NE	43.04	NA	NA	NA	402.60		0.0	*
1Q13		1/3/2013	NE	44.59	NA	NA	NA	401.05		0.0	*
2Q13		4/2/2013	NE	45.41	NA	NA	NA	400.23		0.0	*
3Q13		7/3/2013	NE	44.17	NA	NA	NA	401.47		0.0	*
4Q13		10/1/2013	NE	44.27	NA	NA	NA	401.37		0.6	*
1Q14		2/11/2014	NE	45.43	NA	NA	NA	400.21		13.7	*
2Q14		4/1/2014	NE	46.40	NA	NA	NA	399.24		0.0	*
3Q14		7/1/2014	NE	45.84	NA	NA	NA	399.80		0.0	*
P-83D											
4Q11	445.55	10/6/2011	NE	38.07	NA	NA	NA	407.48	311.84 - 309.84 (133.71 - 135.71)	NA	*
1Q12		1/3/2012	NE	39.01	NA	NA	NA	406.54		NA	*
2Q12		4/2/2012	NE	40.53	NA	NA	NA	405.02		0.0	*
3Q12		7/2/2012	NE	40.12	NA	NA	NA	405.43		0.0	*
4Q12		10/1/2012	NE	42.98	NA	NA	NA	402.57		0.0	*
1Q13		1/3/2013	NE	44.54	NA	NA	NA	401.01		0.0	*
2Q13		4/2/2013	NE	45.38	NA	NA	NA	400.17		0.0	*
3Q13		7/3/2013	NE	44.12	NA	NA	NA	401.43		0.0	*
4Q13		10/1/2013	NE	44.21	NA	NA	NA	401.34		0.1	*
1Q14		2/11/2014	NE	45.40	NA	NA	NA	400.15		0.4	*
2Q14		4/1/2014	NE	46.36	NA	NA	NA	399.19		0.0	*
3Q14		7/1/2014	NE	45.79	NA	NA	NA	399.76		0.0	*
P-84A											
4Q11	446.39	10/6/2011	NE	34.36	NA	NA	NA	412.03	397.89 - 382.89 (48.50 - 63.50)	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	*
3Q14		7/3/2014	NE	45.55	NA	NA	NA	400.84		0.0	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-84B											
4Q11	446.10	10/6/2011	NE	38.09	NA	NA	NA	408.01	372.60 - 370.60 (73.50 - 75.50)	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	*
3Q14		7/3/2014	NE	45.31	NA	NA	NA	400.79		0.0	*
P-84C											
4Q11	446.13	10/6/2011	NE	38.41	NA	NA	NA	407.72	352.08 - 350.08 (94.05 - 96.05)	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	*
3Q14		7/3/2014	NE	45.63	NA	NA	NA	400.50		0.0	*
P-84D											
4Q11	446.14	10/6/2011	NE	38.43	NA	NA	NA	407.71	324.99 - 322.99 (121.15 - 123.15)	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	*
3Q14		7/3/2014	NE	45.62	NA	NA	NA	400.52		0.0	*
P-88A											
4Q11	443.12	10/5/2011	NE	29.92	NA	NA	NA	413.20	404.72 - 389.72 (38.40 - 53.40)	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	*
3Q14		7/3/2014	NE	36.62	NA	NA	NA	406.50		0.0	*
P-88B											
4Q11	443.17	10/5/2011	NE	29.86	NA	NA	NA	413.31	371.17 - 369.17 (72.00 - 74.00)	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	*
3Q14		7/3/2014	NE	36.58	NA	NA	NA	406.59		0.0	*
P-88C											
4Q11	443.16	10/5/2011	NE	30.14	NA	NA	NA	413.02	350.86 - 348.86 (92.30 - 94.30)	NA	*
1Q12		1/4/2012	NE	31.44	NA	NA	NA	411.72		0.0	*
2Q12		4/3/2012	NE	32.78	NA	NA	NA	410.38		0.0	*
3Q12		7/2/2012	NE	33.15	NA	NA	NA	410.01		0.0	*
4Q12		10/2/2012	NE	34.83	NA	NA	NA	408.33		0.0	*
1Q13		1/2/2013	NE	36.10	NA	NA	NA	407.06		0.0	*
2Q13		4/2/2013	NE	37.07	NA	NA	NA	406.09		0.5	*
3Q13		7/2/2013	NE	35.44	NA	NA	NA	407.72		0.0	*
4Q13		10/2/2013	NE	34.61	NA	NA	NA	408.55		0.0	*
1Q14		2/11/2014	NE	36.45	NA	NA	NA	406.71		0.2	*
2Q14		4/4/2014	NE	41.00	NA	NA	NA	402.16		0.2	*
3Q14		7/3/2014	NE	36.87	NA	NA	NA	406.29		0.0	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-88D											
4Q11	443.23	10/5/2011	NE	30.25	NA	NA	NA	412.98	329.53 - 327.53 (113.70 - 115.70)	NA	*
1Q12		1/4/2012	NE	31.57	NA	NA	NA	411.66		0.0	*
2Q12		4/3/2012	NE	32.91	NA	NA	NA	410.32		0.0	*
3Q12		7/2/2012	NE	33.41	NA	NA	NA	409.82		0.0	*
4Q12		10/2/2012	NE	34.99	NA	NA	NA	408.24		0.0	*
1Q13		1/2/2013	NE	36.23	NA	NA	NA	407.00		0.0	*
2Q13		4/2/2013	NE	37.21	NA	NA	NA	406.02		1.6	*
3Q13		7/2/2013	NE	35.51	NA	NA	NA	407.72		0.0	*
4Q13		10/2/2013	NE	34.72	NA	NA	NA	408.51		0.0	*
1Q14		2/11/2014	NE	36.59	NA	NA	NA	406.64		1.7	*
2Q14		4/4/2014	NE	41.45	NA	NA	NA	401.78		0.1	*
3Q14		7/3/2014	NE	36.95	NA	NA	NA	406.28		0.6	*
P-89B											
4Q11	447.35	10/6/2011	NE	37.05	NA	NA	NA	410.30	369.99 - 367.99 (77.36 - 79.36)	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	*
3Q14		7/1/2014	NE	44.59	NA	NA	NA	402.76		0.0	*
P-89C											
4Q11	447.68	10/6/2011	NE	37.39	NA	NA	NA	410.29	350.05 - 348.05 (97.63 - 99.63)	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	*
3Q14		7/1/2014	NE	44.94	NA	NA	NA	402.74		0.0	*
P-89D											
4Q11	447.54	10/6/2011	NE	37.35	NA	NA	NA	410.19	307.20 - 305.20 (140.34 - 142.34)	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	*
3Q14		7/1/2014	NE	44.92	NA	NA	NA	402.62		0.0	*
P-91A											
4Q11	447.19	10/6/2011	NE	41.63	NA	NA	NA	405.56	395.68 - 380.68 (51.52 - 66.52)	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	*
3Q14		7/2/2014	48.74	52.68	394.51	398.45	3.94	397.66		295.2	*
P-91B											
4Q11	447.26	10/6/2011	NE	41.53	NA	NA	NA	405.73	372.57 - 370.57 (74.69 - 76.69)	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	*
3Q14		7/2/2014	NE	49.64	NA	NA	NA	397.62		17.5	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-91C											
4Q11	447.02	10/6/2011	NE	41.47	NA	NA	NA	405.55	352.29 - 350.29 (94.73 - 96.73)	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	*
3Q14		7/2/2014	NE	49.39	NA	NA	NA	397.63		0.3	*
P-91D											
4Q11	447.02	10/6/2011	NE	41.44	NA	NA	NA	405.58	278.70 - 276.70 (168.32 - 170.32)	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	*
3Q14		7/2/2014	NE	49.37	NA	NA	NA	397.65		0.4	*
P-92A											
4Q11	446.12	10/6/2011	39.70	39.76	406.36	406.42	0.06	406.41	398.55 - 383.55 (47.57 - 62.57)	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	
3Q14		7/2/2014	47.55	47.57	398.55	398.57	0.02	398.57		17.5	*
P-92B											
4Q11	446.07	10/6/2011	NE	39.68	NA	NA	NA	406.39	372.42 - 370.42 (73.65 - 75.65)	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	*
3Q14		7/2/2014	NE	47.52	NA	NA	NA	398.55		0.0	*
P-92C											
4Q11	445.98	10/6/2011	NE	39.63	NA	NA	NA	406.35	352.54 - 350.54 (93.44 - 95.44)	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	*
3Q14		7/2/2014	NM	NM	NA	NA	NA	NA		NM	Well Damaged.
P-92D											
4Q11	445.90	10/6/2011	NE	39.57	NA	NA	NA	406.33	304.90 - 302.90 (141.00 - 143.00)	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	*
3Q14		7/2/2014	NE	47.42	NA	NA	NA	398.48		0.0	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-93A											
4Q11	446.58	10/6/2011	NE	39.16	NA	NA	NA	407.42	398.41 - 383.41 (48.17 - 63.17)	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	*
3Q14		7/1/2014	NE	46.10	NA	NA	NA	400.48		0.0	*
P-93B											
4Q11	446.46	10/6/2011	NE	39.19	NA	NA	NA	407.27	371.86 - 369.86 (74.60 - 76.60)	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	*
3Q14		7/1/2014	NE	46.15	NA	NA	NA	400.31		0.0	*
P-93C											
4Q11	446.51	10/6/2011	NE	39.15	NA	NA	NA	407.36	352.26 - 350.26 (94.26 - 96.26)	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	*
3Q14		7/1/2014	NE	46.03	NA	NA	NA	400.48		0.0	*
P-93D											
4Q11	446.89	10/6/2011	NE	39.22	NA	NA	NA	407.67	321.14 - 319.14 (125.75 - 127.75)	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	*
3Q14		7/1/2014	NE	46.17	NA	NA	NA	400.72		0.0	*
P-94											
4Q11	444.65	10/6/2011	NE	33.53	NA	NA	NA	411.12	398.80 - 383.80 (45.85 - 60.85)	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	*
3Q14		7/1/2014	NE	41.46	NA	NA	NA	403.19		0.0	*
P-95											
4Q11	443.44	10/5/2011	NE	28.24	NA	NA	NA	415.20	406.92 - 391.92 (36.52 - 51.52)	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	*
3Q14		7/3/2014	NE	34.73	NA	NA	NA	408.71		0.0	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-102											
4Q11	444.91	10/6/2011	NE	31.47	NA	NA	NA	413.44	402.16 - 382.16 (42.75 - 62.75)	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	*
3Q14		7/3/2014	NE	38.25	NA	NA	NA	406.66		0.0	*
P-114											
4Q11	432.41	10/5/2011	NE	24.59	NA	NA	NA	407.82	399.73 - 379.73 (32.67 - 52.67)	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	
3Q14		7/2/2014	NE	30.87	NA	NA	NA	401.54		3.5	*
P-115											
4Q11	433.31	10/6/2011	NE	25.67	NA	NA	NA	407.64	401.01 - 381.01 (32.30 - 52.30)	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	
3Q14		7/2/2014	NE	31.61	NA	NA	NA	401.70		0.9	*
P-116											
4Q11	436.45	10/5/2011	NE	28.96	NA	NA	NA	407.49	399.01 - 379.01 (37.44 - 57.44)	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	*
3Q14		7/2/2014	NE	34.94	NA	NA	NA	401.51		0.8	*
P-117											
4Q11	432.67	10/5/2011	NE	25.16	NA	NA	NA	407.51	399.74 - 379.74 (32.93 - 52.93)	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	
3Q14		7/2/2014	NE	31.10	NA	NA	NA	401.57		1.0	*
P-118											
4Q11	431.32	10/5/2011	NE	34.28	NA	NA	NA	397.04	400.20 - 384.27 (31.12 - 47.05)	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	
3Q14		7/2/2014	NE	29.78	NA	NA	NA	401.54		0.8	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-119											
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	431.92	1/7/2013	NE	30.46	NA	NA	NA	401.46	401.25 - 385.32	0.0	*
2Q13		4/2/2013	NE	31.10	NA	NA	NA	400.82	(30.67 - 46.60)	0.4	
3Q13		7/2/2013	NE	27.48	NA	NA	NA	404.44		0.0	*
4Q13		10/2/2013	NE	28.09	NA	NA	NA	403.83		0.0	*
1Q14		2/11/2014	NE	31.03	NA	NA	NA	400.89		1.0	
2Q14		4/4/2014	NE	31.55	NA	NA	NA	400.37		0.0	
3Q14		7/2/2014	NE	30.06	NA	NA	NA	401.86		1.1	*
P-120											
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	432.78	1/7/2013	NE	31.00	NA	NA	NA	401.78	401.40 - 385.47	0.0	*
2Q13		4/2/2013	NE	31.42	NA	NA	NA	401.36	(31.38 - 47.31)	0.0	
3Q13		7/2/2013	NE	27.26	NA	NA	NA	405.52		0.0	*
4Q13		10/2/2013	NE	28.43	NA	NA	NA	404.35		0.0	*
1Q14		2/11/2014	NE	31.38	NA	NA	NA	401.40		1.0	
2Q14		4/4/2014	NE	32.01	NA	NA	NA	400.77		0.0	
3Q14		7/2/2014	NE	30.11	NA	NA	NA	402.67		1.0	*
P-129											
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	432.46	1/7/2013	NE	34.12	NA	NA	NA	398.34	400.49 - 384.56	0.0	
2Q13		4/2/2013	NE	33.30	NA	NA	NA	399.16	(31.97 - 47.90)	3.5	
3Q13		7/2/2013	NE	26.81	NA	NA	NA	405.65		0.0	*
4Q13		10/2/2013	NE	31.35	NA	NA	NA	401.11		0.0	*
1Q14		2/11/2014	NE	34.37	NA	NA	NA	398.09		1.6	
2Q14		4/4/2014	NE	34.27	NA	NA	NA	398.19		0.0	
3Q14		7/2/2014	NE	30.93	NA	NA	NA	401.53		0.7	*
T-37											
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	447.15	1/3/2013	NE	43.07	NA	NA	NA	404.08	398.30 - 378.30	0.0	*
2Q13		4/1/2013	NE	43.79	NA	NA	NA	403.36	(48.86 - 68.86)	0.0	*
3Q13		7/3/2013	NE	42.66	NA	NA	NA	404.49		0.0	*
4Q13		10/1/2013	NE	42.51	NA	NA	NA	404.64		0.1	*
1Q14		2/12/2014	NE	44.08	NA	NA	NA	403.07		4.1	*
2Q14		4/1/2014	NE	44.91	NA	NA	NA	402.24		0.0	*
3Q14		7/1/2014	NE	44.44	NA	NA	NA	402.71		0.0	*
GP-9-PZ											
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	442.41	1/4/2013	NE	42.21	NA	NA	NA	400.20	404.81 - 394.81	0.0	
2Q13		4/2/2013	NE	42.90	NA	NA	NA	399.51	(37.60 - 47.60)	0.0	
3Q13		7/5/2013	NE	40.22	NA	NA	NA	402.19		0.0	
4Q13		10/2/2013	NE	40.98	NA	NA	NA	401.43		1.1	
1Q14		2/13/2014	NM	NM	NA	NA	NA	NA		NM	
2Q14		4/4/2014	NE	44.86	NA	NA	NA	397.55		0.5	
3Q14		7/2/2014	NE	42.66	NA	NA	NA	399.75		0.0	
ROST-3-MW (ROST-3-PZ)											
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	402.29 - 392.29	0.0	*
2Q12	442.29	4/2/2012	NE	38.57	NA	NA	NA	403.72	(40.00 - 50.00)	0.0	*
3Q12		7/2/2012	NE	38.84	NA	NA	NA	403.45		0.0	*
4Q12		10/1/2012	NE	40.55	NA	NA	NA	401.74		0.0	
1Q13		1/2/2013	NE	41.50	NA	NA	NA	400.79		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	404.48 - 394.48	147.0	
4Q13	442.29	10/1/2013	NE	39.98	NA	NA	NA	402.31	(37.81 - 47.81)	267.2	
1Q14		2/10/2014	NE	42.20	NA	NA	NA	400.09		2.6	
2Q14		4/1/2014	NE	42.68	NA	NA	NA	399.61		1.2	
3Q14		7/1/2014	NE	42.10	NA	NA	NA	400.19		0.1	

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
ROST-4-PZ											
4Q11	442.13	10/1/2011	NM	NM	NA	NA	NA	NA	407.20 - 397.20 (34.93 - 44.93)	NM	
1Q12		1/3/2012	NE	36.62	NA	NA	NA	405.51		0.0	
2Q12		4/2/2012	37.81	37.84	404.29	404.32	0.03	404.31		0.0	
3Q12		7/2/2012	NE	38.24	NA	NA	NA	403.89		0.0	
4Q12		10/1/2012	NE	39.52	NA	NA	NA	402.61		0.0	
1Q13		1/2/2013	NE	40.52	NA	NA	NA	401.61		0.0	
2Q13		4/1/2013	41.38	41.46	400.67	400.75	0.08	400.73		0.3	
3Q13		7/1/2013	NE	39.60	NA	NA	NA	402.53		0.0	
4Q13		10/1/2013	NE	38.88	NA	NA	NA	403.25		38.9	
1Q14		2/10/2014	NE	40.97	NA	NA	NA	401.16		1.2	
2Q14		4/1/2014	NE	41.22	NA	NA	NA	400.91		0.3	
3Q14		7/1/2014	NE	41.42	NA	NA	NA	400.71		0.0	
ROST-4-PZ(A)											
4Q11	442.11	10/1/2011	NM	NM	NA	NA	NA	NA	407.34 - 397.34 (34.77 - 44.77)	NM	
1Q12		1/3/2012	NE	35.92	NA	NA	NA	406.19		0.0	
2Q12		4/2/2012	NE	37.17	NA	NA	NA	404.94		0.0	
3Q12		7/2/2012	NE	38.64	NA	NA	NA	403.47		0.0	
4Q12		10/1/2012	NE	38.95	NA	NA	NA	403.16		0.0	
1Q13		1/2/2013	NE	40.60	NA	NA	NA	401.51		0.0	
2Q13		4/1/2013	NE	41.86	NA	NA	NA	400.25		0.7	
3Q13		7/1/2013	NE	39.66	NA	NA	NA	402.45		0.2	
4Q13		10/1/2013	NE	38.76	NA	NA	NA	403.35		0.0	
1Q14		2/10/2014	NE	41.29	NA	NA	NA	400.82		0.6	
2Q14		4/1/2014	NE	41.81	NA	NA	NA	400.30		0.4	
3Q14		7/1/2014	NE	39.69	NA	NA	NA	402.42		0.0	
ROST-4-PZ(B)											
4Q11	442.38	10/1/2011	NM	NM	NA	NA	NA	NA	407.33 - 397.33 (35.05 - 45.05)	NM	
1Q12		1/3/2012	NE	36.65	NA	NA	NA	405.73		0.0	
2Q12		4/2/2012	NE	37.87	NA	NA	NA	404.51		0.0	
3Q12		7/2/2012	NE	38.28	NA	NA	NA	404.10		0.0	
4Q12		10/1/2012	NE	39.62	NA	NA	NA	402.76		0.0	
1Q13		1/2/2013	NE	40.61	NA	NA	NA	401.77		0.0	
2Q13		4/1/2013	NE	41.55	NA	NA	NA	400.83		0.5	
3Q13		7/1/2013	NE	39.52	NA	NA	NA	402.86		0.0	
4Q13		10/1/2013	NE	38.58	NA	NA	NA	403.80		1.1	
1Q14		2/10/2014	NE	40.84	NA	NA	NA	401.54		0.3	
2Q14		4/1/2014	NE	41.18	NA	NA	NA	401.20		0.0	
3Q14		7/1/2014	NE	41.38	NA	NA	NA	401.00		0.0	
ROST-4-PZ(C)											
4Q11	442.66	10/1/2011	NM	NM	NA	NA	NA	NA	407.71 - 397.71 (34.95 - 44.95)	NM	
1Q12		1/3/2012	NE	37.40	NA	NA	NA	405.26		0.0	
2Q12		4/2/2012	NE	38.62	NA	NA	NA	404.04		0.0	
3Q12		7/2/2012	NE	39.09	NA	NA	NA	403.57		0.0	
4Q12		10/1/2012	NE	40.43	NA	NA	NA	402.23		0.0	
1Q13		1/2/2013	NE	41.42	NA	NA	NA	401.24		0.0	
2Q13		4/1/2013	NE	42.34	NA	NA	NA	400.32		0.0	
3Q13		7/1/2013	NE	40.57	NA	NA	NA	402.09		0.2	
4Q13		10/1/2013	NE	39.77	NA	NA	NA	402.89		0.0	
1Q14		2/10/2014	NE	41.92	NA	NA	NA	400.74		0.2	
2Q14		4/1/2014	NE	42.19	NA	NA	NA	400.47		0.0	
3Q14		7/1/2014	NE	42.38	NA	NA	NA	400.28		0.0	
ROST-4-PZ(D)											
4Q11	442.98	10/1/2011	NM	NM	NA	NA	NA	NA	408.01 - 398.01 (34.97 - 44.97)	NM	
1Q12		1/3/2012	37.23	37.68	405.30	405.75	0.45	405.66		0.0	
2Q12		4/2/2012	38.57	38.59	404.39	404.41	0.02	404.41		0.0	
3Q12		7/2/2012	NE	39.99	NA	NA	NA	402.99		0.0	
4Q12		10/1/2012	NE	NE	NA	NA	NA	NA		0.0	Well Dry
1Q13		1/2/2013	NE	NE	NA	NA	NA	NA		0.0	Well Dry
2Q13		4/1/2013	NE	NE	NA	NA	NA	NA		3.4	Well Dry
3Q13		7/1/2013	NE	NE	NA	NA	NA	NA		0.0	Well Dry
4Q13		10/1/2013	NE	39.63	NA	NA	NA	403.35		0.0	
1Q14		2/10/2014	NE	41.78	NA	NA	NA	401.20		0.6	
2Q14		4/1/2014	NE	42.10	NA	NA	NA	400.88		0.6	
3Q14		7/1/2014	NE	42.22	NA	NA	NA	400.76		0.0	
ROST-4-PZ(E)											
4Q11	441.96	10/1/2011	NM	NM	NA	NA	NA	NA	407.21 - 397.21 (34.75 - 44.75)	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	
3Q14		7/1/2014	NE	40.59	NA	NA	NA	401.37		1.1	

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
ROST-4-PZ(F)											
4Q11	442.12	10/1/2011	NM	NM	NA	NA	NA	NA	407.59 - 397.59 (34.53 - 44.53)	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	
3Q14		7/1/2014	NE	40.51	NA	NA	NA	401.61		2.4	
ROST-4-PZ(G)											
4Q11	442.13	10/1/2011	NM	NM	NA	NA	NA	NA	407.85 - 397.85 (34.28 - 44.28)	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	
3Q14		7/1/2014	NE	42.08	NA	NA	NA	400.05		0.2	
ROST-5-PZ											
4Q11	442.22	10/5/2011	NE	NE	NA	NA	NA	NA	429.02 - 419.02 (13.20 - 23.20)	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
3Q14		7/2/2014	NE	NE	NA	NA	NA	NA		0.0	Well Dry
ROST-7-PZ											
4Q11	442.19	10/5/2011	NE	22.52	NA	NA	NA	419.67	422.19 - 412.19 (20.00 - 30.00)	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	
3Q14		7/1/2014	NE	22.88	NA	NA	NA	419.31		0.0	
ROST-10-PZ											
4Q11	444.51	10/5/2011	NE	NE	NA	NA	NA	NA	434.51 - 424.51 (10.00 - 20.00)	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
3Q14		7/1/2014	NE	NE	NA	NA	NA	NA		0.0	Well Dry
ROST-21-PZ											
4Q11	443.72	10/5/2011	NE	NE	NA	NA	NA	NA	433.72 - 423.72 (10.00 - 20.00)	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
3Q14		7/1/2014	NE	19.13	NA	NA	NA	424.59		0.0	

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
S-1											
4Q11	443.79	10/6/2011	NE	36.68	NA	NA	NA	407.11	Unknown	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	
3Q14		7/2/2014	44.00	44.01	399.78	399.79	0.01	399.79		195.7	
T-1											
4Q11	444.55	10/6/2011	NE	50.83	NA	NA	NA	393.72	398.40 - 388.40 (43.91 - 53.91)	NA	
1Q12	445.40	1/3/2012	NM	NM	NA	NA	NA	NA	398.40 - 388.40 (47.00 - 57.00)	NM	Well replaced during 4Q11
2Q12		4/2/2012	NE	40.09	NA	NA	NA	405.31		0.6	*
3Q12		7/2/2012	NE	41.19	NA	NA	NA	404.21		0.3	*
4Q12		10/1/2012	NE	42.90	NA	NA	NA	402.50		0.2	*
1Q13		1/3/2013	NE	44.17	NA	NA	NA	401.23		0.0	*
2Q13		4/2/2013	NE	44.94	NA	NA	NA	400.46		0.3	*
3Q13		7/3/2013	NE	42.85	NA	NA	NA	402.55		4.2	*
4Q13		10/1/2013	NE	42.61	NA	NA	NA	402.79		1.5	*
1Q14		2/11/2014	NE	44.35	NA	NA	NA	401.05		1.1	*
2Q14		4/1/2014	NE	44.84	NA	NA	NA	400.56		0.0	*
3Q14		7/1/2014	NE	44.87	NA	NA	NA	400.53		0.0	*
T-2											
4Q11	443.13	10/6/2011	NE	35.97	NA	NA	NA	407.16	392.63 - 372.48 (50.50 - 70.65)	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	*
3Q14		7/1/2014	NE	43.11	NA	NA	NA	400.02		0.0	*
T-3											
4Q11	450.91	10/6/2011	NE	45.68	NA	NA	NA	405.23	403.65 - 388.65 (47.26 - 62.26)	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	
3Q14		7/2/2014	NE	52.21	NA	NA	NA	398.70		0.8	
T-4											
4Q11	447.95	10/6/2011	NE	42.04	NA	NA	NA	405.91	398.24 - 383.24 (49.71 - 64.71)	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	
3Q14		7/1/2014	NE	49.71	NA	NA	NA	398.24		0.0	
T-5											
4Q11	443.46	10/6/2011	NE	35.84	NA	NA	NA	407.62	395.13 - 378.58 (48.33 - 64.88)	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	*
3Q14		7/2/2014	NE	43.47	NA	NA	NA	399.99		5.4	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
T-6											
4Q11	446.55	10/6/2011	NE	39.26	NA	NA	NA	407.29	394.79 - 380.54 (51.76 - 66.01)	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	*
3Q14		7/1/2014	NE	46.23	NA	NA	NA	400.32		0.0	*
T-7											
4Q11	444.01	10/5/2011	35.36	35.43	408.58	408.65	0.07	408.64	395.29 - 380.29 (48.72 - 63.72)	NA	*
1Q12		1/4/2012	37.05	37.08	406.93	406.96	0.03	406.95		0.7	*
2Q12		4/3/2012	38.45	38.45	405.56	405.56	0.00	405.56		0.0	*
3Q12		7/2/2012	38.90	38.96	405.05	405.11	0.06	405.10		0.0	*
4Q12		10/2/2012	40.80	40.83	403.18	403.21	0.03	403.20		0.3	*
1Q13		1/2/2013	41.66	41.67	402.34	402.35	0.01	402.35		2.4	*
2Q13		4/2/2013	NE	42.78	NA	NA	NA	401.23		9.2	*
3Q13		7/2/2013	NE	40.21	NA	NA	NA	403.80		0.0	*
4Q13		10/2/2013	NE	39.72	NA	NA	NA	404.29		5.1	*
1Q14		2/11/2014	NE	42.60	NA	NA	NA	401.41		4.7	*
2Q14		4/4/2014	NE	43.34	NA	NA	NA	400.67		2.5	*
3Q14		7/3/2014	NE	42.36	NA	NA	NA	401.65		2.4	*
T-12											
4Q11	444.69	10/6/2011	NE	38.23	NA	NA	NA	406.46	398.23 - 372.23 (46.46 - 72.46)	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	*
3Q14		7/1/2014	NE	45.31	NA	NA	NA	399.38		0.0	*
T-13											
4Q11	443.46	10/5/2011	NE	35.78	NA	NA	NA	407.68	396.46 - 370.46 (47.00 - 73.00)	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	*
3Q14		7/1/2014	NE	42.79	NA	NA	NA	400.67		0.0	*
T-15											
4Q11	445.03	10/6/2011	NE	37.79	NA	NA	NA	407.24	396.99 - 370.99 (48.04 - 74.04)	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	*
3Q14		7/1/2014	NE	45.12	NA	NA	NA	399.91		0.0	*
T-17											
4Q11	445.90	10/6/2011	NE	36.23	NA	NA	NA	409.67	401.80 - 375.80 (44.10 - 70.10)	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	
3Q14		7/3/2014	NE	44.50	NA	NA	NA	401.40		0.0	

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
T-19											
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	446.71	1/4/2013	NE	47.44	NA	NA	NA	399.27	395.94 - 369.94	0.0	*
2Q13		4/1/2013	NE	48.09	NA	NA	NA	398.62	(50.77 - 76.77)	0.7	*
3Q13		7/3/2013	NE	48.04	NA	NA	NA	398.67		37.2	*
4Q13		10/1/2013	NE	46.40	NA	NA	NA	400.31		0.8	*
1Q14		2/12/2014	NE	48.54	NA	NA	NA	398.17		24.3	*
2Q14		4/4/2014	NE	50.98	NA	NA	NA	395.73		11.7	
3Q14		7/1/2014	NE	48.42	NA	NA	NA	398.29		4.6	*
T-21											
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	444.00	1/2/2013	NE	33.96	NA	NA	NA	410.04	412.04 - 386.04	0.0	
2Q13		4/2/2013	NE	34.98	NA	NA	NA	409.02	(31.96 - 57.96)	0.4	
3Q13		7/2/2013	NE	33.45	NA	NA	NA	410.55		0.0	
4Q13		10/2/2013	NE	32.82	NA	NA	NA	411.18		0.0	
1Q14		2/11/2014	NE	34.47	NA	NA	NA	409.53		0.2	
2Q14		4/4/2014	NE	35.28	NA	NA	NA	408.72		0.2	
3Q14		7/3/2014	NE	34.83	NA	NA	NA	409.17		0.0	
T-22											
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	442.21	1/2/2013	NE	35.62	NA	NA	NA	406.59	410.66 - 384.96	0.0	
2Q13		4/2/2013	NE	36.44	NA	NA	NA	405.77	(31.55 - 57.25)	0.1	
3Q13		7/2/2013	NE	34.04	NA	NA	NA	408.17		0.0	
4Q13		10/2/2013	NE	33.85	NA	NA	NA	408.36		0.0	
1Q14		2/11/2014	NE	35.93	NA	NA	NA	406.28		0.7	
2Q14		4/4/2014	NE	36.61	NA	NA	NA	405.60		0.2	
3Q14		7/3/2014	NE	35.96	NA	NA	NA	406.25		0.0	
T-23											
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	432.64	1/3/2013	NE	28.35	NA	NA	NA	404.29	405.41 - 379.41	0.0	
2Q13		4/2/2013	NE	29.04	NA	NA	NA	403.60	(27.23 - 53.23)	0.2	
3Q13		7/2/2013	NE	26.95	NA	NA	NA	405.69		0.0	*
4Q13		10/2/2013	NE	26.40	NA	NA	NA	406.24		0.0	*
1Q14		2/10/2014	NE	28.80	NA	NA	NA	403.84		0.1	
2Q14		4/4/2014	NE	29.45	NA	NA	NA	403.19		0.0	
3Q14		7/2/2014	NE	28.37	NA	NA	NA	404.27		0.8	
T-24											
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	443.72	1/4/2013	NE	43.20	NA	NA	NA	400.52	402.22 - 376.57	4.3	
2Q13		4/2/2013	44.58	44.64	399.08	399.14	0.06	399.13	(41.50 - 67.15)	0.0	
3Q13		7/2/2013	42.16	42.55	401.17	401.56	0.39	401.48		10.0	
4Q13		10/2/2013	42.20	42.22	401.50	401.52	0.02	401.51		0.8	
1Q14		2/12/2014	43.35	45.60	398.12	400.37	2.25	399.92		8.2	
2Q14		4/4/2014	44.95	45.44	398.28	398.77	0.49	398.67		0.4	
3Q14		7/2/2014	44.09	44.26	399.46	399.63	0.17	399.59		0.0	
T-28											
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	444.22	1/3/2013	NE	42.56	NA	NA	NA	401.66	Unknown	0.0	
2Q13		4/2/2013	NE	43.42	NA	NA	NA	400.80		0.0	
3Q13		7/3/2013	NE	42.40	NA	NA	NA	401.82		0.0	
4Q13		10/1/2013	NE	39.17	NA	NA	NA	405.05		2.1	
1Q14		2/11/2014	NE	43.72	NA	NA	NA	400.50		0.8	
2Q14		4/1/2014	NE	44.84	NA	NA	NA	399.38		0.0	
3Q14		7/1/2014	NE	44.05	NA	NA	NA	400.17		0.0	

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
T-38											
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	445.62	1/3/2013	NE	40.06	NA	NA	NA	405.56	396.48 - 376.48	0.0	*
2Q13		4/1/2013	NM	NM	NA	NA	NA	NA	(49.14 - 69.14)	NM	Unsafe condition
3Q13		7/3/2013	NM	NM	NA	NA	NA	NA		NM	Unsafe condition
4Q13		10/1/2013	NM	NM	NA	NA	NA	NA		NM	Unsafe condition
1Q14		2/12/2014	NE	41.21	NA	NA	NA	404.41		0.3	*
2Q14		4/3/2014	NE	41.38	NA	NA	NA	404.24		0.0	*
3Q14		7/1/2014	NE	41.39	NA	NA	NA	404.23		0.0	*
T-62											
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	431.73	1/7/2013	NE	30.39	NA	NA	NA	401.34	412.02 - 382.02	0.0	
2Q13		4/2/2013	NE	30.80	NA	NA	NA	400.93	(19.71 - 49.71)	0.0	
3Q13		7/2/2013	NE	26.91	NA	NA	NA	404.82		0.0	
4Q13		10/2/2013	NE	27.81	NA	NA	NA	403.92		0.0	
1Q14		2/11/2014	NE	30.81	NA	NA	NA	400.92		31.0	
2Q14		4/7/2014	NE	31.37	NA	NA	NA	400.36		0.0	
3Q14		7/2/2014	NM	NM	NA	NA	NA	NA		NM	
T-63											
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	431.24	1/7/2013	NE	30.45	NA	NA	NA	400.79	411.26 - 381.26	0.0	
2Q13		4/2/2013	NE	30.61	NA	NA	NA	400.63	(19.98 - 49.98)	0.0	
3Q13		7/2/2013	NE	25.92	NA	NA	NA	405.32		0.0	
4Q13		10/2/2013	NE	27.63	NA	NA	NA	403.61		0.0	
1Q14		2/11/2014	NE	30.74	NA	NA	NA	400.50		0.5	
2Q14		4/7/2014	NE	30.80	NA	NA	NA	400.44		0.1	
3Q14		7/2/2014	NE	29.21	NA	NA	NA	402.03		1.0	
T-64											
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	428.80	1/7/2013	NE	28.89	NA	NA	NA	399.91	408.99 - 378.99	0.0	
2Q13		4/2/2013	NE	28.63	NA	NA	NA	400.17	(19.81 - 49.81)	0.1	
3Q13		7/2/2013	NE	23.15	NA	NA	NA	405.65		0.2	
4Q13		10/2/2013	NE	25.86	NA	NA	NA	402.94		0.0	
1Q14		2/11/2014	NE	29.03	NA	NA	NA	399.77		0.4	
2Q14		4/4/2014	NE	29.29	NA	NA	NA	399.51		0.0	
3Q14		7/2/2014	NE	26.90	NA	NA	NA	401.90		0.8	
PZ-1-85											
4Q11		10/5/2011	NE	37.85	NA	NA	NA	407.65		NA	*
1Q12		1/3/2012	NE	39.80	NA	NA	NA	405.70		0.0	*
2Q12		4/4/2012	NE	41.05	NA	NA	NA	404.45		0.0	*
3Q12		7/2/2012	NM	NM	NA	NA	NA	NA		0.0	
4Q12		10/1/2012	NE	43.06	NA	NA	NA	402.44		0.0	*
1Q13	445.50	1/3/2013	NE	44.35	NA	NA	NA	401.15	369.70 - 359.70	0.0	*
2Q13		4/1/2013	NE	45.12	NA	NA	NA	400.38	(75.80 - 85.80)	0.6	*
3Q13		7/1/2013	NE	42.68	NA	NA	NA	402.82		0.0	*
4Q13		10/1/2013	NE	42.63	NA	NA	NA	402.87		1.5	*
1Q14		2/10/2014	NE	44.82	NA	NA	NA	400.68		1.9	*
2Q14		4/1/2014	NE	45.30	NA	NA	NA	400.20		3.3	*
3Q14		7/1/2014	NE	44.82	NA	NA	NA	400.68		4.4	*
PZ-1-101											
4Q11		10/5/2011	NE	37.83	NA	NA	NA	407.69		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	445.52	1/3/2013	NE	44.21	NA	NA	NA	401.31	354.52 - 344.52	0.0	*
2Q13		4/1/2013	NE	45.04	NA	NA	NA	400.48	(91.00 - 101.00)	0.1	*
3Q13		7/1/2013	NE	42.50	NA	NA	NA	403.02		0.0	*
4Q13		10/1/2013	NE	42.50	NA	NA	NA	403.02		0.6	*
1Q14		2/10/2014	NE	44.69	NA	NA	NA	400.83		0.4	*
2Q14		4/1/2014	NE	45.17	NA	NA	NA	400.35		0.0	*
3Q14		7/1/2014	NE	44.69	NA	NA	NA	400.83		3.6	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
PZ-2-70.5											
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	*
3Q14		7/1/2014	NE	42.58	NA	NA	NA	400.57		1.1	*
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	*
3Q14		7/1/2014	NE	42.45	NA	NA	NA	400.67		1.2	*

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

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TABLE 1b
3Q14 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	8/4/2014	NE	41.48	NA	NA	NA	401.17	393.85 - 383.85	0.0	*
		9/2/2014	NE	41.44	NA	NA	NA	401.21	(48.80 - 58.80)	15.3	*
MW-02											
Monthly	443.77	8/4/2014	NE	42.74	NA	NA	NA	401.03	393.90 - 383.90	282.2	*
		9/2/2014	NE	42.73	NA	NA	NA	401.04	(49.87 - 59.87)	23.8	*
MW-03											
Monthly	430.08	8/4/2014	NE	28.46	NA	NA	NA	401.62	395.41 - 385.41	0.0	*
		9/2/2014	NE	28.43	NA	NA	NA	401.65	(34.67 - 44.67)	0.0	*
MW-04											
Monthly	441.14	8/4/2014	NE	39.75	NA	NA	NA	401.39	395.08 - 385.08	93.5	*
		9/2/2014	NE	39.71	NA	NA	NA	401.43	(46.06 - 56.06)	90.9	*
MW-05											
Monthly	429.80	8/4/2014	NE	28.11	NA	NA	NA	401.69	395.83 - 385.83	0.0	*
		9/2/2014	NE	28.06	NA	NA	NA	401.74	(33.97 - 43.97)	0.0	*
MW-06A											
Monthly	432.14	8/4/2014	NE	30.20	NA	NA	NA	401.94	397.31 - 387.31	0.3	*
		9/2/2014	NE	30.18	NA	NA	NA	401.96	(34.83 - 44.83)	0.2	*
MW-06B											
Monthly	432.29	8/4/2014	NE	30.23	NA	NA	NA	402.06	368.24 - 363.24	0.2	*
		9/2/2014	NE	30.23	NA	NA	NA	402.06	(64.05 - 69.05)	0.2	*
MW-06C											
Monthly	432.11	8/4/2014	NE	30.03	NA	NA	NA	402.08	347.16 - 342.16	1.1	*
		9/2/2014	NE	30.03	NA	NA	NA	402.08	(84.95 - 89.95)	0.1	*
MW-06D											
Monthly	431.99	8/4/2014	NE	29.89	NA	NA	NA	402.10	327.27 - 322.27	0.0	*
		9/2/2014	NE	29.87	NA	NA	NA	402.12	(104.72 - 109.72)	0.1	*
MW-07											
Monthly	443.10	8/4/2014	NE	41.67	NA	NA	NA	401.43	400.18 - 390.18	803.1	*
		9/2/2014	NE	41.66	NA	NA	NA	401.44	(42.92 - 52.92)	187.9	*
MW-08											
Monthly	434.11	8/4/2014	NE	32.57	NA	NA	NA	401.54	400.51 - 390.51	152.3	*
		9/2/2014	NE	32.55	NA	NA	NA	401.56	(33.60 - 43.60)	18.4	*
MW-09											
Monthly	445.20	8/4/2014	NE	43.88	NA	NA	NA	401.32	398.75 - 388.75	0.0	*
		9/2/2014	NE	43.64	NA	NA	NA	401.56	(46.45 - 56.45)	1.2	*
MW-10											
Monthly	445.03	8/4/2014	NE	43.94	NA	NA	NA	401.09	400.60 - 390.60	0.0	*
		9/2/2014	NE	43.76	NA	NA	NA	401.27	(44.43 - 54.43)	1.1	*
MW-11											
Monthly	442.33	8/4/2014	NE	41.19	NA	NA	NA	401.14	400.67 - 390.67	0.0	*
		9/3/2014	NE	41.03	NA	NA	NA	401.30	(41.66 - 51.66)	0.0	*
MW-12											
Monthly	442.60	8/4/2014	NE	41.33	NA	NA	NA	401.27	400.68 - 390.68	0.0	*
		9/2/2014	NE	41.22	NA	NA	NA	401.38	(41.92 - 51.92)	0.4	*
MW-14											
Monthly	434.44	8/5/2014	NE	32.36	NA	NA	NA	402.08	401.02 - 391.02	77.8	*
		9/3/2014	NE	32.35	NA	NA	NA	402.09	(33.42 - 43.42)	86.0	*
MW-16											
Monthly	443.39	8/4/2014	NE	42.58	NA	NA	NA	400.81	406.33 - 396.33	0.0	
		9/3/2014	NE	42.54	NA	NA	NA	400.85	(37.06 - 47.06)	1.6	
MW-17											
Monthly	441.57	8/4/2014	NE	41.20	NA	NA	NA	400.37	407.28 - 392.28	0.0	
		9/3/2014	NE	41.04	NA	NA	NA	400.53	(34.29 - 49.29)	0.0	
MW-18											
Monthly	442.04	8/4/2014	NE	41.75	NA	NA	NA	400.29	407.12 - 392.12	0.0	
		9/3/2014	NE	41.63	NA	NA	NA	400.41	(34.92 - 49.92)	3.5	
MW-19											
Weekly	442.77	7/7/2014	NE	42.77	NA	NA	NA	400.00	406.43 - 391.43 (36.34 - 51.34)	0.0	
		7/16/2014	NE	42.66	NA	NA	NA	400.11		0.0	
		7/21/2014	NE	42.49	NA	NA	NA	400.28		0.0	
		7/28/2014	NE	42.41	NA	NA	NA	400.36		0.2	
Monthly		8/4/2014	NE	42.22	NA	NA	NA	400.55		0.0	
Weekly		8/11/2014	NE	42.09	NA	NA	NA	400.68		0.9	
		8/18/2014	NE	41.94	NA	NA	NA	400.83		0.0	
		8/25/2014	NE	42.04	NA	NA	NA	400.73		0.0	
Monthly		9/3/2014	NE	42.19	NA	NA	NA	400.58		0.2	
Weekly		9/8/2014	NE	42.15	NA	NA	NA	400.62		0.0	
		9/15/2014	NE	42.45	NA	NA	NA	400.32		0.0	
		9/23/2014	NE	41.82	NA	NA	NA	400.95		0.0	
MW-20											
Monthly	443.67	8/4/2014	NE	42.93	NA	NA	NA	400.74	407.79 - 392.79	0.0	
		9/2/2014	NE	42.89	NA	NA	NA	400.78	(35.88 - 50.88)	0.0	
MW-21											
Monthly	443.81	8/4/2014	NE	42.63	NA	NA	NA	401.18	408.80 - 393.80	0.0	
		9/2/2014	NE	42.63	NA	NA	NA	401.18	(35.01 - 50.01)	1.8	

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TABLE 1b
3Q14 WEEKLY/MONTHLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & EVENT	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
MW-22											
Weekly	442.16	7/7/2014	NE	42.03	NA	NA	NA	400.13	404.28 - 394.28 (37.88 - 47.88)	0.0	
		7/21/2014	NE	41.71	NA	NA	NA	400.45		0.0	
		7/28/2014	NE	41.64	NA	NA	NA	400.52		0.0	
Monthly		8/4/2014	NE	41.40	NA	NA	NA	400.76		0.0	
Weekly		8/11/2014	NE	41.31	NA	NA	NA	400.85		0.0	
		8/18/2014	NE	41.19	NA	NA	NA	400.97		0.1	
		8/25/2014	NM	NM	NA	NA	NA	NA		NM	
Monthly		9/3/2014	NE	41.29	NA	NA	NA	400.87		0.0	
Weekly		9/8/2014	NE	41.36	NA	NA	NA	400.80		0.0	
		9/15/2014	NE	41.56	NA	NA	NA	400.60		0.0	
		9/23/2014	NM	NM	NA	NA	NA	NA		NM	
MW-24											
Monthly	443.42	8/4/2014	NE	42.40	NA	NA	NA	401.02	404.53 - 394.53 (38.89 - 48.89)	358.1	
		9/2/2014	NE	42.24	NA	NA	NA	401.18		305.7	
P-54											
Monthly	442.18	8/4/2014	NE	41.11	NA	NA	NA	401.07	404.18 - 379.18 (38.00 - 63.00)	0.0	
		9/2/2014	NE	40.97	NA	NA	NA	401.21		0.2	
P-55											
Weekly	443.78	7/7/2014	43.43	43.58	400.20	400.35	0.15	400.32	403.35 - 393.35 (40.43 - 50.43)	112.5	
		7/14/2014	43.36	43.46	400.32	400.42	0.10	400.40		18.1	
		7/22/2014	43.18	43.27	400.51	400.60	0.09	400.58		29.6	
		7/28/2014	43.15	43.25	400.53	400.63	0.10	400.61		105.5	
Monthly		8/4/2014	42.85	42.93	400.85	400.93	0.08	400.91		26.5	
Weekly		8/11/2014	42.83	42.92	400.86	400.95	0.09	400.93		2.6	
		8/18/2014	42.72	42.83	400.95	401.06	0.11	401.04		60.3	
		8/25/2014	42.74	42.92	400.86	401.04	0.18	401.00		7.7	
Monthly		9/3/2014	42.85	43.06	400.72	400.93	0.21	400.89		48.0	
Weekly		9/8/2014	42.82	43.05	400.73	400.96	0.23	400.91		11.8	
		9/15/2014	42.90	43.22	400.56	400.88	0.32	400.82		136.2	
		9/22/2014	42.66	42.85	400.93	401.12	0.19	401.08		0.0	
P-56											
Monthly	446.02	8/4/2014	NE	45.33	NA	NA	NA	400.69	405.20 - 380.20 (40.82 - 65.82)	0.0	
		9/3/2014	NE	45.45	NA	NA	NA	400.57		0.0	
P-57											
Monthly	446.53	8/4/2014	NE	45.35	NA	NA	NA	401.18	406.07 - 381.07 (40.46 - 65.46)	0.0	
		9/3/2014	NE	45.49	NA	NA	NA	401.04		0.1	
P-58											
Monthly	444.92	8/4/2014	NE	43.43	NA	NA	NA	401.49	404.70 - 379.70 (40.21 - 65.21)	2.3	
		9/3/2014	NE	43.50	NA	NA	NA	401.42		0.0	
P-59											
Monthly	446.78	8/4/2014	NE	46.32	NA	NA	NA	400.46	398.87 - 373.87 (47.91 - 72.91)	204.8	*
		9/3/2014	NE	46.05	NA	NA	NA	400.73		318.6	*
P-60											
Weekly	446.57	7/7/2014	46.67	46.74	399.83	399.90	0.07	399.89	403.12 - 383.12 (43.45 - 63.45)	74.4	
		7/14/2014	46.55	46.67	399.90	400.02	0.12	400.00		322.0	
		7/22/2014	46.38	46.43	400.14	400.19	0.05	400.18		69.8	
		7/28/2014	46.32	46.34	400.23	400.25	0.02	400.25		47.0	
Monthly		8/5/2014	46.10	46.16	400.41	400.47	0.06	400.46		24.6	
Weekly		8/11/2014	46.02	46.06	400.51	400.55	0.04	400.54		86.0	
		8/18/2014	45.87	45.93	400.64	400.70	0.06	400.69		264.0	
		8/25/2014	45.94	45.97	400.60	400.63	0.03	400.63		17.4	
Monthly		9/3/2014	46.06	46.12	400.45	400.51	0.06	400.50		63.3	
Weekly		9/8/2014	NE	46.05	NA	NA	NA	400.52		126.0	
		9/15/2014	NE	46.29	NA	NA	NA	400.28		221.4	
		9/22/2014	NE	45.74	NA	NA	NA	400.83		0.0	
P-60-11											
Monthly	446.18	8/5/2014	NE	45.08	NA	NA	NA	401.10	413.03 - 383.03 (33.15 - 63.15)	0.0	
		9/3/2014	NE	44.78	NA	NA	NA	401.40		0.0	
P-60-12											
Monthly	443.31	8/5/2014	NE	42.91	NA	NA	NA	400.40	383.31 - 373.31 (60.00 - 70.00)	65.2	*
		9/3/2014	NE	42.87	NA	NA	NA	400.44		31.4	*
P-60-12S											
Monthly	443.33	8/5/2014	NE	18.40	NA	NA	NA	424.93	429.49 - 419.49 (13.84 - 23.84)	0.4	
		9/3/2014	NE	18.40	NA	NA	NA	424.93		0.3	
P-60-13											
Monthly	442.43	8/5/2014	NE	40.87	NA	NA	NA	401.56	402.43 - 382.43 (40.00 - 60.00)	0.0	
		9/3/2014	NE	40.44	NA	NA	NA	401.99		0.0	
P-60-13S											
Monthly	442.39	8/5/2014	NE	17.65	NA	NA	NA	424.74	432.39 - 422.39 (10.00 - 20.00)	0.0	
		9/3/2014	NE	17.27	NA	NA	NA	425.12		0.5	

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 1b
3Q14 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	7/7/2014	NE	46.15	NA	NA	NA	400.83	410.50 - 395.50 (36.48 - 51.48)	0.0	
		7/14/2014	NE	46.08	NA	NA	NA	400.90		0.2	
		7/22/2014	NE	45.96	NA	NA	NA	401.02		0.0	
		7/28/2014	NE	45.96	NA	NA	NA	401.02		0.2	
Monthly		8/5/2014	NE	45.71	NA	NA	NA	401.27		1.1	
Weekly		8/11/2014	NE	45.63	NA	NA	NA	401.35		2.4	
		8/18/2014	NE	45.51	NA	NA	NA	401.47		0.2	
		8/25/2014	NE	45.48	NA	NA	NA	401.50		0.6	
Monthly		9/3/2014	NE	45.47	NA	NA	NA	401.51		0.0	
Weekly		9/8/2014	NE	45.41	NA	NA	NA	401.57		0.3	
		9/15/2014	NE	45.42	NA	NA	NA	401.56		2.6	
		9/23/2014	NM	NM	NM	NM	NM	NM		NM	
P-66											
Monthly	436.70	8/4/2014	NE	35.10	NA	NA	NA	401.60	401.98 - 376.98 (34.72 - 59.72)	0.1	
		9/3/2014	NE	35.14	NA	NA	NA	401.56		0.0	
P-68											
Weekly	445.07	7/7/2014	45.10	45.16	399.91	399.97	0.06	399.96	399.81 - 374.81 (45.26 - 70.26)	255.0	*
		7/14/2014	44.99	45.03	400.04	400.08	0.04	400.07		220.7	*
		7/22/2014	44.81	44.89	400.18	400.26	0.08	400.24		223.0	*
		7/28/2014	44.78	44.84	400.23	400.29	0.06	400.28		223.3	*
Monthly		8/5/2014	44.56	44.62	400.45	400.51	0.06	400.50		248.1	*
Weekly		8/11/2014	44.78	44.83	400.24	400.29	0.05	400.28		186.0	*
		8/18/2014	44.38	44.45	400.62	400.69	0.07	400.68		265.0	*
		8/25/2014	44.47	44.50	400.57	400.60	0.03	400.60		397.0	*
Monthly		9/3/2014	44.55	44.61	400.46	400.52	0.06	400.51		232.8	*
Weekly		9/8/2014	44.52	44.57	400.50	400.55	0.05	400.54		300.5	*
		9/15/2014	44.74	44.82	400.25	400.33	0.08	400.31		321.9	*
		9/22/2014	44.26	44.32	400.75	400.81	0.06	400.80		0.0	*
P-93A											
Monthly	446.58	8/5/2014	NE	45.33	NA	NA	NA	401.25	398.41 - 383.41 (48.17 - 63.17)	1.4	*
		9/3/2014	NE	45.41	NA	NA	NA	401.17		0.0	*
P-93B											
Monthly	446.46	8/5/2014	NE	45.37	NA	NA	NA	401.09	371.86 - 369.86 (74.60 - 76.60)	0.0	*
		9/3/2014	NE	45.47	NA	NA	NA	400.99		0.0	*
P-93C											
Monthly	446.51	8/5/2014	NE	45.27	NA	NA	NA	401.24	352.26 - 350.26 (94.26 - 96.26)	0.0	*
		9/3/2014	NE	45.34	NA	NA	NA	401.17		0.0	*
P-93D											
Monthly	446.89	8/5/2014	NE	45.41	NA	NA	NA	401.48	321.14 - 319.14 (125.75 - 127.75)	1.4	*
		9/3/2014	NE	45.48	NA	NA	NA	401.41		0.0	*
GP-9-PZ											
Monthly	442.41	8/4/2014	NE	41.85	NA	NA	NA	400.56	404.81 - 394.81 (37.60 - 47.60)	0.0	
		9/3/2014	NE	41.96	NA	NA	NA	400.45		0.9	
ROST-3-MW											
Weekly	442.29	7/7/2014	NE	41.98	NA	NA	NA	400.31	404.48 - 394.48 (37.81 - 47.81)	3.0	
		7/14/2014	NE	41.83	NA	NA	NA	400.46		3.5	
		7/21/2014	NE	41.72	NA	NA	NA	400.57		0.0	
		7/28/2014	NE	41.65	NA	NA	NA	400.64		0.1	
Monthly		8/4/2014	NE	41.45	NA	NA	NA	400.84		0.3	
Weekly		8/11/2014	NE	41.32	NA	NA	NA	400.97		0.2	
		8/18/2014	NE	41.21	NA	NA	NA	401.08		6.5	
		8/25/2014	NE	41.18	NA	NA	NA	401.11		0.2	
Monthly		9/3/2014	NE	41.22	NA	NA	NA	401.07		6.5	
Weekly		9/8/2014	NE	41.29	NA	NA	NA	401.00		0.0	
		9/15/2014	NE	41.40	NA	NA	NA	400.89		0.0	
		9/22/2014	NE	41.14	NA	NA	NA	401.15		0.0	
ROST-4-PZ											
Weekly	442.13	7/7/2014	NE	41.30	NA	NA	NA	400.83	407.20 - 397.20 (34.93 - 44.93)	0.0	
		7/14/2014	NE	41.15	NA	NA	NA	400.98		0.0	
		7/21/2014	NE	41.09	NA	NA	NA	401.04		0.0	
		7/28/2014	NE	41.07	NA	NA	NA	401.06		0.9	
Monthly		8/4/2014	NE	40.89	NA	NA	NA	401.24		0.0	
Weekly		8/11/2014	NE	40.73	NA	NA	NA	401.40		0.1	
		8/18/2014	NE	40.61	NA	NA	NA	401.52		3.9	
		8/25/2014	NE	40.51	NA	NA	NA	401.62		0.0	
Monthly		9/3/2014	NE	40.40	NA	NA	NA	401.73		1.5	
Weekly		9/8/2014	NE	40.44	NA	NA	NA	401.69		0.5	
		9/15/2014	NE	40.40	NA	NA	NA	401.73		0.0	
		9/22/2014	NE	40.36	NA	NA	NA	401.77		0.0	
ROST-4-PZ(A)											
Weekly	442.11	7/7/2014	NE	41.18	NA	NA	NA	400.93	407.34 - 397.34 (34.77 - 44.77)	0.0	
		7/16/2014	NE	41.09	NA	NA	NA	401.02		0.0	
		7/21/2014	NE	40.96	NA	NA	NA	401.15		0.0	
		7/28/2014	NE	40.88	NA	NA	NA	401.23		0.1	
Monthly		8/4/2014	NE	40.72	NA	NA	NA	401.39		0.0	
Weekly		8/11/2014	NE	40.51	NA	NA	NA	401.60		0.1	
		8/18/2014	NE	40.34	NA	NA	NA	401.77		0.2	
		8/25/2014	NE	40.36	NA	NA	NA	401.75		1.0	
Monthly		9/3/2014	NE	40.38	NA	NA	NA	401.73		0.0	
Weekly		9/8/2014	NE	40.33	NA	NA	NA	401.78		0.3	
		9/15/2014	NE	40.45	NA	NA	NA	401.66		0.0	
		9/23/2014	NE	39.88	NA	NA	NA	402.23		0.0	

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 1b
3Q14 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(B)											
Weekly	442.38	7/7/2014	NE	41.13	NA	NA	NA	401.25	407.33 - 397.33 (35.05 - 45.05)	0.5	
		7/16/2014	NE	40.90	NA	NA	NA	401.48		0.2	
		7/21/2014	NE	40.77	NA	NA	NA	401.61		0.0	
		7/28/2014	NE	40.70	NA	NA	NA	401.68		0.0	
Monthly		8/4/2014	NE	40.58	NA	NA	NA	401.80		0.0	
Weekly		8/11/2014	NE	40.46	NA	NA	NA	401.92		0.4	
		8/18/2014	NE	40.33	NA	NA	NA	402.05		2.2	
		8/25/2014	NE	40.27	NA	NA	NA	402.11		0.3	
Monthly		9/3/2014	NE	40.21	NA	NA	NA	402.17		0.0	
Weekly		9/8/2014	NE	40.18	NA	NA	NA	402.20		0.3	
		9/15/2014	NE	40.23	NA	NA	NA	402.15		0.0	
		9/23/2014	NE	40.09	NA	NA	NA	402.29		0.3	
ROST-4-PZ(C)											
Weekly	442.66	7/7/2014	NE	42.28	NA	NA	NA	400.38	407.71 - 397.71 (34.95 - 44.95)	0.0	
		7/14/2014	NE	42.15	NA	NA	NA	400.51		0.2	
		7/21/2014	NE	42.09	NA	NA	NA	400.57		0.0	
		7/28/2014	NE	42.05	NA	NA	NA	400.61		0.0	
Monthly		8/4/2014	NE	41.87	NA	NA	NA	400.79		0.0	
Weekly		8/11/2014	NE	41.72	NA	NA	NA	400.94		0.1	
		8/18/2014	NE	41.58	NA	NA	NA	401.08		26.0	
		8/25/2014	NE	41.48	NA	NA	NA	401.18		0.3	
Monthly		9/3/2014	NE	41.38	NA	NA	NA	401.28		1.8	
Weekly		9/8/2014	NE	41.44	NA	NA	NA	401.22		0.8	
		9/15/2014	NE	41.43	NA	NA	NA	401.23		1.2	
		9/22/2014	NE	41.36	NA	NA	NA	401.30		0.0	
ROST-4-PZ(D)											
Weekly	442.98	7/7/2014	NE	42.10	NA	NA	NA	400.88	408.01 - 398.01 (34.97 - 44.97)	0.0	
		7/14/2014	NE	41.94	NA	NA	NA	401.04		0.2	
		7/21/2014	NE	41.89	NA	NA	NA	401.09		0.0	
		7/28/2014	NE	41.86	NA	NA	NA	401.12		0.7	
Monthly		8/4/2014	NE	41.67	NA	NA	NA	401.31		0.0	
Weekly		8/11/2014	NE	41.52	NA	NA	NA	401.46		0.6	
		8/18/2014	NE	41.38	NA	NA	NA	401.60		0.0	
		8/25/2014	NE	41.30	NA	NA	NA	401.68		0.1	
Monthly		9/3/2014	NE	41.19	NA	NA	NA	401.79		0.0	
Weekly		9/8/2014	NE	41.22	NA	NA	NA	401.76		0.1	
		9/15/2014	NE	41.18	NA	NA	NA	401.80		1.5	
		9/22/2014	NE	41.14	NA	NA	NA	401.84		0.0	
ROST-4-PZ(E)											
Weekly	441.96	7/7/2014	NE	40.48	NA	NA	NA	401.48	407.21 - 397.21 (34.75 - 44.75)	0.0	
		7/16/2014	NE	40.41	NA	NA	NA	401.55		0.0	
		7/21/2014	NE	40.29	NA	NA	NA	401.67		0.0	
		7/28/2014	NE	40.23	NA	NA	NA	401.73		0.1	
Monthly		8/4/2014	NE	40.13	NA	NA	NA	401.83		0.0	
Weekly		8/11/2014	NE	40.08	NA	NA	NA	401.88		1.3	
		8/18/2014	NE	39.98	NA	NA	NA	401.98		0.0	
		8/25/2014	NE	39.92	NA	NA	NA	402.04		0.0	
Monthly		9/3/2014	NE	39.85	NA	NA	NA	402.11		0.0	
Weekly		9/8/2014	NE	39.83	NA	NA	NA	402.13		0.0	
		9/15/2014	NE	39.51	NA	NA	NA	402.45		0.0	
		9/23/2014	NE	39.77	NA	NA	NA	402.19		0.3	
ROST-4-PZ(F)											
Weekly	442.12	7/7/2014	NE	40.45	NA	NA	NA	401.67	407.59 - 397.59 (34.53 - 44.53)	0.0	
		7/16/2014	NE	40.39	NA	NA	NA	401.73		0.0	
		7/21/2014	NE	40.31	NA	NA	NA	401.81		0.1	
		7/28/2014	NE	40.29	NA	NA	NA	401.83		1.5	
Monthly		8/4/2014	NE	40.18	NA	NA	NA	401.94		0.2	
Weekly		8/11/2014	NE	40.11	NA	NA	NA	402.01		0.6	
		8/18/2014	NE	40.03	NA	NA	NA	402.09		0.0	
		8/25/2014	NE	39.95	NA	NA	NA	402.17		2.0	
Monthly		9/3/2014	NE	39.90	NA	NA	NA	402.22		0.0	
Weekly		9/8/2014	NE	39.88	NA	NA	NA	402.24		0.7	
		9/15/2014	NE	39.86	NA	NA	NA	402.26		0.0	
		9/23/2014	NE	39.82	NA	NA	NA	402.30		2.7	
ROST-4-PZ(G)											
Weekly	442.13	7/7/2014	NE	41.94	NA	NA	NA	400.19	407.85 - 397.85 (34.28 - 44.28)	0.0	
		7/16/2014	NE	41.83	NA	NA	NA	400.30		0.1	
		7/21/2014	NE	41.66	NA	NA	NA	400.47		0.0	
		7/28/2014	NE	41.60	NA	NA	NA	400.53		0.5	
Monthly		8/4/2014	NE	41.41	NA	NA	NA	400.72		0.0	
Weekly		8/11/2014	NE	41.27	NA	NA	NA	400.86		0.0	
		8/18/2014	NE	41.12	NA	NA	NA	401.01		0.1	
		8/25/2014	NE	41.18	NA	NA	NA	400.95		0.6	
Monthly		9/3/2014	NE	41.26	NA	NA	NA	400.87		0.2	
Weekly		9/8/2014	NE	41.31	NA	NA	NA	400.82		0.0	
		9/15/2014	NE	41.62	NA	NA	NA	400.51		0.5	
		9/23/2014	NE	41.02	NA	NA	NA	401.11		0.0	
ROST-5-PZ											
Monthly	442.22	8/4/2014	NE	NE	NA	NA	NA	NA	429.02 - 419.02 (13.20 - 23.20)	0.0	
		9/2/2014	NE	22.35	NA	NA	NA	419.87		0.3	

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 1b
3Q14 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-7-PZ											
Monthly	442.19	8/4/2014	NE	22.44	NA	NA	NA	419.75	422.19 - 412.19 (20.00 - 30.00)	7.8	
		9/3/2014	NE	22.35	NA	NA	NA	419.84		0.0	
ROST-10-PZ											
Monthly	444.51	8/4/2014	NE	NE	NA	NA	NA	NA	434.51 - 424.51 (10.00 - 20.00)	0.0	
		9/2/2014	NE	19.87	NA	NA	NA	424.64		0.1	
ROST-21-PZ											
Monthly	443.72	8/4/2014	NE	19.18	NA	NA	NA	424.54	433.72 - 423.72 (10.00 - 20.00)	0.0	
		9/2/2014	NE	19.27	NA	NA	NA	424.45		0.7	
T-12											
Monthly	444.69	8/4/2014	NE	44.46	NA	NA	NA	400.23	398.23 - 372.23 (46.46 - 72.46)	0.4	*
		9/3/2014	NE	44.49	NA	NA	NA	400.20		2.7	*
PZ-1-85											
Monthly	445.48	8/4/2014	NE	44.21	NA	NA	NA	401.27	369.70 - 359.70 (75.78 - 85.78)	17.2	*
		9/2/2014	NE	44.02	NA	NA	NA	401.46		0.2	*
PZ-1-101											
Monthly	445.49	8/4/2014	NE	44.08	NA	NA	NA	401.41	354.52 - 344.52 (90.97 - 100.97)	4.8	*
		9/2/2014	NE	43.86	NA	NA	NA	401.63		0.8	*
PZ-2-70.5											
Monthly	443.06	8/4/2014	NE	41.81	NA	NA	NA	401.25	382.65 - 372.65 (60.41 - 70.41)	15.9	*
		9/2/2014	NE	41.69	NA	NA	NA	401.37		27.1	*
PZ-2-84											
Monthly	443.00	8/4/2014	NE	41.70	NA	NA	NA	401.30	371.12 - 359.12 (71.88 - 83.88)	0.0	*
		9/2/2014	NE	41.57	NA	NA	NA	401.43		35.7	*

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

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TABLE 2a
CUMULATIVE 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							
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	*	3.02	0.00	41	
3Q12	6.65	20.03	0.997	2.01	0.09	29	
4Q12	6.63	18.38	*	5.10	0.00	47	Initial Sample
	7.64	17.47	1.226	6.88	0.00	-12	Confirmation Sample
1Q13	6.73	18.14	*	8.16	0.20	-0.02	
2Q13	6.70	18.71	1.096	7.39	0.01	-117	
3Q13	6.76	19.26	1.068	28.82	0.90	-35	
4Q13	6.71	19.07	1.332	9.26	0.00	-27	
1Q14	6.77	18.29	1.203	9.97	0.00	-3	
2Q14	6.73	18.29	1.145	4.81	0.07	20	
3Q14	6.76	19.63	1.799	7.12	0.00	-59	
MW-02							
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	*	41.55	0.00	-60	
3Q12	6.66	20.80	1.082	4.01	0.00	-26	
4Q12	6.61	18.86	*	6.41	0.00	-37	
1Q13	6.67	18.53	*	12.39	0.05	-0.11	
2Q13	6.64	20.21	1.204	7.15	0.01	-159	
3Q13	6.76	21.55	1.320	9.69	0.00	-105	
4Q13	6.72	20.79	1.279	5.91	0.00	-99	
1Q14	6.61	19.24	1.256	17.36	0.03	-107	
2Q14	6.68	20.81	1.280	16.03	0.09	-105	
3Q14	6.74	21.58	*	8.24	0.00	-99	
MW-03							
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	*	2.26	0.00	-79	
3Q12	6.63	20.63	1.255	1.18	0.03	-67	
4Q12	6.80	20.10	*	1.81	0.00	-61	
1Q13	6.88	19.17	1.333	2.67	0.01	-243	
2Q13	6.92	19.83	1.078	2.64	0.02	-207	
3Q13	6.99	20.05	1.084	8.73	0.00	-143	
4Q13	6.93	19.92	1.402	9.94	0.00	-123	
1Q14	6.90	18.04	1.689	8.24	0.01	-125	
2Q14	6.85	19.35	1.267	1.91	0.64	-137	
3Q14	6.95	20.06	*	8.43	0.00	-134	
MW-04							
4Q11	6.89	-4.00	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	*	9.39	0.00	-58	
3Q12	6.60	19.94	1.137	9.69	0.00	-82	
4Q12	6.78	19.13	*	8.68	0.00	-66	
1Q13	6.83	18.75	*	25.45	0.21	-113	Initial Sample
	7.26	18.37	1.296	6.07	0.04	-108	Confirmation Sample
2Q13	6.81	19.74	1.283	8.50	0.00	-151	
3Q13	6.76	20.36	1.481	8.03	0.00	-105	
4Q13	6.79	18.67	1.505	8.67	0.00	-103	
1Q14	6.84	17.90	1.457	9.36	0.00	-113	
2Q14	6.81	18.59	1.434	7.85	0.00	-99	
3Q14	6.85	19.57	*	8.29	0.00	-116	
MW-05							
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	*	4.57	0.00	-50	
3Q12	6.78	22.92	0.856	8.64	0.00	-120	
4Q12	6.79	18.67	*	8.72	0.00	-67	
1Q13	6.83	19.18	*	11.85	0.04	-124	
2Q13	6.79	19.64	1.010	8.72	0.00	-166	
3Q13	6.85	20.57	1.113	12.87	0.00	-129	
4Q13	6.86	19.97	1.115	9.55	0.00	-114	
1Q14	6.82	17.75	1.142	28.73	0.00	-119	
2Q14	6.77	20.42	1.165	8.64	0.00	-126	
3Q14	6.79	19.91	*	9.32	0.00	-118	

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 2a
CUMULATIVE 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-06A							
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	*	6.24	0.00	-55	
3Q12	6.56	20.14	1.098	1.46	0.00	-37	
4Q12	6.65	19.52	*	8.32	0.00	-57	
1Q13	7.00	20.21	0.690	20.50	0.02	-132	
2Q13	6.84	18.96	0.848	7.09	0.00	-255	
3Q13	6.77	20.15	0.928	9.62	0.00	-128	
4Q13	6.67	19.52	1.339	9.08	0.00	-116	
1Q14	6.72	17.88	1.418	8.64	0.00	-114	
2Q14	6.58	19.29	1.852	9.74	0.05	-128	
3Q14	6.69	19.70	*	7.30	0.00	-114	
MW-06B							
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	*	3.07	0.00	-35	
3Q12	6.80	20.81	1.437	5.88	0.00	-42	
4Q12	6.89	19.49	*	7.40	0.00	-34	
1Q13	6.82	18.11	1.127	7.34	0.00	-79	
2Q13	6.80	18.21	1.557	1.11	0.04	-132	
3Q13	6.92	19.68	1.210	9.92	0.19	-85	
4Q13	6.89	18.56	1.424	7.08	0.00	-88	
1Q14	6.96	17.14	1.221	17.54	0.01	-88	
2Q14	6.93	18.42	1.203	1.60	0.14	-117	
3Q14	6.92	19.60	*	9.10	0.00	-89	
MW-06C							
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	*	1.71	0.00	-68	
3Q12	6.92	20.05	1.036	2.16	0.00	-55	
4Q12	6.94	19.04	*	0.51	0.00	-63	
1Q13	6.94	17.60	0.828	6.48	0.01	-103	
2Q13	7.70	4.91	1.051	4.91	0.05	-178	
3Q13	7.03	19.24	1.050	6.30	0.10	-124	
4Q13	6.99	17.83	1.168	8.60	0.00	-122	
1Q14	7.03	17.02	1.153	6.78	0.00	-118	
2Q14	7.01	17.94	1.102	11.44	0.17	-136	
3Q14	7.08	18.97	*	4.81	0.00	-125	
MW-06D							
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	*	7.17	0.00	-77	
3Q12	6.43	20.56	1.030	1.05	0.04	-41	
4Q12	7.03	19.07	*	5.16	0.00	-61	
1Q13	7.07	17.15	0.929	6.69	0.00	-116	
2Q13	8.27	18.20	1.131	7.93	0.00	-172	
3Q13	7.04	18.60	1.373	8.93	0.00	-134	
4Q13	6.98	17.47	1.611	8.40	0.00	-124	
1Q14	7.08	16.88	1.424	6.80	0.00	-127	
2Q14	7.05	17.34	1.424	8.46	0.06	-147	
3Q14	7.01	18.57	*	18.02	0.00	-135	
MW-07							
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	*	3.58	0.00	-31	
3Q12	6.69	21.88	1.062	1.69	0.03	-69	
4Q12	6.75	18.34	*	6.24	0.17	-15	
1Q13	6.90	18.28	1.056	8.57	0.00	-91	
2Q13	6.86	19.35	1.123	3.37	0.07	-148	
3Q13	6.76	19.76	1.254	21.67	0.09	-91	
4Q13	6.78	18.89	1.442	9.42	0.05	-76	
1Q14	6.88	18.24	1.569	9.44	0.22	-151	
2Q14	6.87	18.98	1.610	8.87	0.07	-89	
3Q14	6.83	20.22	*	9.55	0.05	-93	

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TABLE 2a
CUMULATIVE 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-08							
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	*	3.16	0.08	-11	
3Q12	6.46	21.97	1.299	7.27	0.00	17	Well was resampled on 08/07/12.
4Q12	6.52	17.81	*	5.83	0.12	0.00	
1Q13	6.58	17.83	0.863	9.84	0.00	-56	
2Q13	6.50	19.71	0.890	7.19	0.05	-124	
3Q13	6.57	19.86	2.092	8.65	0.07	-60	
4Q13	6.52	18.42	2.225	8.90	0.00	-46	
1Q14	6.59	18.12	1.741	8.77	0.11	-130	
2Q14	6.56	18.82	1.777	9.15	0.02	-65	
3Q14	6.72	19.81	*	8.40	0.00	-95	
MW-09							
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	*	5.46	0.00	-15	
3Q12	6.67	19.87	1.127	8.71	0.01	-39	
4Q12	6.69	17.19	*	5.51	0.00	-10	
1Q13	6.73	17.96	1.367	25.29	0.00	-111	
2Q13	6.69	18.01	1.126	9.51	0.00	-125	
3Q13	6.75	18.84	1.213	9.52	0.13	-76	
4Q13	6.71	18.47	1.440	7.91	0.00	-91	
1Q14	6.82	17.06	1.322	0.19	0.02	-54	
2Q14	6.75	17.34	1.273	1.20	0.42	-48	
3Q14	6.75	19.67	*	7.03	0.11	-67	
MW-10							
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	*	5.76	0.00	-63	
3Q12	6.87	21.46	0.623	2.57	0.02	-90	
4Q12	6.78	17.36	*	7.57	0.00	-20	Initial Sample
	7.61	17.42	1.222	6.93	0.00	-126	Confirmation Sample
1Q13	6.89	18.36	1.082	9.43	0.00	-173	Initial Sample
	6.88	16.98	*	8.89	0.04	-101	Confirmation Sample
2Q13	6.78	18.85	1.210	8.71	0.02	-260	
3Q13	6.90	20.11	1.360	9.57	0.02	-127	
4Q13	6.92	19.56	1.373	8.91	0.00	-129	
1Q14	6.85	17.17	1.632	9.92	0.01	-124	
2Q14	6.83	17.96	1.734	9.43	0.06	-162	
3Q14	6.89	19.54	*	7.27	0.00	-123	
MW-11							
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	*	5.40	0.00	-68	
3Q12	6.67	21.27	1.158	1.15	0.06	-69	
4Q12	6.68	18.82	*	8.44	0.00	-41	
1Q13	6.76	17.64	1.586	1.94	0.00	-179	
2Q13	6.75	18.16	1.313	5.58	0.01	-310	
3Q13	6.78	19.55	1.336	10.06	0.08	-94	
4Q13	6.73	17.76	1.676	9.66	0.00	-98	
1Q14	6.77	16.61	1.587	9.79	0.02	-100	
2Q14	6.74	17.19	1.677	9.63	0.08	-116	
3Q14	6.78	19.16	*	7.69	0.01	-99	
MW-12							
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	*	6.47	0.00	90	
1Q13	6.79	17.34	1.006	5.83	0.06	1	
2Q13	6.86	19.24	0.958	1.01	0.09	-285	
3Q13	6.85	19.61	1.003	4.21	0.13	261	
4Q13	6.83	18.87	1.030	7.86	0.01	69	
1Q14	6.79	17.15	0.977	4.91	0.14	56	
2Q14	6.80	18.59	0.969	3.00	0.19	98	
3Q14	6.85	19.68	1.737	9.27	0.20	103	

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TABLE 2a
CUMULATIVE 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-13							
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	*	6.11	0.00	-78	
3Q12	6.64	22.65	1.435	7.16	0.00	-96	
4Q12	6.60	20.73	*	9.02	0.04	-35	
1Q13	6.64	18.59	1.019	3.55	0.01	-178	
2Q13	6.60	19.69	1.260	2.35	0.00	-152	
3Q13	6.69	20.60	1.355	9.26	0.04	-122	
4Q13	6.54	19.63	1.527	7.87	0.00	-93	
1Q14	6.75	19.40	1.449	9.22	0.00	-107	
2Q14	6.71	20.02	1.459	3.40	0.00	-115	
3Q14	6.84	20.85	1.494	9.21	0.00	-124	
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	*	9.70	0.00	5	
3Q12	6.61	22.82	1.058	5.78	0.00	-63	
4Q12	6.61	19.59	1.137	7.69	0.03	-129	
1Q13	6.65	18.92	0.804	8.18	0.06	-100	
2Q13	6.48	19.09	1.138	5.68	0.03	-129	
3Q13	6.73	20.30	1.076	4.75	0.24	-113	
4Q13	6.70	19.37	1.262	1.83	0.05	-109	
1Q14	6.66	16.71	1.156	3.11	0.03	-90	
2Q14	6.74	19.27	1.371	2.17	0.65	-107	
3Q14	6.80	21.27	1.093	3.92	0.06	-117	
MW-16							
1Q13	*	19.17	0.851	7.03	0.00	-98	Added to Interim GW Monitoring Program in 1Q13
2Q13	6.57	19.56	0.826	0.96	0.03	-288	
3Q13	6.56	21.37	0.986	9.33	0.28	-63	
4Q13	6.49	18.69	1.283	8.13	0.00	-42	
1Q14	6.55	16.61	1.579	9.95	0.05	-66	
2Q14	6.47	19.14	1.466	4.29	0.04	-95	
3Q14	6.55	20.83	*	9.79	0.00	-87	
MW-22							
1Q13	11.15	17.69	1.096	9.20	0.00	-111	Added to Interim GW Monitoring Program in 1Q13
2Q13	6.76	19.91	1.150	1.64	0.07	-282	
3Q13	6.74	21.40	1.101	21.29	0.01	-105	
4Q13	6.72	20.53	1.171	9.24	0.02	-107	
1Q14	6.78	19.54	1.115	7.57	0.04	-104	
2Q14	6.75	21.83	1.066	8.03	0.05	-108	
3Q14	6.77	23.02	*	7.61	0.00	-106	
MW-24							
2Q13	6.73	18.63	1.203	3.04	0.24	-219	Added to Interim GW Monitoring Program in 2Q13
3Q13	6.75	19.12	1.169	9.18	0.34	207	
4Q13	6.75	18.59	1.371	9.32	1.62	74	
1Q14	6.75	16.98	1.338	8.15	0.08	91	
2Q14	6.69	18.35	1.264	1.63	1.34	98	
3Q14	6.79	19.63	*	7.14	1.03	132	
P-54							
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	*	36.80	0.22	180	
3Q12	6.72	19.02	0.973	7.77	0.00	9	
4Q12	6.72	17.62	1.167	4.76	0.17	146	
1Q13	6.75	17.50	1.061	4.97	0.11	-23	
2Q13	6.70	18.08	1.105	2.88	0.11	-96	Initial Sample
	6.73	17.51	1.035	4.36	0.63	165	Confirmation Sample
3Q13	6.80	18.42	1.091	8.66	4.22	293	
4Q13	6.80	18.09	1.475	6.74	2.46	68	
1Q14	6.74	16.08	1.147	7.53	1.40	108	
2Q14	6.69	17.89	1.065	2.80	2.28	140	
3Q14	6.81	19.11	*	1.04	2.50	117	

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TABLE 2a
CUMULATIVE 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	*	4.55	0.00	-43	
3Q12	NM	NM	NM	NM	NM	NM	Well damaged. No sample taken.
4Q12	NM	NM	NM	NM	NM	NM	Well damaged. No sample taken.
1Q13	*	17.37	0.635	7.68	0.00	-125	Well Replaced during 4Q12
2Q13	6.86	21.33	0.799	0.06	0.02	-174	
3Q13	6.91	21.72	0.785	9.58	0.01	-133	
4Q13	6.87	21.40	0.950	3.17	0.03	-115	
1Q14	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample taken.
2Q14	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample taken.
3Q14	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample taken.
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	*	1.04	0.00	0.00	
3Q12	6.58	22.08	1.245	3.47	0.00	12	
4Q12	6.51	22.60	*	7.52	0.02	-7	
1Q13	*	20.98	1.106	4.56	0.00	-47	
2Q13	6.61	22.69	1.218	3.00	0.00	-122	
3Q13	6.70	25.57	1.395	6.56	0.02	-115	
4Q13	6.63	24.88	1.319	1.79	0.01	-91	
1Q14	6.66	21.79	1.248	1.13	0.05	-100	
2Q14	6.68	20.97	1.227	1.79	0.00	-92	
3Q14	6.66	25.62	1.260	8.34	0.04	-107	
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	*	2.28	0.00	-54	
3Q12	6.59	20.98	1.182	3.25	0.00	-5	
4Q12	6.59	18.72	*	5.19	0.00	-28	
1Q13	*	20.16	1.116	6.22	0.00	-104	
2Q13	6.53	20.78	1.331	6.97	0.00	-146	
3Q13	6.59	22.45	1.235	8.81	0.00	-109	
4Q13	6.60	21.55	1.284	4.52	0.00	-120	
1Q14	6.66	20.29	1.271	9.67	0.00	-178	
2Q14	6.61	21.26	1.309	19.65	0.04	-106	
3Q14	6.63	23.22	*	9.69	0.00	-108	
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	*	10.20	0.00	-5	
3Q12	6.56	19.51	1.199	12.67	0.00	19	
4Q12	6.49	18.76	*	8.22	0.00	11	Initial Sample
	7.45	18.15	1.259	13.60	0.01	-112	Confirmation Sample
1Q13	6.57	16.48	0.964	23.26	0.00	-67	
2Q13	6.50	18.92	1.174	23.19	0.03	-109	
3Q13	6.53	21.63	1.201	9.42	0.05	-87	
4Q13	6.52	19.70	1.430	6.70	0.02	-84	
1Q14	6.55	18.92	1.201	8.00	0.04	-163	
2Q14	6.53	19.72	1.187	11.10	0.11	-65	
3Q14	6.60	22.73	*	7.88	0.02	-86	
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	*	3.30	0.00	-23	
3Q12	6.63	21.74	1.220	9.00	0.00	-79	
4Q12	6.57	17.90	*	7.16	0.00	14	
1Q13	6.64	16.36	1.208	4.99	0.00	-82	
2Q13	6.54	18.74	1.109	3.91	0.00	-119	
3Q13	6.64	21.34	1.202	3.31	0.05	-107	
4Q13	6.63	20.31	1.318	4.96	0.00	-96	
1Q14	6.57	17.87	1.486	11.88	0.04	-203	
2Q14	6.61	18.96	1.514	17.69	0.18	-92	
3Q14	6.61	23.29	1.990	6.10	0.00	-105	

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TABLE 2a
CUMULATIVE 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-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	*	19.95	0.00	-11	
3Q12	6.41	22.52	1.372	20.89	0.00	-53	
4Q12	6.44	18.80	1.353	21.29	0.00	-161	
1Q13	6.48	19.00	0.943	14.28	0.00	-79	
2Q13	6.40	19.20	1.198	13.65	0.00	-133	
3Q13	6.46	20.78	1.173	8.99	0.04	-81	
4Q13	6.46	20.11	1.429	13.42	0.02	-82	
1Q14	6.44	18.56	1.221	9.76	0.04	-87	
2Q14	6.45	21.06	1.203	7.90	0.00	-83	
3Q14	6.58	22.67	1.065	7.24	0.07	-89	
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	*	14.87	0.00	-22	
1Q13	*	16.88	0.445	24.29	0.00	-39	
2Q13	6.99	16.19	0.175	14.65	1.42	-93	
3Q13	6.92	20.80	0.318	9.99	0.04	-122	
4Q13	6.68	18.27	0.447	19.33	0.00	-81	
1Q14	6.61	16.61	0.686	14.25	0.00	-103	
2Q14	7.36	16.48	0.316	10.22	4.52	-3	
3Q14	6.84	20.10	0.260	9.50	0.06	-133	
P-93A							
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	*	32.40	4.64	15	
1Q13	6.79	20.25	1.198	36.06	4.26	-66	
2Q13	6.85	19.70	1.433	33.41	5.83	-86	
3Q13	6.99	23.07	1.654	36.18	4.25	-83	
4Q13	7.15	26.33	1.618	72.75	5.89	-50	
1Q14	6.99	19.48	1.872	24.97	4.65	-74	
2Q14	7.02	20.74	2.104	18.21	4.97	-60	
3Q14	6.87	21.30	*	10.96	4.31	-50	
P-93B							
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	*	0.76	0.00	-48	
1Q13	6.80	17.81	1.731	2.92	0.12	-116	
2Q13	6.84	17.21	1.666	3.54	0.97	-99	
3Q13	6.80	20.05	1.644	1.56	0.05	-117	
4Q13	6.85	18.53	1.928	9.70	1.75	-0.10	
1Q14	6.84	15.74	1.605	4.53	1.62	-87	
2Q14	6.93	18.96	1.454	3.43	3.47	-76	
3Q14	6.88	20.02	*	9.67	0.98	-108	
P-93C							
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	*	0.00	0.02	19	
1Q13	6.91	17.76	0.916	0.83	0.12	-118	
2Q13	6.91	17.09	0.961	0.00	0.89	-74	
3Q13	6.83	20.08	1.550	0.69	0.08	-81	Initial Sample
	6.87	20.60	1.270	0.03	0.08	-111	Confirmation Sample
4Q13	6.91	18.92	1.366	0.28	0.87	-82	
1Q14	6.94	15.83	1.298	0.12	1.88	-67	
2Q14	6.89	18.31	1.308	4.81	0.95	-57	
3Q14	6.92	19.88	*	2.59	2.03	-74	

SEE LAST PAGE OF TABLE FOR NOTES

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

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
P-93D							
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	*	3.31	0.00	-0.03	
3Q12	6.93	21.54	1.446	2.93	0.00	-88	
4Q12	7.76	17.20	1.623	2.10	NM	NM	
1Q13	7.07	16.25	1.187	4.91	0.00	-77	
2Q13	7.08	18.02	1.211	3.37	0.17	-111	
3Q13	7.04	21.16	1.306	1.21	0.12	-120	
4Q13	6.98	20.50	1.467	0.43	0.00	-103	
1Q14	6.93	17.14	1.378	0.58	0.04	-274	
2Q14	6.97	17.61	1.378	4.61	0.00	-103	
3Q14	7.01	20.51	*	5.34	0.00	-127	
P-114							
4Q11	7.16	20.29	1.287	12.60	3.19	-118	Added to Interim GW Monitoring Program in 4Q11
1Q12	7.02	19.70	1.155	7.81	4.25	-6	
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	*	12.12	3.00	15	
1Q13	7.25	19.52	0.782	9.14	1.53	-96	
2Q13	7.33	20.80	0.941	31.68	1.83	-144	
3Q13	7.45	22.10	1.095	17.89	3.10	-103	
4Q13	7.16	20.73	1.191	15.82	2.36	-95	
1Q14	7.13	18.07	1.228	47.51	2.25	-86	
2Q14	7.36	20.07	1.245	18.06	1.85	-91	
3Q14	7.98	22.69	*	8.46	3.54	-110	
ROST-3-MW (ROST-3-PZ)							
2Q12	6.94	19.34	*	9.40	0.35	15	Added to Interim GW Monitoring Program in 2Q12
3Q12	6.83	24.31	0.813	6.90	0.29	-95	
4Q12	6.84	15.50	*	6.38	0.63	-9.00	
1Q13	*	16.92	0.723	6.82	0.00	-124	2" Well Installed to replace ROST-3-PZ
2Q13	6.94	18.60	0.751	11.04	0.01	-319	
3Q13	6.95	18.57	0.773	33.57	0.00	-128	
4Q13	6.89	18.00	0.915	8.72	0.00	-111	
1Q14	6.95	16.14	0.939	9.80	0.00	-116	
2Q14	6.89	18.62	0.974	5.54	0.00	-127	
3Q14	6.88	19.20	*	9.54	0.00	-128	
ROST-4-PZ(C)							
2Q12	6.77	20.00	2.128	0.40	0.00	-1	Added to Interim GW Monitoring Program 2Q12
3Q12	6.74	21.56	0.976	6.67	0.04	-94	
4Q12	6.75	18.50	*	0.81	0.02	-47	
1Q13	6.77	19.35	1.091	7.82	0.00	-173	
2Q13	6.75	19.22	1.334	1.67	0.01	-148	
3Q13	6.85	20.00	1.089	4.00	0.13	-111	
4Q13	6.69	18.87	1.769	5.71	0.00	-119	
1Q14	6.64	17.08	1.888	3.68	0.01	-79	
2Q14	6.61	20.07	2.351	5.94	0.09	-80	
3Q14	6.78	19.88	*	5.00	0.01	-104	
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	*	1.18	0.00	-37	
3Q12	6.79	18.86	1.259	4.54	0.00	-125	
4Q12	6.68	16.69	*	1.47	0.00	-2	
1Q13	6.93	15.73	1.075	2.11	0.00	-117	
2Q13	6.81	18.64	1.177	10.67	0.00	-122	
3Q13	7.06	20.34	1.200	5.39	0.01	-164	
4Q13	6.65	19.39	1.324	6.84	0.00	-97	
1Q14	6.91	16.38	1.183	1.47	0.03	-111	
2Q14	6.94	17.65	1.176	6.70	0.00	-128	
3Q14	6.85	21.13	1.700	3.45	0.01	-128	

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

SEE LAST PAGE OF TABLE FOR NOTES

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

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

Notes:
1) NM = Not Measured

SEE LAST PAGE OF TABLE FOR NOTES

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

						VOCs																		
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
			Screening Values (mg/L)			6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
MW-01	MW1-ROX-120511	12/5/2011	43.41 - 58.41	37.10	NE	<0.005 UJ	0.00097		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW1-ROX-011612	1/16/2012		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	48.80 - 58.80	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		43.28	NE	<0.01	0.00066		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW1-ROX-070914	7/9/2014	48.80 - 58.80	42.09	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
MW-02	MW2-ROX-112811	11/28/2011	49.87 - 59.87	38.03	NE	<0.005	0.0216		<0.005	<0.005	0.0106	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0121	<0.001	<0.002	<0.0005	<0.025	0.503
	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		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
	MW2-ROX-071414	7/14/2014	49.87 - 59.87	43.13	NE	<0.01	0.0102 J		<0.005	0.0194 J	0.0073 J	0.0013 J J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.008 J	<0.001	<0.002	<0.0005	<0.025	0.955
MW-03	MW3-ROX-112911	11/29/2011	34.67 - 44.67	24.06	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	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 UJ	<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	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0025
	MW3-ROX-011614	1/16/2014		29.91	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW3-ROX-040914	4/9/2014		30.50	NE	<0.01	0.0015		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW3-ROX-071114	7/10/2014	34.67 - 44.67	29.05	NE	<0.01	0.00062		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001

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

						VOCs																		
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
			Screening Values (mg/L)			6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			
MW-04	MW4-ROX-121511	12/15/2011	42.63 - 57.63	33.99	NE	<0.005	0.0381		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW4-ROX-011612	1/16/2012		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	<0.001	<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	<0.001	<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	<0.002	<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	<0.001	<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	46.06 - 56.06	40.20	NE	<0.005	8.96 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.00056 J
	MW4-ROX-030413	3/4/2013		40.20	NE	<0.5	21.4		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.05	<2.5	<0.1
	MW4-ROX-040913	4/9/2013		40.90	NE	<0.02	64.2		<0.01	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.004	<0.002	<0.004	<0.01	<0.01	<0.002	<0.004	<0.001	<0.05	<0.002
	MW4-ROX-040913-DUP	4/9/2013		40.90	NE	<0.01	72.9		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.00081 J
	MW4-ROX-071713	7/17/2013		37.61	NE	<0.01	12.2		<0.005	<0.005	0.0016 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.001	<0.05	0.0015
	MW4-ROX-101613	10/16/2013		38.80	NE	<0.1	1.7		<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.05	<0.01	<0.02	<0.005	<0.25	<0.01
	MW4-ROX-013014	1/30/2014		41.09	NE	<0.01	2.01		<0.005	0.00058 J	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.00048 J
	MW4-ROX-041614	4/16/2014		41.91	NE	<0.01	0.553		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW4-ROX-071614	7/16/2014	46.06 - 56.06	40.18	NE	<0.01	1.88		<0.005	<0.005	<0.05	<0.05	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.01
MW-05	MW5-ROX-112111	11/21/2011	33.97 - 43.97	23.46	NE	<0.005 UJ	0.0109		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005		<0.001
	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		<0.001
	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		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
	MW5-ROX-071414	7/14/2014	33.97 - 43.97	28.59	NE	<0.01	0.001		<0.005	<0.005	0.0011 J	0.0046 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
MW-06A	MW6A-ROX-112111	11/21/2011	34.83 - 44.83	25.49	NE	<0.0059 UJ	0.0105 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005		<0.001
	MW6A-ROX-112111-DUP	11/21/2011		25.49	NE	<0.005 UJ	0.0137 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005		<0.001
	MW6A-ROX-011712	1/17/2012		26.74	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-050212	5/2/2012		27.77	NE	<0.005	0.00077		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-080112	8/1/2012		28.36	NE	<0.005	0.0016		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-102412	10/24/2012		30.06	NE	<0.12 UJ	0.00073		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-011413	1/14/2013		31.00	NE	<0.005	0.0276		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-040313	4/3/2013		31.62	NE	<0.005 UJ	0.0017		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-070913	7/9/2013		28.25	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005		<0.001
	MW6A-ROX-070913-DUP	7/9/2013		28.25	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005		<0.001
	MW6A-ROX-100713	10/7/2013		28.87	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-100713-DUP	10/7/2013		28.87	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-011614	1/16/2014		31.62	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-011614-DUP	1/16/2014		31.62	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-040814	4/8/2014		32.16	NE	0.11	0.0011		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-040814-DUP	4/8/2014		32.16	NE	0.116	0.001		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-071014	7/10/2014	34.83 - 44.83	30.75	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002 UJ	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025 UJ	<0.001

SEE LAST PAGE OF TABLE FOR NOTES

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

						VOCs																		
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
			Screening Values (mg/L)			6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
MW-06B	MW6B-ROX-110311	11/3/2011	64.05 - 69.05	24.67	NE	<0.05	0.961		<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02 UJ	<0.05	<0.05	<0.01	<0.02	<0.005	<0.25	<0.01
	MW6B-ROX-011712	1/17/2012		26.77	NE	<0.005	0.0013		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6B-ROX-050212	5/2/2012		27.82	NE	<0.005	0.00086		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6B-ROX-080112	8/1/2012		28.39	NE	<0.0032 U	0.00045 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6B-ROX-102412	10/24/2012		30.11	NE	<0.005 UJ	0.0015		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6B-ROX-011713	1/17/2013		31.11	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6B-ROX-040313	4/3/2013		31.68	NE	<0.005 UJ	0.00043 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6B-ROX-070913	7/9/2013		28.25	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005		<0.001
	MW6B-ROX-100713	10/7/2013		28.93	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6B-ROX-011614	1/16/2014		31.67	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6B-ROX-040814	4/8/2014		32.21	NE	<0.01	0.0009		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6B-ROX-071014	7/10/2014	64.05 - 69.05	30.81	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002 UJ	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025 UJ	<0.001
MW-06C	MW6C-ROX-110311	11/3/2011	84.95 - 89.95	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	<0.005	<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	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6C-ROX-080112	8/1/2012		28.15	NE	<0.003 U	0.00061		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6C-ROX-102412	10/24/2012		27.85	NE	<0.005 UJ	0.00035 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6C-ROX-011713	1/17/2013		30.88	NE	<0.005 UJ	<0.0005 UJ		<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.002 UJ	<0.0005 UJ	<0.025 UJ	<0.001 UJ
	MW6C-ROX-040313	4/3/2013		31.41	NE	<0.005 UJ	0.00062		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6C-ROX-070913	7/9/2013		28.03	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005		<0.001
	MW6C-ROX-100713	10/7/2013		28.72	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6C-ROX-011614	1/16/2014		31.48	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6C-ROX-040814	4/8/2014		32.01	NE	<0.01	0.0021		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6C-ROX-071014	7/10/2014	84.95 - 89.95	30.60	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002 UJ	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025 UJ	<0.001
MW-06D	MW6D-ROX-110311	11/3/2011	104.72 - 109.72	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	<0.005	<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	<0.005	<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	<0.005	<0.005	<0.001	<0.002	<0.0005		<0.001
	MW6D-ROX-102412	10/24/2012		29.71	NE	<0.005 UJ	0.00055		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6D-ROX-011713	1/17/2013		30.75	NE	<0.005 UJ	0.00053 J		<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.002 UJ	<0.0005 UJ	<0.025 UJ	<0.001 UJ
	MW6D-ROX-040313	4/3/2013		31.27	NE	<0.005 UJ	0.00055		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6D-ROX-070913	7/9/2013		27.91	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005		<0.001
	MW6D-ROX-100713	10/7/2013		28.58	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6D-ROX-011614	1/16/2014		31.33	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6D-ROX-040814	4/8/2014		31.85	NE	<0.01	0.0064		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW6D-ROX-071014	7/10/2014	104.72 - 109.72	31.47	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002 UJ	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025 UJ	<0.001
	MW6D-ROX-071014-DUP	7/10/2014		31.47	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002 UJ	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025 UJ	<0.001

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

						VOCs																		
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
				Screening Values (mg/L)		6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
MW-07	MW7-ROX-110211	11/2/2011	42.92 - 52.92	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	<0.1	<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	<0.01	<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	<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	<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	<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	<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	<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	<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	<0.001	<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	<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	<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	<5	<5	<10	<5	<10	<25	<25	<5	<10	<2.5	<130	<5
	MW7-ROX-071614	7/16/2014	42.92 - 52.92	42.05	NE	<0.01	1290		<0.005	0.0036 J J	0.0022 J J	0.0022 J J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0015 J J	<0.001	<0.002	<0.0005	<0.025	0.208 J
	MW7-ROX-071614-DUP	7/16/2014		42.05	NE	<0.01	1390		<0.005	0.0034 J J	0.0023 J J	0.0022 J J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0015 J J	<0.001	<0.002	<0.0005	<0.025	0.206 J
MW-08	MW-8-ROX-110211	11/2/2011	33.60 - 43.60	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	<0.1	<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	<0.1	<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	<0.02	<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	<0.01	<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	<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	<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	<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	<0.001	<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	<0.001	<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	<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	<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	<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	<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	<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	<2	<2	<4	<2	<4	<10	<10	<2	<4	<1	<50	<2
	MW8-ROX-071614	7/16/2014	33.60 - 43.60	33.01	NE	<0.01 UJ	280		<0.005 UJ	0.0069 J	0.0042 J J	0.0028 J J	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.005 UJ	0.0032 J J	<0.001 UJ	<0.002 UJ	<0.0005 UJ	<0.025 UJ	0.266

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						VOCs																	
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
			Screening Values (mg/L)			6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																			
MW-09	MW9-ROX-110111	11/1/2011	46.45 - 56.45	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		<0.001
	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	<0.005	<0.005	<0.005	<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-040913	4/9/2013		44.67	NE	<0.005	<0.0005		<0.01	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW9-ROX-070813	7/8/2013		42.35	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW9-ROX-100313	10/3/2013		42.27	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW9-ROX-011414	1/14/2014		44.47	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW9-ROX-040714	4/7/2014		44.99	NE	<0.01	0.0044		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW9-ROX-070914	7/9/2014	46.45 - 56.45	44.35	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
MW-10	MW10-ROX-110111	11/1/2011	44.43 - 54.43	37.72	NE	<0.005	0.0022		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW10-ROX-011612	1/16/2012		39.28	NE	<0.005	0.0026		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW10-ROX-050112	5/1/2012		40.86	NE	<0.005	0.00079		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW10-ROX-072712	7/27/2012		41.21	NE	<0.005 UJ	0.00058		<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.0005		<0.001
	MW10-ROX-102612	10/26/2012		43.08	NE																				
	MW10-ROX-121712	12/17/2012		43.08	NE	<0.005 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	0.00095 J	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW10-ROX-011013	1/10/2013		44.10	NE	<0.101 U	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	0.0074	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW10-ROX-012113	1/21/2013		44.10	NE	<0.025	0.003		<0.0051 U	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.001	<0.01	<0.005	<0.005	<0.005	<0.005	<0.001		<0.005
	MW10-ROX-040913	4/9/2013		44.60	NE	<0.005	0.00067		<0.01	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW10-ROX-070813	7/8/2013		42.27	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW10-ROX-100313	10/3/2013		42.38	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW10-ROX-011514	1/15/2014		44.42	NE	0.0174	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW10-ROX-040714	4/7/2014		45.00	NE	0.0684	0.0018		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	0.0032	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW10-ROX-070914	7/9/2014	44.43 - 54.43	44.35	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
MW-11	MW-11-ROX-110211	11/2/2011	41.66 - 51.66	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		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
	MW11-ROX-070914	7/9/2014	41.66 - 51.66	41.75	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001

SEE LAST PAGE OF TABLE FOR NOTES

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

						VOCs																		
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
			Screening Values (mg/L)			6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
MW-12	MW-12-ROX-110211	11/2/2011	41.92 - 51.92	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	<0.005	<0.001	<0.002	<0.0005		<0.001
	MW12-ROX-100713	10/7/2013		40.22	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW12-ROX-011514	1/15/2014		42.54	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW12-ROX-040814	4/8/2014		43.15	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW12-ROX-070914	7/9/2014	41.92 - 51.92	41.97	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
MW-13	MW13-ROX-110311	11/3/2011	25.57 - 35.57	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
	MW13-ROX-070714	7/7/2014	25.57 - 35.57	28.49	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
MW-14	MW14-ROX-110911	11/9/2011	Unknown	27.00	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
	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
	MW14-ROX-070714	7/7/2014	33.42 - 43.42	32.82	NE	<0.01 UJ	<0.0005		<0.005	<0.005	0.00042 J	0.00047 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<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
	MW16-ROX-071014	7/10/2014	37.06 - 47.06	43.15	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002 UJ	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025 UJ	<0.001

SEE LAST PAGE OF TABLE FOR NOTES

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

						VOCs																		
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
			Screening Values (mg/L)			6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
MW-22	MW22-ROX-012313	1/23/2013	37.88 - 47.88	41.80	NE	<0.25	2.12		<0.295 U	<0.25	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.25	<0.05	<0.1	<0.025	<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
	MW22-ROX-041014	4/10/2014		43.15	NE	0.0911 J	1.7		0.0334	0.0331	0.0128	0.0152	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0094	<0.001	<0.002	<0.0005	<0.025	3.32
	MW22-ROX-041014-DUP	4/10/2014		43.15	NE	<0.01 UJ	1.56		0.0287	0.0319	0.0123	0.0144	<0.005	<0.001	0.00046 J	<0.002	<0.001	<0.002	<0.005	0.0089	<0.001	<0.002	<0.0005	<0.025	3.02
	MW22-ROX-071414	7/14/2014	37.88 - 47.88	41.85	NE	<0.01	1.76		0.0185 J	0.0349 J	0.013 J	0.0137 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0085 J	<0.001	<0.002	<0.0005	<0.025	1.93
MW-24	MW24-ROX-040513	4/5/2013	38.89 - 48.89	43.39	NE	<0.005	0.0029		<0.01	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0012
	MW24-ROX-071113	7/11/2013		40.35	NE	<0.0157 UJ	<0.0005		<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005		<0.001
	MW24-ROX-100913	10/9/2013		41.27	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW24-ROX-011514	1/15/2014		43.47	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW24-ROX-040914	4/9/2014		44.13	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	MW24-ROX-071114	7/10/2014	38.89 - 48.89	42.97	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<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	<0.001	<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	<0.001	<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	<0.001	<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	<0.001	<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	<0.001	<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	<0.001	<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	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	P114-ROX-042114	4/21/2014		32.22	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	P114-ROX-071814	7/18/2014	32.67 - 52.67	30.87	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025 UJ	<0.001
P-54	P54-ROX-110311	11/3/2011	38.00 -63.00	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
	P54-ROX-071114	7/10/2014	38.00 - 63.00	41.71	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001

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

						VOCs																		
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
			Screening Values (mg/L)			6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
P-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		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	40.43 - 50.43	43.60	NE	<0.25	0.571		<0.25	0.0533	0.011 J	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.1	<0.05	<0.05	<0.05	<0.05	<0.01		0.316
	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
	P56-ROX-070814	7/8/2014	40.82 - 65.82	45.97	NE	0.0626 J	0.127 J		0.0132 J	0.0159 J	0.0073 J	0.0034 J J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0058 J	0.0018 J	<0.002	<0.0005	<0.025 UJ	1.71 J
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	<0.001	<0.002	<0.0005		0.759 E
	P57-ROX-110512	11/5/2012		44.98	NE	<2.5	142		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<0.25	<13	1.09
	P57-ROX-012913	1/29/2013		45.92	NE	<2.5	114		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	1.43	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<0.25	<13	1.1
	P57-ROX-041113	4/11/2013		46.29	NE	<5	141		<5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<0.25	<13	1.19
	P57-ROX-071613	7/16/2013		43.38	NE	<0.01	254		<0.005	0.0143 J	0.0131 J	0.0103 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0119 J	<0.001	<0.002	<0.0005	<0.025	1.59
	P57-ROX-101413	10/14/2013		44.38	NE	<0.01	288		<0.005	0.0129	0.0116	0.0163	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0113	<0.001	<0.002	<0.0005	<0.025	1.1
	P57-ROX-020314	2/3/2014		46.57	NE	<10	261		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<0.5	<25	0.697 J
	P57-ROX-041514	4/15/2014		46.70	NE	<0.01 UJ	384		0.0055	0.0151	0.0131	0.0147	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0114	<0.001	<0.002	<0.0005	<0.025	1.08
	P57-ROX-070814	7/8/2014	40.46 - 65.46	45.95	NE	0.0497 J	384		<0.005 UJ	0.011 J	0.0091 J	0.0066 J	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.005 UJ	0.0081 J	<0.001 UJ	<0.002 UJ	<0.0005 UJ	<0.025 UJ	1.12
	P57-ROX-070814-DUP	7/8/2014		45.95	NE	0.0441 J	377		0.0086 J	0.0114 J	0.0097 J	0.007 J	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.005 UJ	0.0085 J	<0.001 UJ	<0.002 UJ	<0.0005 UJ	<0.025 UJ	1.21

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

						VOCs																		
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
			Screening Values (mg/L)			6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
P-58	P58-ROX-102811	10/28/2011	40.21 - 65.21	37.31	NE	<0.005	430		<0.005	<0.005	0.0148	0.0344	<0.005	<0.001	0.0014	<0.002	<0.001	<0.002	<0.005	0.0113	<0.001	<0.002	<0.0005	<0.025	<5
	P58-ROX-011912	1/19/2012		39.73	NE	<0.005	487		<0.005	0.027	0.0215	0.056 J	<0.005	<0.001	0.0013	<0.002	<0.001	<0.002	<0.005	0.0149	<0.001	<0.002	<0.0005	<0.025	0.97 J
	P58-ROX-011912-D	1/19/2012		39.73	NE	<0.005	474		<0.005	0.0235 J	0.0168 J	0.0387 J	<0.005	<0.001	0.0014 J	<0.002	<0.001	<0.002	<0.005	0.0123 J	<0.001	<0.002	<0.0005	<0.025	1.03
	P58-ROX-050712	5/7/2012		40.90	NE	<0.5	477		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.05	<2.5	1.03
	P58-ROX-050712-DUP	5/7/2012		40.90	NE	<0.5	440		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.05	<2.5	1
	P58-ROX-080612	8/6/2012		41.63	NE	<0.1 UJ	313		<0.1 UJ	<0.1	<0.1	0.0317 J	<0.1	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.1	<0.02	<0.04	<0.01		0.889
	P58-ROX-080612-DUP	8/6/2012		41.63	NE	<0.05	308		<0.05	<0.05	0.0176 J	0.0339 J	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	0.0118 J	<0.01	<0.02	<0.005	<0.25	0.931
	P58-ROX-110612	11/6/2012		43.09	NE	<0.5 UJ	415		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1 UJ	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.05	<2.5	0.844
	P58-ROX-121012	12/10/2012		43.09	NE																			
	P58-ROX-012213	1/22/2013		44.21	NE	<5	552		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<0.5	<25	1.27
	P58-ROX-041113	4/11/2013		44.40	NE	<20	532		<20	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<1	<50	1.28 J
	P58-ROX-071613	7/16/2013		41.49	NE	<0.01	398		<0.005	0.0239	0.0215	0.0532	<0.005	<0.001	0.0017	<0.002	<0.001	<0.002	<0.005	0.0152	<0.001	<0.002	<0.0005	<0.025	1.07
	P58-ROX-101413	10/14/2013		42.19	NE	<0.01	647		<0.005	0.023	0.0235	0.0483	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0143	<0.001	<0.002	<0.0005	<0.025	1.53
	P58-ROX-020314	2/3/2014		44.66	NE	<10	496		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<0.5	<25	0.767 J
	P58-ROX-041514	4/15/2014		45.66	NE	<0.01 UJ	782		0.0056 J	0.0216 J	0.0185 J	0.0396 J	<0.005	<0.001	0.0013 J	<0.002	<0.001	<0.002	<0.005	0.0116 J	<0.001	<0.002	<0.0005	<0.025	0.891 J
	P58-ROX-071814	7/18/2014		43.80	NE	<20	406		<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<1	<25 UJ	<2
P-59	P59-ROX-102711	10/27/2011	47.91 - 72.91	41.06	NE	<0.25	6.01		<0.25	<0.25	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.25	<0.05	<0.1	<0.025	<1.3	1.49
	P59-ROX-011912	1/19/2012		42.88	NE	<0.005	6.61		<0.158 U	<0.005 UJ	0.0054	0.0031 J J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0036 J	<0.001	<0.002	<0.0005	<0.025	1.28
	P59-ROX-011912-DUP	1/19/2012		42.88	NE	<0.005	7.04		<0.185 U	0.0264 J	0.0055	0.0372 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0038 J	<0.001	<0.002	<0.0005	<0.025	1.4
	P59-ROX-050912	5/9/2012		44.11	NE	<0.25	7.86		<0.25	<0.25	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.25	<0.05	<0.1	<0.025	<1.3	1.93
	P59-ROX-080212	8/2/2012		44.07	NE	<0.1 UJ	11		<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.1	<0.02	<0.04	<0.01		1.74
	P59-ROX-110212	11/2/2012		45.98	NE	<0.5 UJ	10.3		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.05	<2.5	1.87
	P59-ROX-110212-DUP	11/2/2012		45.98	NE	<0.5 UJ	10.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.05	<2.5	1.94
	P59-ROX-013013	1/30/2013		46.60	NE	<0.25	12.1		<0.25	<0.25	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.25	<0.05	<0.1	<0.025	<1.3	1.9
	P59-ROX-041213	4/12/2013		46.95	NE	<0.5 UJ	15		<0.25	<0.25	0.289	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.25	<0.05	<0.1	<0.025	<1.3	2.85
	P59-ROX-041213-DUP	4/12/2013		46.95	NE	<0.5 UJ	13.4		<0.25	<0.25	0.288	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.25	<0.05	<0.1	<0.025	<1.3	2.57
	P59-ROX-071613	7/16/2013		44.13	NE	<0.01	10.2		<0.005	0.0213 J	0.0068 J	0.0027 J J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0046 J J	<0.001	<0.002	<0.0005	<0.025	2.4
	P59-ROX-101013	10/10/2013		45.50	NE	<0.01	14.7		<0.005	0.0224	<0.005	0.0024 J	<0.005	<0.001	<0.001	0.0034	<0.001	<0.002	<0.005	0.0051	<0.001	<0.002	<0.0005	<0.025	3.19
	P59-ROX-020314	2/3/2014		47.35	NE	<0.2	15.9		<0.1	0.0165 J	<0.1	<0.1	<0.1	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.1	<0.02	<0.04	<0.01	<0.5	1.86
	P59-ROX-041514	4/15/2014		48.60	NE	<0.01 UJ	14.8		0.0253	0.0181	0.0035 J	0.0014 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0029 J	0.0023	<0.002	<0.0005	<0.025	1.69
	P59-ROX-070814	7/8/2014	47.91 - 72.91	47.69	NE	0.057 J	12.4		0.0169 J	0.0251 J	0.0073 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0046 J J	<0.001	<0.002	<0.0005	<0.025 UJ	1.92
P-66	P66-ROX-110111	11/1/2011	34.72 - 59.72	28.92	NE	<0.005	0.0171		<0.005	0.0153	0.0185	0.0063	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0016
	P66-ROX-051012	5/10/2012		32.48	NE	<0.005	0.0193		<0.005	0.0139	0.019	0.0059	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0015
	P66-ROX-080312	8/3/2012		30.51	NE	<0.005	0.0994		<0.005	0.0118	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0013
	P66-ROX-103112	10/31/2012		34.75	NE	<0.005	0.223		<0.005	0.0145	0.02	0.0054	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0012
	P66-ROX-011813	1/18/2013		35.70	NE	<0.005	0.0896		<0.005	0.0129	0.0227	0.0087	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0014
	P66-ROX-041113	4/11/2013		36.03	NE	<0.01	0.0444		<0.01	0.0199	0.0249	0.0104	<0.005	<0.001	<0.001	0.00065 J	<0.001	<0.002	<0.005	0.0093	<0.001	<0.002	<0.0005	<0.025	0.0036
	P66-ROX-071213	7/12/2013		33.20	NE	<0.01	0.187		<0.005	0.0146	0.0221	0.006	<0.005	<0.001 UJ	0.00059 J	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0022
	P66-ROX-101013	10/10/2013		33.66	NE	0.0095 J	0.0646		<0.005	0.0141	0.0186	0.0067	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0045
	P66-ROX-110713	11/7/2013		33.66	NE	<0.01	0.03		<0.005	0.0088	0.0102	0.0071	<0.005	<0.001	0.0007 J	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0016
	P66-ROX-012914	1/29/2014		36.39	NE	<0.01	0.008		<0.005	0.016	0.0205	0.0053	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0013
	P66-ROX-041114	4/11/2014		37.10	NE	<0.01	0.0052		<0.005	0.0129	0.0168	0.0041 J	<0.005	<0.001	0.00052 J	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0014
	P66-ROX-070714	7/7/2014	34.72 - 59.72	35.60	NE	<0.01 UJ	0.0429		<0.005	0.0112	0.0147	0.0023 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0016

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

						VOCs																		
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
			Screening Values (mg/L)			6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
P-74	P74-ROX-103111	10/31/2011	44.43 - 69.43	36.26	NE	<0.005	5.02		<0.005	0.0242	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.229
	P74-ROX-011912	1/19/2012		38.77	NE	<0.005	<0.205 U		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0095
	P74-ROX-050712	5/7/2012		39.92	NE	<0.005	0.336		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0081
	P74-ROX-080612	8/6/2012		40.71	NE	<0.05 UJ	2.46		<0.05 UJ	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.05	<0.01	<0.02	<0.005		0.0782
	P74-ROX-110112	11/1/2012		41.72	NE	<0.1	3.5		<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.1	<0.02	<0.04	<0.01	<0.5	0.0493
	P74-ROX-011713	1/17/2013		42.65	NE	<0.1	4.99		<0.1	0.0143 J	<0.1	<0.1	<0.1	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.1	<0.02	<0.04	<0.01	<0.5	0.0997
	P74-ROX-041113	4/11/2013		42.83	NE	<0.01	0.144		<0.01	0.0026 J	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0086
	P74-ROX-071513	7/15/2013		40.11	NE	<0.0046 U	0.117		<0.005	0.0088	0.002 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0017 J	<0.001	<0.002	<0.0005	<0.025	0.0306
	P74-ROX-101413	10/14/2013		41.72	NE	<0.01	1.55		<0.005	0.0158	0.003 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0031 J	<0.001	<0.002	<0.0005	<0.025	0.0653
	P74-ROX-012414	1/24/2014		43.35	NE	<0.01	4.45		<0.005	0.0252	0.0031 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0031 J	<0.001	<0.002	<0.0005	<0.025	0.115
	P74-ROX-041514	4/15/2014		44.74	NE	0.0398 J	0.0349		<0.005	0.0013 J	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0043
	P74-ROX-070814	7/8/2014	44.43 - 69.43	43.02	NE	<0.01 UJ	0.309		<0.005	0.0138	0.0014 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0018 J	<0.001	<0.002	<0.0005	<0.025 UJ	0.0374
P-93A	P93A-ROX-102611	10/26/2011	48.17 - 63.17	39.43	NE	<0.005 UJ	543		<0.005	<0.005	0.006	0.015	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0081	<0.001	<0.002	<0.0005	<0.025	0.304
	P93A-ROX-012012	1/20/2012		41.66	NE	<0.005	164 J		<0.005	0.0037 J J	0.0045 J	0.0122	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0023 J	<0.001	<0.002	<0.0005	<0.025	0.185
	P93A-ROX-050812	5/8/2012		42.75	NE	<0.0441 U	200		<0.005 UJ	0.005 J	0.0069 J	0.0179 J	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.005 UJ	0.0035 J J	<0.001 UJ	<0.002 UJ	<0.0005 UJ	<0.025 UJ	0.38 J
	P93A-ROX-080912	8/9/2012		43.66	NE	<1.63 U	87		<0.005	0.0027 J	0.0048 J	0.0128	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0022 J	<0.001	<0.002	<0.0005	<0.025	0.225
	P93A-ROX-110712	11/7/2012		45.00	NE	<0.5 UJ	148		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.05	<2.5	0.265
	P93A-ROX-110712-DUP	11/7/2012		45.00	NE	<0.5 UJ	156		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.05	<2.5	0.262
	P93A-ROX-012313	1/23/2013		45.89	NE	<2.5	101		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<0.25	<13 UJ	<0.5
	P93A-ROX-012313-DUP	1/23/2013		45.89	NE	<2.5	98.5		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<0.25	<13 UJ	<0.5
	P93A-ROX-041113	4/11/2013		46.29	NE	<5	120		<5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<0.25	<13	0.255 J
	P93A-ROX-041113-DUP	4/11/2013		46.29	NE	<5	120		<5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<0.25	<13	<0.5
	P93A-ROX-071813	7/18/2013		43.25	NE	<0.0053 U	89.1		<0.005	<0.005	0.0056	0.0916	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0024 J	<0.001	<0.002	<0.001	<0.05	0.162
	P93A-ROX-101113	10/11/2013		44.18	NE	<0.01 UJ	197		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0025 J	<0.001	<0.002	<0.0005	<0.025	0.264
	P93A-ROX-012914	1/29/2014		46.53	NE	<5	136		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<0.25	<13	<0.5
	P93A-ROX-041714	4/17/2014		47.41	NE	<5	132		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<0.25	<13	<0.5
	P93A-ROX-071814	7/18/2014	48.17 - 63.17	45.70	NE	<10	170		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<0.5	<13 UJ	<1
	P93A-ROX-071814-DUP	7/18/2014		45.70	NE	<10	174		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<0.5	<13 UJ	<1
P-93B	P93B-ROX-102611	10/26/2011	74.60 - 76.60	39.48	NE	<0.005 UJ	590		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0533
	P93B-ROX-012012	1/20/2012		41.72	NE	<0.005	337		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	0.0831 J	0.0274 J
	P93B-ROX-050812	5/8/2012		42.79	NE	<0.0747 U	304		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0379 J
	P93B-ROX-080912	8/9/2012		43.69	NE	<0.0672 U	317		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0741
	P93B-ROX-110712	11/7/2012		45.05	NE	<0.5 UJ	162 J		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.05	<2.5	<0.1
	P93B-ROX-110712-DUP	11/7/2012		45.05	NE	<0.5 UJ	413 J		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.05	<2.5	0.0695 J
	P93B-ROX-012313	1/23/2013		45.89	NE	<5	415		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<0.5	<25 UJ	<1
	P93B-ROX-041113	4/11/2013		46.32	NE	<5	618		<5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<0.25	<13	<0.5
	P93B-ROX-071813	7/18/2013		43.30	NE	<0.01	296		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.001	<0.05	0.0652
	P93B-ROX-101613	10/16/2013		44.43	NE	<20	187		<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<1	<50	<2
	P93B-ROX-101613-DUP	10/16/2013		44.43	NE	<20	180		<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<1	<50	<2
	P93B-ROX-012814	1/28/2014		46.58	NE	<10	242		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<0.5	<25	<1
	P93B-ROX-012814-DUP	1/28/2014		46.58	NE	<10	293		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<0.5	<25	<1
	P93B-ROX-041714	4/17/2014		47.46	NE	<5	134		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<0.25	<13	<0.5
	P93B-ROX-041714-DUP	4/17/2014		47.46	NE	<5	126		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<0.25	<13	<0.5
	P93B-ROX-071714	7/17/2014	74.60 - 76.60	45.75	NE	<0.01 UJ	175		<0.005 UJ	<0.005 UJ	<0.005 UJ	0.00042 J J	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.002 UJ	<0.0005 UJ	<0.025 UJ	0.0236 J

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						VOCs																		
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
			Screening Values (mg/L)			6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		
P-93C	P93C-ROX-102611	10/26/2011	94.26 - 96.26	39.36	NE	<0.005 UJ	0.0014		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-012012	1/20/2012		41.57	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-050812	5/8/2012		42.68	NE	<0.005	0.0057		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-080912	8/9/2012		43.57	NE	<0.0056 U	0.00084		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-110812	11/8/2012		45.12	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-012313	1/23/2013		45.78	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025 UJ	<0.001
	P93C-ROX-041213	4/12/2013		46.21	NE	<0.0056 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-071813	7/18/2013		43.31	NE	<0.01	101		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.001	<0.05	0.0041
	P93C-ROX-080813	8/8/2013		43.31	NE	<0.5	19.1		<0.25	<0.25	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.25	<0.05	<0.1	<0.025	<1.3	<0.05
	P93C-ROX-101613	10/16/2013		44.31	NE	<0.01	1.4		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-012414	1/24/2014		46.44	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-041714	4/17/2014		47.34	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-071714	7/17/2014	94.26 - 96.26	45.61	NE	<0.01	1.55		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
P-93D	P93D-ROX-102711	10/27/2011	125.75 - 127.75	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	<0.001	<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	<0.001	<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	<0.001	<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	<0.001	<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	<0.001 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	<0.001	<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	<0.001	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	<0.001	0.00069 J	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	0.0164	<0.0005	<0.025	<0.001
	P93D-ROX-071714	7/17/2014	125.75 - 127.75	45.78	NE	<0.01	0.00064		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001
ROST-3-PZ	ROST3PZ-ROX-051412	5/14/2012	40.00 - 50.00	38.82	NE	<0.61 U	0.0074		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0167
	ROST3PZ-ROX-080712	8/7/2012		39.00	NE	<0.005	0.0041		<0.005	<0.005	<0.005	0.00072 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0047
	ROST3PZ-ROX-110112	11/1/2012		40.82	NE	<0.005	0.0052		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0018
ROST-3-MW	ROST3MW-ROX-012313	1/23/2013	37.81 - 47.81	41.50	NE	<0.005	0.0051 J		<0.005	0.0028 J	0.0013 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0011 J	<0.001	<0.002	<0.0005	<0.025 UJ	0.0296
	ROST3MW-ROX-040513	4/5/2013				<0.005 UJ	0.0605		<0.005	<0.005	0.0011 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0012 J	<0.001	<0.002	<0.0005	<0.025	0.0136
	ROST3MW-ROX-071113	7/11/2013		39.50	NE	<0.01 UJ	0.0125		<0.005 UJ	<0.005	0.0014 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0014 J	<0.001	<0.002	<0.0005		0.218
	ROST3-MW-ROX-100913	10/9/2013		40.16	NE	<0.01	0.0033		<0.0164	0.00073 J	<0.005	<0.005	<0.005	<0.001	<0.001	0.0034	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0182
	ROST3MW-ROX-011714	1/17/2014		42.20	NE	<0.01	0.004		<0.005	0.0012 J	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.008
	ROST3MW-ROX-041014	4/10/2014		42.80	NE	<0.01	0.0075		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0055
	ROST3MW-ROX-071414	7/14/2014	37.81 - 47.81	41.88	NE	<0.01	0.0058		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.008
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
	ROST4C-ROX-071114	7/10/2014	34.95 - 44.95	42.22	NE	<0.01	0.0751		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0594

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

						VOCs																		
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
			Screening Values (mg/L)			6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																		
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		41.00	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	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	<0.025	<0.025	<0.005	<0.01	<0.0025	<0.13	1.88
	T12-ROX-080212	8/2/2012		41.92	NE	<0.05 UJ	1.64		<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.05	<0.01	<0.02	<0.005		0.573
	T12-ROX-110512	11/5/2012		43.91	NE	<0.05	1.71		<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.05	<0.01	<0.02	<0.005	<0.25	1.73
	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
	T12-ROX-070814	7/8/2014	46.46 - 72.46	45.13	NE	0.0658 J	2.14		0.0094	0.0096	0.0039 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0024 J	0.0022	<0.002	<0.0005	<0.025 UJ	0.614

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

						VOCs																			
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
			Screening Values (mg/L)				0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			
MW-01	MW1-ROX-120511	12/5/2011	43.41 - 58.41	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	<0.001	<0.001	<0.001
	MW1-ROX-011612	1/16/2012		37.75	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0032	0.000079 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-050112	5/1/2012		39.09	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0031	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-073012	7/30/2012		39.39	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0022	0.0001 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-102612	10/26/2012		41.22	NE																				
	MW1-ROX-121712	12/17/2012		41.22	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0022	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-011013	1/10/2013	48.80 - 58.80	41.89	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0015	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-040913	4/9/2013		42.55	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0012	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-070813	7/8/2013		39.56	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0049	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-100313	10/3/2013		40.28	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0013	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-011414	1/14/2014		42.77	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0018	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-040714	4/7/2014		43.28	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-070914	7/9/2014	48.80 - 58.80	42.09	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0035	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
MW-02	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
	MW2-ROX-071414	7/14/2014	49.87 - 59.87	43.13	NE	<0.005	<0.005		<0.005		0.0966 J	<0.005	<0.001	0.0792 J	0.112 J	0.0113 J	<0.005	<0.005	<0.001		0.341 J	0.15 J	<0.005	0.764	0.0845	0.804
MW-03	MW3-ROX-112911	11/29/2011	34.67 - 44.67	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		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW3-ROX-040914	4/9/2014		30.50	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW3-ROX-071114	7/10/2014	34.67 - 44.67	29.05	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001

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

						VOCs																			
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
			Screening Values (mg/L)				0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			
MW-04	MW4-ROX-121511	12/15/2011	42.63 - 57.63	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		36.00	NE	0.0017 J	<0.005		<0.005		0.0061	<0.005	<0.001	<0.0001	0.0061	0.0283	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0148	0.0025	0.0173
	MW4-ROX-050312	5/3/2012		37.45	NE	<0.005	<0.005		<0.005		0.0038 J	<0.005	0.0174	<0.0001	<0.005	0.0255	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.016	0.003	0.0189
	MW4-ROX-050312-DUP	5/3/2012		37.45	NE	<0.005	<0.005		<0.005		0.0036 J	<0.005	0.0162	<0.0001	0.0043 J	0.0252	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0151	0.0031	0.0182
	MW4-ROX-072512	7/25/2012		37.63	NE	<0.005	<0.005 UJ		<0.005		0.0061	<0.005	0.015	<0.0001	0.0071	0.0418	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0221	0.0042	0.0262
	MW4-ROX-072512-Dup	7/25/2012		37.63	NE	<0.005	<0.005 UJ		<0.005		0.0063	<0.005	0.0154	<0.0001	0.0072	0.0427	<0.005	<0.005	<0.001		0.00068 J	0.0057	<0.005	0.0214	0.0043	0.0257
	MW4-ROX-102912	10/29/2012		39.45	NE	<0.01	<0.01		<0.01		0.0029 J	<0.01	0.0324	<0.01	0.0033 J	0.0175	<0.01	<0.01	<0.002		<0.01	<0.01	<0.01	0.0114	<0.002	0.0114
	MW4-ROX-011113	1/11/2013		40.20	NE	<0.005	<0.005		<0.005		0.0012 J	<0.005	0.0654	<0.005	0.0026 J	0.0075	<0.005	<0.005	<0.001		0.0019 J	0.0024 J	<0.005	0.0056	<0.001	0.0056
	MW4-ROX-011113-DUP	1/11/2013	46.06 - 56.06	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	<0.5	<0.1	<0.5	<0.1		<0.5	<0.5	<0.5	<0.1	<0.1	<0.1
	MW4-ROX-040913	4/9/2013		40.90	NE	<0.01	<0.01		<0.01		<0.01	<0.01	0.112	<0.01	<0.01	0.0057	<0.01	<0.01	<0.002		<0.01	<0.01	<0.01	0.0052	<0.002	0.0062
	MW4-ROX-040913-DUP	4/9/2013		40.90	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.125	<0.005	0.004 J	0.0076	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0073	0.0011	0.0084
	MW4-ROX-071713	7/17/2013		37.61	NE	<0.005	<0.005		0.0041 J		0.0067	<0.005	0.0559	<0.005	0.008	0.0381	<0.005	<0.005	0.00085 J		0.0012 J	<0.005	0.0392 J	0.0302	0.0052	0.0353
	MW4-ROX-101613	10/16/2013		38.80	NE	<0.05 UJ	<0.05		<0.05		<0.05	<0.05	0.0333 J	<0.05	<0.05	<0.01	<0.05	<0.05	<0.01		<0.05	<0.05	<0.05 UJ	<0.01	<0.01	0.0058 J
	MW4-ROX-013014	1/30/2014		41.09	NE	<0.005	<0.005		<0.005		0.0021 J	<0.005	<0.001	<0.005	0.0026 J	0.0037	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0132	0.0049	0.0181
	MW4-ROX-041614	4/16/2014		41.91	NE	<0.005	<0.005		<0.005		0.00059 J	<0.005	<0.001	<0.005	0.00081 J	0.00099 J	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0027	0.00039 J	0.0031
	MW4-ROX-071614	7/16/2014	46.06 - 56.06	40.18	NE	<0.005	<0.005		<0.005		<0.05	<0.005	<0.001	<0.05	<0.05	0.006 J	<0.005	<0.005	<0.001		<0.05	<0.05	<0.005	<0.01	<0.01	0.0055 J
MW-05	MW5-ROX-112111	11/21/2011	33.97 - 43.97	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
	MW5-ROX-071414	7/14/2014	33.97 - 43.97	28.59	NE	<0.005	<0.005		<0.005		0.00049 J	<0.005	<0.001	<0.005	<0.005	0.0016	<0.005	<0.005	<0.001		0.00033 J	<0.005	<0.005	0.002	0.00073 J	0.0027
MW-06A	MW6A-ROX-112111	11/21/2011	34.83 - 44.83	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	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-011413	1/14/2013		31.00	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-040313	4/3/2013		31.62	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-070913	7/9/2013		28.25	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0027	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW6A-ROX-070913-DUP	7/9/2013		28.25	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0025	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW6A-ROX-100713	10/7/2013		28.87	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	0.0131	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-100713-DUP	10/7/2013		28.87	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	0.0132	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-011614	1/16/2014		31.62	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0108	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-011614-DUP	1/16/2014		31.62	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0103	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-040814	4/8/2014		32.16	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.00086 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-040814-DUP	4/8/2014		32.16	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-071014	7/10/2014	34.83 - 44.83	30.75	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0148	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001

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

						VOCs																				
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
			Screening Values (mg/L)				0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-06B	MW6B-ROX-110311	11/3/2011	64.05 - 69.05	24.67	NE	<0.05	<0.05		<0.05		<0.05	<0.05	0.036 J	<0.0001	<0.05	<0.01	<0.05	<0.05	<0.01		<0.05	<0.05	<0.05	<0.01	<0.01	<0.01
	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	<0.001	<0.001	<0.001
	MW6B-ROX-050212	5/2/2012		27.82	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0115	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6B-ROX-080112	8/1/2012		28.39	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0122	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6B-ROX-102412	10/24/2012		30.11	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0091	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6B-ROX-011713	1/17/2013		31.11	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0166	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6B-ROX-040313	4/3/2013		31.68	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0132	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6B-ROX-070913	7/9/2013		28.25	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0069	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW6B-ROX-100713	10/7/2013		28.93	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	0.0113	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6B-ROX-011614	1/16/2014		31.67	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0069	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6B-ROX-040814	4/8/2014		32.21	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0047	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6B-ROX-071014	7/10/2014	64.05 - 69.05	30.81	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0054	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
MW-06C	MW6C-ROX-110311	11/3/2011	84.95 - 89.95	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	<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	<0.001	<0.001	<0.001
	MW6C-ROX-050212	5/2/2012		27.62	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6C-ROX-080112	8/1/2012		28.15	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6C-ROX-102412	10/24/2012		27.85	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6C-ROX-011713	1/17/2013		30.88	NE	<0.005 UJ	<0.005 UJ		<0.005 UJ		<0.005 UJ	<0.005 UJ	0.0012 J	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ		<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.001 UJ
	MW6C-ROX-040313	4/3/2013		31.41	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0022	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6C-ROX-070913	7/9/2013		28.03	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW6C-ROX-100713	10/7/2013		28.72	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	0.00075 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6C-ROX-011614	1/16/2014		31.48	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.00068 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6C-ROX-040814	4/8/2014		32.01	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6C-ROX-071014	7/10/2014	84.95 - 89.95	30.60	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
MW-06D	MW6D-ROX-110311	11/3/2011	104.72 - 109.72	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	<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	<0.001	<0.001	<0.001
	MW6D-ROX-050212	5/2/2012		27.45	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6D-ROX-080212	8/2/2012		30.56	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6D-ROX-102412	10/24/2012		29.71	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6D-ROX-011713	1/17/2013		30.75	NE	<0.005 UJ	<0.005 UJ		<0.005 UJ		<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ		<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.001 UJ
	MW6D-ROX-040313	4/3/2013		31.27	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6D-ROX-070913	7/9/2013		27.91	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW6D-ROX-100713	10/7/2013		28.58	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6D-ROX-011614	1/16/2014		31.33	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.00061 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6D-ROX-040814	4/8/2014		31.85	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.00094 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6D-ROX-071014	7/10/2014	104.72 - 109.72	31.47	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6D-ROX-071014-DUP	7/10/2014		31.47	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001

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

						VOCs																			
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
			Screening Values (mg/L)				0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			
MW-07	MW-7-ROX-110211	11/2/2011	42.92 - 52.92	35.95	NE	<5	<5		<5		<5	<5	<1	0.0113	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1
	MW7-ROX-011812	1/18/2012		38.10	NE	<0.005	<0.005		<0.005		0.0101	<0.005	0.0022	0.0134	0.0135	0.158	<0.005	<0.005	<0.001		0.148	0.0341	<0.005	0.137	0.0527	0.19
	MW7-ROX-011812-DUP	1/18/2012		38.10	NE	<0.005	<0.005		<0.005		0.01	<0.005	0.0024	0.0138	0.0138	0.156	<0.005	<0.005	<0.001		0.146	0.0332	<0.005	0.134	0.051	0.184
	MW7-ROX-050412	5/4/2012		39.19	NE	<0.5	<0.5		<0.5		<0.5	<0.5	<0.1	0.0158	<0.5	0.101	<0.5	<0.5	<0.1		<0.5	<0.5	<0.5	<0.1	<0.1	<0.1
	MW7-ROX-080712	8/7/2012		39.50	NE	<0.05	<0.05		<0.05		<0.05	<0.05	<0.01	0.0089	0.0102 J	0.0629	<0.05	<0.05	<0.01		0.1	0.021 J	<0.05	0.12	0.0486	0.169
	MW7-ROX-103012	10/30/2012		41.23	NE	<10	<10		<10		<10	<10	<2	<10	<10	<2	<10	<10	<2		<10	<10	<10	<2	<2	<2
	MW7-ROX-103012-DUP	10/30/2012		41.23	NE	<10	<10		<10		<10	<10	<2	<10	<10	<2	<10	<10	<2		<10	<10	<10	<2	<2	<2
	MW7-ROX-011513	1/15/2013		42.21	NE	<20	<20		<20		<20	<20	<4	<20	<20	<4	<20	<20	<4		<20	<20	<20	<4	<4	<4
	MW7-ROX-011513-DUP	1/15/2013		42.21	NE	<20	<20		<20		<20	<20	<4	<20	<20	<4	<20	<20	<4		<20	<20	<20	<4	<4	<4
	MW7-ROX-041013	4/10/2013		42.70	NE	<10	<10		<10		<10	<10	<2	<10	<10	<2	<10	<10	<2		<10	<10	<10	<2	<2	<2
	MW7-ROX-041013-DUP	4/10/2013		42.70	NE	<10	<10		<10		<10	<10	<2	<10	<10	<2	<10	<10	<2		<10	<10	<10	<2	<2	<2
	MW7-ROX-071713	7/17/2013		39.60	NE	<0.005	<0.005		<0.005		0.0096 J	<0.005	0.0031 J	0.0185 J	0.0173 J	0.289 J	<0.005	<0.005	<0.001		0.117 J	0.0264 J	0.0094 J	0.455 J	0.183 J	0.639 J
	MW7-ROX-101613	10/16/2013		40.64	NE	<10 UJ	<10		<10		<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2		<10	<10	<10 UJ	<2	<2	<2
	MW7-ROX-013014	1/30/2014		42.94	NE	<13	<13		<13		<13	<13	<2.5	<13	<13	<2.5	<13	<13	<2.5		<13	<13	<13	<2.5	<2.5	<2.5
	MW7-ROX-041614	4/16/2014		43.79	NE	<25	<25		<25		<25	<25	<5	<25	<25	<5	<25	<25	<5		<25	<25	<25	<5	<5	<5
	MW7-ROX-071614	7/16/2014	42.92 - 52.92	42.05	NE	<0.005	<0.005		<0.005		0.0127 J	<0.005	<0.001	0.0165 J	0.0197 J	0.224 J	<0.005	<0.005	<0.001		0.143 J	0.0324 J	<0.005	0.48 J	0.187 J	0.667 J
	MW7-ROX-071614-DUP	7/16/2014		42.05	NE	<0.005	<0.005		<0.005		0.0131 J	<0.005	<0.001	0.0141 J	0.0194 J	0.222 J	<0.005	<0.005	<0.001		0.142 J	0.0318 J	<0.005	0.465 J	0.181 J	0.647 J
MW-08	MW-8-ROX-110211	11/2/2011	33.60 - 43.60	27.02	NE	<5	<5		<5		<5	<5	4.94 J	0.0282	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1
	MW8-ROX-011812	1/18/2012		29.15	NE	<0.005	<0.005		<0.005		0.0162	<0.005	1.41 J	0.0239	0.0377	<2	<0.005	<0.005	<0.001		0.163	0.061	<0.005	0.574	0.219	0.794
	MW8-ROX-050412	5/4/2012		30.21	NE	<0.5	<0.5		<0.5		<0.5	<0.5	4.15	0.0186	<0.5	1.55	<0.5	<0.5	<0.1		<0.5	<0.5	<0.5	0.978	0.37	1.35
	MW8-ROX-050412-DUP	5/4/2012		30.21	NE	<0.5	<0.5		<0.5		<0.5	<0.5	4.07	0.0188	<0.5	1.52	<0.5	<0.5	<0.1		<0.5	<0.5	<0.5	0.939	0.381	1.32
	MW8-ROX-080712	8/7/2012		30.97	NE	<0.1	<0.1		<0.1		<0.1	<0.1	0.878	0.0164	0.0191 J	0.781	<0.1	<0.1	<0.02		0.104	0.0299 J	<0.1	0.623	0.246	0.868
	MW8-ROX-080712-DUP	8/7/2012		30.97	NE	<0.05	<0.05		<0.05		<0.05	<0.05	0.885	0.0164	0.0176 J	0.729	<0.05	<0.05	<0.01		0.0921	0.0265 J	<0.05	0.598	0.235	0.833
	MW8-ROX-103012	10/30/2012		32.32	NE	<5	<5		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1
	MW8-ROX-011513	1/15/2013		33.30	NE	<10	<10		<10		<10	<10	<2	<10	<10	2.09	<10	<10	<2		<10	<10	<10	<2	<2	<2
	MW8-ROX-041013	4/10/2013		33.77	NE	<25	<25		<25		<25	<25	<5	<25	<25	<5	<25	<25	<5		<25	<25	<25	<5	<5	<5
	MW8-ROX-071713	7/17/2013		30.43	NE	<0.005	<0.005		<0.005		0.0173	<0.005	0.197	0.0335	0.0374	0.348	<0.005	<0.005	<0.001		0.199	0.0598	<0.005 UJ	1.01	0.361	1.3
	MW8-ROX-071713-DUP	7/17/2013		30.43	NE	<0.005	<0.005		<0.005		0.0174	<0.005	0.187	0.0347	0.0383	0.341	<0.005	<0.005	<0.001		0.203	0.0613	<0.005 UJ	0.818 J	0.364	1.05
	MW8-ROX-101613	10/16/2013		31.59	NE	<10 UJ	<10		<10		<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2		<10	<10	<10 UJ	<2	<2	<2
	MW8-ROX-101613-DUP	10/16/2013		31.59	NE	<10 UJ	<10		<10		<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2		<10	<10	<10 UJ	<2	<2	<2
	MW8-ROX-013014	1/30/2014		34.02	NE	<13	<13		<13		<13	<13	1.92 J	<13	<13	<2.5	<13	<13	<2.5		<13	<13	<13	<2.5	<2.5	<2.5
	MW8-ROX-013014-DUP	1/30/2014		34.02	NE	<13	<13		<13		<13	<13	1.99 J	<13	<13	<2.5	<13	<13	<2.5		<13	<13	<13	<2.5	<2.5	<2.5
	MW8-ROX-041614	4/16/2014		34.73	NE	<10	<10		<10		<10	<10	<2	<10	<10	<2	<10	<10	<2		<10	<10	<10	<2	<2	<2
	MW8-ROX-041614-DUP	4/16/2014		34.73	NE	<10	<10		<10		<10	<10	<2	<10	<10	<2	<10	<10	<2		<10	<10	<10	<2	<2	<2
	MW8-ROX-071614	7/16/2014	33.60 - 43.60	33.01	NE	<0.005 UJ	<0.005 UJ		<0.005 UJ		0.0266 J	<0.005 UJ	0.392 J	0.0598 J	0.0606 J	0.108 J	<0.005 UJ	<0.005 UJ	<0.001 UJ		0.226 J	0.0904 J	<0.005 UJ	0.377 J	0.141 J	0.518 J

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

						VOCs																			
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
			Screening Values (mg/L)				0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			
MW-09	MW9-ROX-110111	11/1/2011	46.45 - 56.45	37.78	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
	MW9-ROX-011612	1/16/2012		39.50	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.000062 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW9-ROX-050312	5/3/2012		41.03	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001		<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW9-ROX-072712	7/27/2012		41.30	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW9-ROX-102912	10/29/2012		43.17	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW9-ROX-011113	1/11/2013		43.90	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW9-ROX-040913	4/9/2013		44.67	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW9-ROX-070813	7/8/2013		42.35	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW9-ROX-100313	10/3/2013		42.27	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW9-ROX-011414	1/14/2014		44.47	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW9-ROX-040714	4/7/2014		44.99	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW9-ROX-070914	7/9/2014	46.45 - 56.45	44.35	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
MW-10	MW10-ROX-110111	11/1/2011	44.43 - 54.43	37.72	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
	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	<0.001	<0.001	<0.001
	MW10-ROX-050112	5/1/2012		40.86	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.000052 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW10-ROX-072712	7/27/2012		41.21	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW10-ROX-102612	10/26/2012		43.08	NE																					
	MW10-ROX-121712	12/17/2012		43.08	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	0.00058 J
	MW10-ROX-011013	1/10/2013		44.10	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	0.016	<0.001	<0.001	<0.001
	MW10-ROX-012113	1/21/2013		44.10	NE	<0.005	<0.005	<0.02	<0.025		<0.005	<0.025	<0.002	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	
	MW10-ROX-040913	4/9/2013		44.60	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW10-ROX-070813	7/8/2013		42.27	NE	<0.005	<0.005		<0.005	1.9	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW10-ROX-100313	10/3/2013		42.38	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW10-ROX-011514	1/15/2014		44.42	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW10-ROX-040714	4/7/2014		45.00	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW10-ROX-070914	7/9/2014	44.43 - 54.43	44.35	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
MW-11	MW-11-ROX-110211	11/2/2011	41.66 - 51.66	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	<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	<0.001	<0.001	<0.001
	MW11-ROX-043012	4/30/2012		38.66	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW11-ROX-072712	7/27/2012		38.90	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.00012	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW11-ROX-102512	10/25/2012		40.59	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW11-ROX-011013	1/10/2013		41.43	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW11-ROX-040813	4/8/2013		42.02	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW11-ROX-070813	7/8/2013		39.24	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW11-ROX-100713	10/7/2013		39.95	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW11-ROX-011514	1/15/2014		42.16	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW11-ROX-040714	4/7/2014		42.70	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW11-ROX-070914	7/9/2014	41.66 - 51.66	41.75	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001

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

						VOCs																			
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
			Screening Values (mg/L)				0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			
MW-12	MW-12-ROX-110211	11/2/2011	41.92 - 51.92	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	<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	<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	<0.001	<0.001	<0.001
	MW12-ROX-011712-DUP	1/17/2012		37.70	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW12-ROX-043012	4/30/2012		38.98	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW12-ROX-072712	7/27/2012		39.22	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW12-ROX-102512	10/25/2012		40.95	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW12-ROX-011013	1/10/2013		41.83	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	0.00089 J	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW12-ROX-040813	4/8/2013		42.46	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW12-ROX-070913	7/9/2013		39.28	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW12-ROX-100713	10/7/2013		40.22	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW12-ROX-011514	1/15/2014		42.54	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW12-ROX-040814	4/8/2014		43.15	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW12-ROX-070914	7/9/2014	41.92 - 51.92	41.97	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
MW-13	MW13-ROX-110311	11/3/2011	25.57 - 35.57	22.85	NE	<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	<0.001	<0.001	<0.001
	MW13-ROX-012012	1/20/2012		24.77	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0066 J	0.00021	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW13-ROX-050712	5/7/2012		25.79	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0083	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW13-ROX-080812	8/8/2012		26.67	NE	<0.005 UJ	<0.005 UJ		<0.005 UJ		<0.005 UJ	<0.005 UJ	0.0133 J	<0.0013 U	<0.005 UJ	<0.001 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ		<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.001 UJ
	MW13-ROX-110812	11/8/2012		25.30	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0093	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW13-ROX-012313	1/23/2013		29.26	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0082	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW13-ROX-041213	4/12/2013		29.44	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0093	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW13-ROX-071213	7/12/2013		25.67	NE	<0.005	<0.005 UJ		<0.005		<0.005	<0.005	0.0094	<0.005	0.00064 J	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW13-ROX-100913	10/9/2013		26.94	NE	<0.005	<0.005 UJ		<0.005		<0.005	<0.005	0.0072	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW13-ROX-012914	1/29/2014		29.63	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.008	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW13-ROX-041114	4/11/2014		30.15	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0062	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW13-ROX-070714	7/7/2014	25.57 - 35.57	28.49	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0091	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
MW-14	MW14-ROX-110911	11/9/2011	Unknown	27.00	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW14-ROX-051012	5/10/2012	33.42 - 43.42	NM	NE	<0.005	<0.005		<0.005		0.0104	<0.005	<0.001	0.00099	0.0078	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0016	0.00041 J	0.002
	MW14-ROX-080312	8/3/2012		NM	NE	<0.005	<0.005		<0.005		0.0173	<0.005	<0.001	0.0013	0.0137	0.00093 J	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0033	0.00061 J	0.0039
	MW14-ROX-103112	10/31/2012		32.02	NE	<0.005	<0.005		<0.005		0.0161	<0.005	<0.001	<0.005	0.0121	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0024	<0.001	0.0024
	MW14-ROX-011813	1/18/2013		33.05	NE	<0.005	<0.005		<0.005		0.021	<0.005	<0.001	<0.005	0.0162	0.00097 J	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0026	<0.001	0.003
	MW14-ROX-041113	4/11/2013		33.31	NE	<0.005	<0.005		<0.005		0.0346	<0.005	<0.001	<0.005	0.0206	0.0014	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0038	<0.001	0.0043
	MW14-ROX-071213	7/12/2013		30.36	NE	<0.005	<0.005 UJ		<0.005		0.0168	<0.005	<0.001	<0.005	0.0109	0.00059 J	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	0.0026	<0.001	0.0029
	MW14-ROX-101013	10/10/2013		30.80	NE	<0.005	<0.005		<0.005		0.0011 J	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		0.00088 J	0.0011 J	<0.005	<0.001	<0.001	<0.001
	MW14-ROX-012914	1/29/2014		33.67	NE	<0.005	<0.005		<0.005		0.0036 J	<0.005	<0.001	<0.005	0.002 J	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW14-ROX-041114	4/11/2014		34.30	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW14-ROX-070714	7/7/2014	33.42 - 43.42	32.82	NE	<0.005	<0.005		<0.005		0.00073 J	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
MW-16	MW16-ROX-012313	1/23/2013	37.06 - 47.06	43.05	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW16-ROX-040813	4/8/2013		43.39	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW16-ROX-070813	7/8/2013		40.62	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW16-ROX-100813	10/8/2013		41.62	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW16-ROX-011514	1/15/2014		43.76	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW16-ROX-040914	4/9/2014		44.63	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW16-ROX-071014	7/10/2014	37.06 - 47.06	43.15	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001

SEE LAST PAGE OF TABLE FOR NOTES

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

						VOCs																				
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
			Screening Values (mg/L)				0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-22	MW22-ROX-012313	1/23/2013	37.88 - 47.88	41.80	NE	<0.25	<0.25		<0.25		0.126 J	<0.25	<0.05	0.396	0.22 J	10.5	<0.25	<0.25	<0.05		1.23	0.288	<0.25 UJ	7.56	3.73	11.3
	MW22-ROX-012313-DUP	1/23/2013		41.80	NE	<0.25	<0.25		<0.25		0.124 J	<0.25	<0.05	0.377	0.234 J	9.06	<0.25	<0.25	<0.05		1.26	0.291	<0.25 UJ	6.96	3.52	10.5
	MW22-ROX-040513	4/5/2013		42.23	NE	<0.005	<0.005		<0.005		0.159 J	0.0124 J	<0.001	0.286 J	0.29 J	6.14	<0.005	<0.005	<0.001		0.931	0.379 J	<0.005	5.15	2.64	7.79
	MW22-ROX-071113	7/11/2013		39.35	NE	<0.005	<0.005		<0.005 UJ		0.131	0.0102	<0.001	0.345	0.242	3.92	<0.005	<0.005	<0.001		0.864	0.309	<0.005 UJ	4.13	2.26	6.39
	MW22-ROX-071113-DUP	7/11/2013		39.35	NE	<0.005	<0.005		<0.005 UJ		0.133	0.0103	<0.001	0.362	0.245	3.57	<0.005	<0.005	<0.001		0.754	0.311	<0.005 UJ	3.83	2.05	5.88
	MW22-ROX-100913	10/9/2013		40.39	NE	<0.005	<0.005 UJ		<0.005		0.137	0.0101	<0.001	0.47	0.244	6.02	<0.005	<0.005	<0.001		1.37	0.357	<0.005	7.46	3.48	10.9
	MW22-ROX-100913-DUP	10/9/2013		40.39	NE	<0.005	<0.005 UJ		<0.005		0.136	0.0084	<0.001	0.445	0.243	6.32	<0.005	<0.005	<0.001		1.43	0.343	<0.005	7.75	3.65	11.4
	MW22-ROX-012014	1/20/2014		42.49	NE	<0.005	<0.005		0.0082		0.169	0.007	<0.001	0.287	0.287	5.33	<0.005	<0.005	<0.001		1.3	0.298	<0.005	5.65	2.65	8.29
	MW22-ROX-012014-DUP	1/20/2014		42.49	NE	<0.005	<0.005		0.0088		0.169	0.007	<0.001	0.262	0.286	5.71	<0.005	<0.005	<0.001		1.37	0.398	<0.005	6.01	2.81	8.83
	MW22-ROX-041014	4/10/2014		43.15	NE	<0.005	<0.005		<0.005		0.157	<0.005	<0.001	0.334	0.254	5.95	<0.005	<0.005	<0.001		1.1	0.384	<0.005	6.85	3.38	10.2
	MW22-ROX-041014-DUP	4/10/2014		43.15	NE	<0.005	<0.005		<0.005		0.138	0.0082	<0.001	0.28	0.235	5.52	<0.005	<0.005	<0.001		1	0.35	<0.005	6.23	3.12	9.35
	MW22-ROX-071414	7/14/2014	37.88 - 47.88	41.85	NE	<0.005	<0.005		<0.005		0.153 J	<0.005	<0.001	0.282 J	0.205 J	3.14	<0.005	<0.005	<0.001		0.353 J	0.262 J	<0.005	3.78	1.85	5.64
MW-24	MW24-ROX-040513	4/5/2013	38.89 - 48.89	43.39	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	0.0014	<0.005	<0.005	<0.001		0.00051 J	<0.005	<0.005	0.0021	0.0009 J	0.003
	MW24-ROX-071113	7/11/2013		40.35	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW24-ROX-100913	10/9/2013		41.27	NE	<0.005	<0.005 UJ		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW24-ROX-011514	1/15/2014		43.47	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW24-ROX-040914	4/9/2014		44.13	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW24-ROX-071114	7/10/2014	38.89 - 48.89	42.97	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
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
	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
	P114-ROX-050912	5/9/2012		28.09	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0035 J	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P114-ROX-080912	8/9/2012		29.13	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.00083 J	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		0.00039 J	<0.005	<0.005	<0.001	<0.001	<0.001
	P114-ROX-110912	11/9/2012		30.90	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0076 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	0.0013 J	<0.001	0.0013 J
	P114-ROX-012313	1/23/2013		30.22	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.003 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	P114-ROX-041513	4/15/2013		31.80	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0051	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P114-ROX-071813	7/18/2013		27.22	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0023 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	P114-ROX-071813-DUP	7/18/2013		27.22	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0022 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	P114-ROX-101713	10/17/2013		29.43	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0036	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P114-ROX-012814	1/28/2014		32.11	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0153	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P114-ROX-042114	4/21/2014		32.22	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0093	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P114-ROX-071814	7/18/2014	32.67 - 52.67	30.87	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0037	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
P-54	P54-ROX-110311	11/3/2011	38.00 -63.00	35.49	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-011712	1/17/2012		37.17	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.000089 U	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-050412	5/4/2012		38.77	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-080212	8/2/2012		38.95	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-103012	10/30/2012		40.70	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-011113	1/11/2013		41.56	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-041013	4/10/2013		41.80	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-050313	5/3/2013		41.80	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-071113	7/11/2013		39.07	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	P54-ROX-100813	10/8/2013		39.94	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-011514	1/15/2014		42.20	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-040914	4/9/2014		42.80	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-071114	7/10/2014	38.00 - 63.00	41.71	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001

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

						VOCs																		
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
			Screening Values (mg/L)				0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
P-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	40.43 - 50.43	43.60	NE	<0.05	<0.01	0.276	<0.25		0.0678	<0.25	<0.02	0.079 J	0.14	0.189	<0.05	<0.01	<0.05	0.183	0.039 J	0.026 J	<0.1	0.279	0.347	
	P55-ROX-012113	1/21/2013		43.60	NE	<0.005	<0.005		<0.005		0.0937	<0.005	0.002	0.12	0.206	0.262	<0.005	<0.005	<0.001		0.046	0.0312	<0.005	0.356	0.382	0.738
	P55-ROX-041513	4/15/2013		43.63	NE	<0.01	<0.01		<0.01		0.068	<0.01	<0.002	0.0974 J	0.148	0.143	<0.01	<0.01	<0.002		0.0241	0.0229	<0.01	0.235	0.362	0.597
	P55-ROX-071613	7/16/2013		40.06	NE	<0.005	<0.005 UJ		<0.005	0.72	0.0884	<0.005	<0.001	0.0841	0.175	0.343	<0.005	<0.005	<0.001		0.073	0.0559	<0.005 UJ	0.535	0.558	1.11
	P55-ROX-101013	10/10/2013		41.67	NE	<0.005	<0.005		<0.005		0.0851	<0.005	0.001	0.121	0.167	0.601	<0.005	<0.005	<0.001		0.151	0.062	<0.005	0.739	0.639	1.38
P-56	P56-ROX-102711	10/27/2011	40.82 - 65.82	39.42	NE	<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
	P56-ROX-070814	7/8/2014	40.82 - 65.82	45.97	NE	<0.005	<0.005		<0.005		0.106 J	<0.005	<0.001	0.156 J	0.133 J	0.288 J	<0.005	<0.005	<0.001		0.487 J	0.166 J	<0.005	2.04 J	0.122 J	2.09 J
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	0.453	0.0894	<0.5	<0.1	<0.5	<0.5	<0.1		0.632	0.159 J	<0.5	0.928	0.0563 J	0.984
	P57-ROX-080612	8/6/2012		43.53	NE	<0.25	<0.25		<0.25 UJ		<0.25	<0.25	0.238	0.119	<0.25	0.0577	<0.25	<0.25	<0.05		0.506	0.123 J	<0.25 UJ	0.74	0.0328 J	0.773
	P57-ROX-080612-DUP	8/6/2012		43.53	NE	<0.005	<0.005		<0.005 UJ		0.0432	<0.005	0.212	0.115	0.0519	0.0558	<0.005	<0.005	<0.001		0.505 E	0.137	<0.005 UJ	0.692	0.0348	0.727
	P57-ROX-110512	11/5/2012		44.98	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	1.53 J	<2.5	<0.5	<2.5	<2.5	<0.5		0.577 J	<2.5	<2.5	1.03	<0.5	1.03
	P57-ROX-012913	1/29/2013		45.92	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	0.331 J	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5	<0.5	<0.5	<0.5
	P57-ROX-041113	4/11/2013		46.29	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		0.494 J	<2.5	<2.5	<0.5	<0.5	<0.5
	P57-ROX-071613	7/16/2013		43.38	NE	<0.005	<0.005 UJ		<0.005		0.0698 J	<0.005	0.112 J	0.203 J	0.0802 J	0.202 J	<0.005	<0.005	<0.001		<5	0.129 J	<0.005 UJ	1.81	0.256 J	2.01
	P57-ROX-101413	10/14/2013		44.38	NE	<0.005	<0.005		<0.005		0.0539	<0.005	0.107	0.206	0.0586	0.0421	<0.005	<0.005	<0.001		0.763 J	0.12	<0.005	0.468	0.0206	0.489
	P57-ROX-020314	2/3/2014		46.57	NE	<5	<5		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1
	P57-ROX-041514	4/15/2014		46.70	NE	<0.005	<0.005		0.0062		0.0492	<0.005	0.0563	0.272	0.0585	0.0248	0.0015 J	<0.005	<0.001		0.503 E J	0.114	<0.005	0.296	0.0143	0.311
	P57-ROX-070814	7/8/2014	40.46 - 65.46	45.95	NE	<0.005 UJ	<0.005 UJ		<0.005 UJ		0.0656 J	<0.005 UJ	<0.001 UJ	0.128 J	0.0605 J	0.154 J	<0.005 UJ	<0.005 UJ	<0.001 UJ		0.375 J	0.0913 J	<0.005 UJ	1.46	0.237	1.7
	P57-ROX-070814-DUP	7/8/2014		45.95	NE	<0.005 UJ	<0.005 UJ		<0.005 UJ		0.0689 J	<0.005 UJ	<0.001 UJ	0.139 J	0.0633 J	0.16 J	<0.005 UJ	<0.005 UJ	<0.001 UJ		0.392 J	0.0954 J	<0.005 UJ	1.56	0.234	1.79

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

						VOCs																			
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
			Screening Values (mg/L)				0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			
P-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
	P58-ROX-071814	7/18/2014	40.21 - 65.21	43.80	NE	<10	<10		<10		<10	<10	<2	<10	<10	<2	<10	<10	<2		<10	<10	<10	<2	<2	<2
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
	P59-ROX-070814	7/8/2014	47.91 - 72.91	47.69	NE	<0.005	<0.005		<0.005		0.0948 J	<0.005	<0.001	0.228 J	0.16 J	1.55	<0.005	<0.005	<0.001		0.607	0.285 J	<0.005	4.48	0.929	5.41
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	<0.0001	0.152	0.0021	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0012	0.0012	0.0024
	P66-ROX-080312	8/3/2012		30.51	NE	<0.005	<0.005		<0.005		0.0874	<0.005	0.103	0.0013	0.112	0.0013	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0011	0.0011	0.0022
	P66-ROX-103112	10/31/2012		34.75	NE	<0.005	<0.005		<0.005		0.122	<0.005	0.0733	<0.005	0.156	0.0014	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P66-ROX-011813	1/18/2013		35.70	NE	<0.005	<0.005		<0.005		0.146	<0.005	0.104	<0.005	0.193	0.0015	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	0.00093 J	0.00093 J
	P66-ROX-041113	4/11/2013		36.03	NE	<0.005	<0.005		<0.005		0.287	<0.005	0.086	<0.005	0.384	0.0012	<0.005	<0.005	<0.001		0.0041 J	<0.005	<0.005	<0.001	<0.001	<0.001
	P66-ROX-071213	7/12/2013		33.20	NE	<0.005	<0.005 UJ		<0.005		0.191	<0.005	<0.001	<0.005	0.229	0.0018	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	0.001	0.0015
	P66-ROX-101013	10/10/2013		33.66	NE	<0.005	<0.005		<0.005		0.151	<0.005	0.085	0.0104	0.204	0.0013	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	0.00096 J	0.00096 J
	P66-ROX-110713	11/7/2013		33.66	NE	<0.005	<0.005		<0.005		0.0958	<0.005	0.0528	0.0057	0.0658	0.00086 J	<0.005	<0.005	0.0015		<0.005	<0.005	<0.005	<0.001	0.00057 J	0.00057 J
	P66-ROX-012914	1/29/2014		36.39	NE	<0.005	<0.005		<0.005		0.131	<0.005	<0.001	<0.005	0.157	0.0017	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	0.0045	0.0045
	P66-ROX-041114	4/11/2014		37.10	NE	<0.005	<0.005		<0.005		0.115	<0.005	<0.001	0.0014 J	0.136	0.0017	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	0.00072 J	0.0013
	P66-ROX-070714	7/7/2014	34.72 - 59.72	35.60	NE	<0.005	<0.005		<0.005		0.144	<0.005	<0.001	<0.005	0.102	0.0022	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.001	0.00099 J	0.002

SEE LAST PAGE OF TABLE FOR NOTES

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

						VOCs																			
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
			Screening Values (mg/L)				0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			
P-74	P74-ROX-103111	10/31/2011	44.43 - 69.43	36.26	NE	<0.005	<0.005		<0.005		0.0123	<0.005	0.0222	0.0673	0.0222	0.669	<0.005	<0.005	<0.001		0.587	0.162	<0.005	0.177	<0.1	0.177
	P74-ROX-011912	1/19/2012		38.77	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.0158	0.0012 J	0.0038	<0.005	<0.005	<0.001		0.0292	0.0126	<0.005	0.0526	0.0262	0.0788
	P74-ROX-050712	5/7/2012		39.92	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.00024	0.001 J	0.0017	<0.005	<0.005	<0.001		0.0155	0.0063	<0.005	0.0273	0.0093	0.0366
	P74-ROX-080612	8/6/2012		40.71	NE	<0.05	<0.05		<0.05 UJ		<0.05	<0.05	<0.01	0.0177	<0.05	0.159	<0.05	<0.05	<0.01		0.187	0.0663	<0.05 UJ	0.388	0.125	0.512
	P74-ROX-110112	11/1/2012		41.72	NE	<0.1	<0.1		<0.1		<0.1	<0.1	<0.02	0.0834 J	<0.1	0.232	<0.1	<0.1	<0.02		0.125	0.0414 J	<0.1	0.246	0.0811	0.328
	P74-ROX-011713	1/17/2013		42.65	NE	<0.1	<0.1		<0.1		<0.1	<0.1	<0.02	0.141	<0.1	0.278	<0.1	<0.1	<0.02		0.249	0.0973 J	<0.1	0.547	<0.02	0.555
	P74-ROX-041113	4/11/2013		42.83	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.0016 J	<0.005	0.003	<0.005	<0.005	<0.001		0.0184	0.0138	<0.005	0.0456	0.0146	0.0601
	P74-ROX-071513	7/15/2013		40.11	NE	<0.005	<0.005		<0.005		0.0031 J	<0.005	<0.001	0.024	0.0054	0.0064	<0.005	<0.005	<0.001		0.101	0.0365	<0.005	0.109	0.027	0.136
	P74-ROX-101413	10/14/2013		41.72	NE	<0.005	<0.005		<0.005		0.0052	0.0074	0.0011	0.0257	0.0094	0.0344	<0.005	<0.005	<0.001		0.192	0.0739	<0.005	0.237	0.0483	0.285
	P74-ROX-012414	1/24/2014		43.35	NE	<0.005	<0.005		<0.005		0.0058	<0.005	<0.001	0.0322	0.0112	0.153	<0.005	<0.005	<0.001		0.292	0.11	<0.005	0.316	0.0579	0.374
	P74-ROX-041514	4/15/2014		44.74	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.00074 J	<0.005	0.00078 J	<0.005	<0.005	<0.001		0.0083	0.0039 J	<0.005	0.0193	0.0015	0.0208
	P74-ROX-070814	7/8/2014	44.43 - 69.43	43.02	NE	<0.005	<0.005		<0.005		0.0018 J J	<0.005	<0.001	0.0128	0.0036 J	0.0087	<0.005	<0.005	<0.001		0.117	0.0518	<0.005	0.121	0.0122	0.133
P-93A	P93A-ROX-102611	10/26/2011	48.17 - 63.17	39.43	NE	<0.005	<0.005		<0.005		0.0189	<0.005	0.0405	0.108	0.0172	0.0438	<0.005 UJ	<0.005	<0.001		0.171	0.0399	<0.005	0.482	0.0614	0.543
	P93A-ROX-012012	1/20/2012		41.66	NE	<0.005	<0.005		0.0041 J		0.0134	<0.005	0.0604	0.059 J	0.0134	0.0196	<0.005	<0.005	<0.001		0.101	0.025	<0.005 UJ	0.292	0.0416	0.333
	P93A-ROX-050812	5/8/2012		42.75	NE	<0.005 UJ	<0.005 UJ		<0.005 UJ		0.0218 J	<0.005 UJ	0.0557 J	0.0472	0.0239 J	0.0407 J	<0.005 UJ	<0.005 UJ	<0.001 UJ		0.194 J	0.0416 J	<0.005 UJ	0.647 J	0.0841 J	0.731 J
	P93A-ROX-080912	8/9/2012		43.66	NE	<0.005	<0.005		<0.005		0.0126	<0.005	0.0485	0.0496	0.0137	0.0091	<0.005	<0.005	<0.001		0.145	0.0273	<0.005	0.436	0.0642	0.5
	P93A-ROX-110712	11/7/2012		45.00	NE	<0.5	<0.5		<0.5		<0.5	<0.5	<0.1	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1		<0.5	<0.5	<0.5	0.43	0.076 J	0.506
	P93A-ROX-110712-DUP	11/7/2012		45.00	NE	<0.5	<0.5		<0.5		<0.5	<0.5	<0.1	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1		<0.5	<0.5	<0.5	0.404	0.073 J	0.477
	P93A-ROX-012313	1/23/2013		45.89	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5 UJ	<0.5	<0.5	<0.5
	P93A-ROX-012313-DUP	1/23/2013		45.89	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5 UJ	<0.5	<0.5	<0.5
	P93A-ROX-041113	4/11/2013		46.29	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5	<0.5	<0.5	<0.5
	P93A-ROX-041113-DUP	4/11/2013		46.29	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5	<0.5	<0.5	<0.5
	P93A-ROX-071813	7/18/2013		43.25	NE	<0.005	<0.005		<0.005		0.0101	<0.005	0.0054	0.0303	0.0113	0.0072	<0.005	<0.005	<0.001		0.0915	0.0116	<0.005 UJ	0.273	0.0426	0.316
	P93A-ROX-101113	10/11/2013		44.18	NE	<0.005	<0.005		<0.005		0.0142	<0.005	0.0034	0.0621	0.015	0.0133	<0.005	<0.005	<0.001		0.146	0.0163	<0.005 UJ	0.451	0.0789	0.53
	P93A-ROX-012914	1/29/2014		46.53	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5	<0.5	<0.5	<0.5
	P93A-ROX-041714	4/17/2014		47.41	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5	<0.5	<0.5	<0.5
	P93A-ROX-071814	7/18/2014	48.17 - 63.17	45.70	NE	<5	<5		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1
	P93A-ROX-071814-DUP	7/18/2014		45.70	NE	<5	<5		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1
P-93B	P93B-ROX-102611	10/26/2011	74.60 - 76.60	39.48	NE	<0.005	<0.005		<0.005		0.0292	<0.005	<0.001	0.012	0.0359	0.0859	<0.005 UJ	<0.005	<0.001		0.0303	0.0082	<0.005	0.167	0.0352	0.202
	P93B-ROX-012012	1/20/2012		41.72	NE	<0.005	<0.005		<0.005		0.022 J	<0.005	0.0063 J	0.0041 J J	0.0244 J	0.0678 J	<0.005	<0.005	<0.001		0.0114 J	0.0028 J J	<0.005 UJ	0.0598 J	0.0224 J	0.0822 J
	P93B-ROX-050812	5/8/2012		42.79	NE	<0.005	<0.005		<0.005		0.0188 J	<0.005	<0.001	0.002	0.0272 J	0.0512 J	<0.005	<0.005	<0.001		0.0196 J	0.0054 J	<0.005	0.116 J	0.0251 J	0.141 J
	P93B-ROX-080912	8/9/2012		43.69	NE	<0.005	<0.005		<0.005		0.0266	<0.005	<0.001	0.0049	0.0406	0.0786	<0.005	<0.005	<0.001		0.0372	0.0107	<0.005	0.245	0.0468	0.292
	P93B-ROX-110712	11/7/2012		45.05	NE	<0.5	<0.5		<0.5		<0.5	<0.5	<0.1	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1		<0.5	<0.5	<0.5	0.0986 J	<0.1	0.0986 J
	P93B-ROX-110712-DUP	11/7/2012		45.05	NE	<0.5	<0.5		<0.5		<0.5	<0.5	<0.1	<0.5	<0.5	0.0719 J	<0.5	<0.5	<0.1		<0.5	<0.5	<0.5	0.237	<0.1	0.237
	P93B-ROX-012313	1/23/2013		45.89	NE	<5	<5		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5 UJ	<1	<1	<1
	P93B-ROX-041113	4/11/2013		46.32	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5	<0.5	<0.5	<0.5
	P93B-ROX-071813	7/18/2013		43.30	NE	<0.005	<0.005		<0.005		0.0247	<0.005	0.0035	0.0093	0.0357	0.0646	<0.005	<0.005	<0.001		0.025	0.0069	0.0176 J	0.195	0.0418	0.236
	P93B-ROX-101613	10/16/2013		44.43	NE	<10 UJ	<10		<10		<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2		<10	<10	<10 UJ	<2	<2	<2
	P93B-ROX-101613-DUP	10/16/2013		44.43	NE	<10 UJ	<10		<10		<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2		<10	<10	<10 UJ	<2	<2	<2
	P93B-ROX-012814	1/28/2014		46.58	NE	<5	<5		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1
	P93B-ROX-012814-DUP	1/28/2014		46.58	NE	<5	<5		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1
	P93B-ROX-041714	4/17/2014		47.46	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5	<0.5	<0.5	<0.5
	P93B-ROX-041714-DUP	4/17/2014		47.46	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5	<0.5	<0.5	<0.5
	P93B-ROX-071714	7/17/2014	74.60 - 76.60	45.75	NE	<0.005 UJ	<0.005 UJ		<0.005 UJ		0.0227 J	<0.005 UJ	<0.001 UJ	0.0053 J	0.0297 J	0.0129 J	<0.005 UJ	<0.005 UJ	<0.001 UJ		0.008 J	0.0037 J J	<0.005 UJ	0.0662 J	0.0047 J	0.0708

SEE LAST PAGE OF TABLE FOR NOTES

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

						VOCs																			
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
			Screening Values (mg/L)				0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			
P-93C	P93C-ROX-102611	10/26/2011	94.26 - 96.26	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	<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
	P93C-ROX-050812	5/8/2012		42.68	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.004	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93C-ROX-080912	8/9/2012		43.57	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0053	0.000065 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93C-ROX-110812	11/8/2012		45.12	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0056	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93C-ROX-012313	1/23/2013		45.78	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0044	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	P93C-ROX-041213	4/12/2013		46.21	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0045	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93C-ROX-071813	7/18/2013		43.31	NE	<0.005	<0.005		<0.005		0.002 J	<0.005	0.0049	<0.005	0.002 J	0.007	<0.005	<0.005	<0.001		0.0016 J	<0.005	<0.005 UJ	0.0076	0.0015	0.0091
	P93C-ROX-080813	8/8/2013		43.31	NE	<0.25	<0.25		<0.25		<0.25	<0.25	<0.05	<0.25	<0.25	<0.05	<0.25	<0.25	<0.05		<0.25	<0.25	<0.25	<0.05	<0.05	<0.05
	P93C-ROX-101613	10/16/2013		44.31	NE	<0.005 UJ	<0.005		<0.005		<0.005	<0.005	0.0035 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	P93C-ROX-012414	1/24/2014		46.44	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0047	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93C-ROX-041714	4/17/2014		47.34	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0043	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93C-ROX-071714	7/17/2014	94.26 - 96.26	45.61	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0061 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
P-93D	P93D-ROX-102711	10/27/2011	125.75 - 127.75	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
	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
	P93D-ROX-050812	5/8/2012		42.96	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.00077 J	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93D-ROX-080812	8/8/2012		43.71	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0092 U	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93D-ROX-110812	11/8/2012		NM	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0023	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93D-ROX-012213	1/22/2013		44.21	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		0.0015 J	<0.005	<0.005	<0.001	<0.001	<0.001
	P93D-ROX-041113	4/11/2013		46.37	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93D-ROX-071213	7/12/2013		43.51	NE	<0.005	<0.005 UJ		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	P93D-ROX-101113	10/11/2013		44.24	NE	<0.005 UJ	<0.005		<0.005		<0.005	<0.005	0.00066 J J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	P93D-ROX-013114	1/31/2014		46.62	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0011	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93D-ROX-041414	4/14/2014		47.54	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.0017 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93D-ROX-071714	7/17/2014	125.75 - 127.75	45.78	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0011 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
ROST-3-PZ	ROST3PZ-ROX-051412	5/14/2012	40.00 - 50.00	38.82	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.00048	0.00096 J	0.0038	<0.005	<0.005	<0.001		0.0095	0.0023 J	<0.005	0.0607	0.0151	0.0758
	ROST3PZ-ROX-080712	8/7/2012		39.00	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.00038	<0.005	0.0015	<0.005	<0.005	<0.001		0.0042 J	0.0012 J	<0.005	0.0289	0.0074	0.0363
	ROST3PZ-ROX-110112	11/1/2012		40.82	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		0.0026 J	<0.005	<0.005	0.0122	0.0037	0.0159
ROST-3-MW	ROST3MW-ROX-012313	1/23/2013	37.81 - 47.81	41.50	NE	<0.005	<0.005		<0.005		0.0066	<0.005	<0.001	0.0076	0.0156	0.0016	<0.005	<0.005	<0.001		0.0786	0.022	<0.005 UJ	0.114	0.0159	0.13
	ROST3MW-ROX-040513	4/5/2013				<0.005	<0.005		<0.005		0.0032 J	<0.005	<0.001	0.132 J	0.0082	0.0076	<0.005	<0.005	<0.001		0.0531	0.0145	<0.005	0.0603	0.0126	0.0729
	ROST3MW-ROX-071113	7/11/2013		39.50	NE	<0.005	<0.005		<0.005 UJ		0.0146	<0.005	<0.001	0.0411	0.0279	0.014	<0.005	<0.005	<0.001		0.164	0.0373	<0.005 UJ	0.644	0.124	0.768
	ROST3-MW-ROX-100913	10/9/2013		40.16	NE	<0.005	<0.005 UJ		<0.005		0.0017 J	<0.005	<0.001	0.0045 J	0.0029 J	0.0018	<0.005	<0.005	<0.001		0.0168	0.0035 J	<0.005	0.0422	0.0123	0.0546
	ROST3MW-ROX-011714	1/17/2014		42.20	NE	<0.005	<0.005		<0.005		0.00099 J	<0.005	<0.001	<0.005	0.002 J	0.0012	<0.005	<0.005	<0.001		0.0207	0.0057	<0.005	0.0377	0.0063	0.044
	ROST3MW-ROX-041014	4/10/2014		42.80	NE	<0.005	<0.005		<0.005		0.00043 J	<0.005	<0.001	0.00084 J	0.00082 J	0.0015	<0.005	<0.005	<0.001		0.0121	0.003 J	<0.005	0.0287	0.0028	0.0315
	ROST3MW-ROX-071414	7/14/2014	37.81 - 47.81	41.88	NE	<0.005	<0.005		<0.005		0.00053 J	<0.005	<0.001	0.0045 J	0.00098 J	0.0024	<0.005	<0.005	<0.001		0.0132	0.0032 J	<0.005	0.0371	0.0041	0.0412
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
	ROST4C-ROX-071114	7/10/2014	34.95 - 44.95	42.22	NE	<0.005	<0.005		<0.005		0.00037 J	<0.005	<0.001	0.0104	<0.005	0.0421	<0.005	<0.005	<0.001		0.00082 J	<0.005	<0.005	0.0574	0.0815	0.139

SEE LAST PAGE OF TABLE FOR NOTES

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

						VOCs																		
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
			Screening Values (mg/L)				0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
T-12	T12-ROX-102711	10/27/2011	46.46 - 72.46	38.54	NE	<0.05	<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		41.00	NE	<0.005	<0.005		<0.005		0.022	<0.005	0.0016	0.132	0.03	0.175	<0.005	<0.005	<0.001		0.34	0.0715	0.0952	0.684	0.0399	0.724
	T12-ROX-050912	5/9/2012		42.62	NE	<0.025	<0.025		<0.025		0.0572	<0.025	<0.005	0.0924	0.101	0.388	<0.025	<0.025	<0.005		0.476	0.0765	<0.025	2.87	0.251	3.12
	T12-ROX-080212	8/2/2012		41.92	NE	<0.05	<0.05		<0.05		0.0297 J	<0.05	<0.01	0.0625	0.0486 J	0.197	<0.05	<0.05	<0.01		0.403	0.0474 J	<0.05	1.32	0.0709	1.39
	T12-ROX-110512	11/5/2012		43.91	NE	<0.05	<0.05		<0.05		0.0468 J	<0.05	<0.01	0.125	0.0831	0.322	<0.05	<0.05	<0.01		0.385	0.0543	<0.05	2.55	0.176	2.73
	T12-ROX-011813	1/18/2013		44.50	NE	<0.025	<0.025		<0.025		0.031	<0.025	<0.005	0.129	0.0466	0.184	<0.025	<0.025	<0.005		0.42	0.0407	<0.025	1.11	0.0252	1.13
	T12-ROX-041513	4/15/2013		44.99	NE	<0.05	<0.05		<0.05		0.0405 J	<0.05	<0.01	0.266 J	0.076	0.592	<0.05	<0.05	<0.01		0.309	<0.05	<0.05	1.2	0.104	1.3
	T12-ROX-071613	7/16/2013		42.33	NE	<0.005	<0.005 UJ		<0.005		0.0363 J	<0.005	<0.001	0.122 J	0.0627 J	0.186 J	<0.005	<0.005	<0.001		0.361 J	0.0238 J	<0.005 UJ	0.794 J	0.0145 J	0.808 J
	T12-ROX-101513	10/15/2013		43.73	NE	<0.025	<0.025		<0.025		0.0618	<0.025	<0.005	0.215 J	0.114	0.697	<0.025	<0.025	<0.005		0.575	0.0607	<0.025	2.43	0.139	2.57
	T12-ROX-012414	1/24/2014		45.26	NE	<0.005	<0.005		<0.005		0.0362	<0.005	<0.001	0.171	0.0676	0.421	<0.005	<0.005	<0.001		0.526	0.0507	<0.005	1.12	0.0469	1.23
	T12-ROX-041514	4/15/2014		46.72	NE	<0.005	<0.005		<0.005		0.0306	<0.005	<0.001	0.12	0.0534	0.406	<0.005	<0.005	<0.001		0.22 J	0.0339	<0.005	0.841	0.0401	0.864
	T12-ROX-070814	7/8/2014	46.46 - 72.46	45.13	NE	<0.005	<0.005		<0.005		0.0577 J	<0.005	<0.001	0.146	0.0912	0.686	<0.005	<0.005	<0.001		0.425	0.0589	<0.005	1.25	0.0909	1.3

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

						SVOCs																			
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
					Screening Values (mg/L)	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]	
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																					
MW-01	MW1-ROX-120511	12/5/2011	43.41 - 58.41	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
	MW1-ROX-011612	1/16/2012		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
	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
	MW1-ROX-073012	7/30/2012		39.39	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	0.00032 J	<0.011	<0.0053
	MW1-ROX-102612	10/26/2012		41.22	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0057	0.00099 J	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011	<0.0057
	MW1-ROX-121712	12/17/2012		41.22	NE																						
	MW1-ROX-011013	1/10/2013	48.80 - 58.80	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 UJ
	MW1-ROX-040913	4/9/2013		42.55	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0011 U	<0.011	<0.0053 UJ
	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
	MW1-ROX-100313	10/3/2013		40.28	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00065 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
	MW1-ROX-011414	1/14/2014		42.77	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011 UJ	<0.0053 UJ	<0.00011	<0.00011	<0.0021	<0.011 UJ	<0.0053	<0.011 UJ	<0.0053
	MW1-ROX-040714	4/7/2014		43.28	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	0.003 J J	<0.011	<0.0054	<0.0022	<0.0054	<0.011 UJ	<0.0057 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.0054	<0.011 UJ	<0.0054
	MW1-ROX-070914	7/9/2014	48.80 - 58.80	42.09	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
MW-02	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
	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	0.0035 J	<0.0053
	MW2-ROX-050112	5/1/2012		40.25	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	0.0055 J	<0.0052
	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	<0.0053
	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	<0.0054
	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 UJ
	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	<0.0054 UJ
	MW2-ROX-071113	7/11/2013		40.82	NE	0.000035 J	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0055	0.00063 J	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	0.005 J	<0.0055
	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
	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
	MW2-ROX-041014	4/10/2014		44.66	NE	<0.00012	<0.00012	<0.012	<0.00012	<0.00006	<0.00012	<0.00006	<0.00012	<0.00012	<0.012 UJ	<0.012	<0.006	<0.0024	<0.006	<0.012	<0.006	<0.00012	<0.00012	<0.0024	<0.012	<0.006	<0.012	<0.006
	MW2-ROX-071414	7/14/2014	49.87 - 59.87	43.13	NE	0.000084 J	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00037 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
MW-03	MW3-ROX-112911	11/29/2011	34.67 - 44.67	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
	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
	MW3-ROX-011612	1/16/2012		24.93	NE	<0.0001	<0.0001	<0.01	0.000063 J	0.00011	0.00012	0.00013	<0.00013 U	0.00012	<0.01 UJ	<0.01	<0.0052	<0.0004 U	<0.00039 U	<0.01	<0.0052	0.000098 J	<0.00013 U	<0.0052	<0.01	<0.0052	<0.01	<0.0052
	MW3-ROX-043012	4/30/2012		26.19	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052
	MW3-ROX-072712	7/27/2012		26.60	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011 UJ	<0.00011	<0.011	<0.011	<0.0053	<0.00067 U	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053
	MW3-ROX-102512	10/25/2012		28.39	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.00059 U	<0.01	<0.0051
	MW3-ROX-010913	1/9/2013		29.35	NE	<0.0001	0.000023 J	<0.01 UJ	0.000037 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005
	MW3-ROX-040813	4/8/2013		29.74	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011	<0.0057
	MW3-ROX-071113	7/11/2013		26.32	NE	0.000028 J	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	0.0038	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
	MW3-ROX-100813	10/8/2013		27.38	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
	MW3-ROX-011614	1/16/2014		29.91	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011 UJ	<0.0053 UJ	<0.00011	<0.00011	<0.0021	<0.011 UJ	<0.0053	<0.011 UJ	<0.0053
	MW3-ROX-040914	4/9/2014		30.50	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	0.00038 J	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
	MW3-ROX-071114	7/10/2014	34.67 - 44.67	29.05	NE	<0.0001	<0.0001	<0.011	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.011	<0.011	<0.0054	0.0013 J	<0.0054	<0.011	<0.0054	0.000028 J	<0.0001	<0.0022	<0.011	<0.0054	<0.011	<0.0054

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

						SVOCs																		
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
			Screening Values (mg/L)			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]	
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																						
MW-04	MW4-ROX-121511	12/15/2011	42.63 - 57.63	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	<0.0052
	MW4-ROX-011612	1/16/2012		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	<0.0052
	MW4-ROX-050312	5/3/2012		37.45	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005
	MW4-ROX-050312-DUP	5/3/2012		37.45	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051
	MW4-ROX-072512	7/25/2012		37.63	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	0.0056 J	<0.01	<0.0051	<0.00079 U	0.00039 J	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	0.0014 J	<0.01	<0.0051
	MW4-ROX-072512-Dup	7/25/2012		37.63	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000046 U	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.00069 U	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	0.0012 J	<0.01	<0.0051
	MW4-ROX-102912	10/29/2012		39.45	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052
	MW4-ROX-011113	1/11/2013		40.20	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056 UJ
	MW4-ROX-011113-DUP	1/11/2013	46.06 - 56.06	40.20	NE	<0.00012	<0.00012	<0.012 UJ	<0.00012	<0.00006	<0.00012	<0.00006	<0.00012	<0.00012	<0.012	<0.012	<0.006	<0.0024	<0.006	<0.012	<0.006	<0.00012	<0.00012	<0.0024	<0.012	<0.006	<0.012	<0.006 UJ
	MW4-ROX-030413	3/4/2013		40.20	NE																							
	MW4-ROX-040913	4/9/2013		40.90	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053 UJ
	MW4-ROX-040913-DUP	4/9/2013		40.90	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053 UJ	<0.011	<0.0053 UJ
	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	<0.0055
	MW4-ROX-101613	10/16/2013		38.80	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011 UJ	<0.0055 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.0054	<0.011 UJ	<0.0054
	MW4-ROX-013014	1/30/2014		41.09	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011 UJ	<0.0054 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.0054	<0.011 UJ	<0.0054
	MW4-ROX-041614	4/16/2014		41.91	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
	MW4-ROX-071614	7/16/2014	46.06 - 56.06	40.18	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.00038 J	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052
MW-05	MW5-ROX-112111	11/21/2011	33.97 - 43.97	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	<0.0053
	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	<0.0053
	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	<0.0051
	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	<0.0052
	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	<0.0051
	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	<0.0055 UJ
	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	<0.0054 UJ
	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	<0.005
	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	<0.0055
	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	<0.0053
	MW5-ROX-041014	4/10/2014		30.09	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
	MW5-ROX-071414	7/14/2014	33.97 - 43.97	28.59	NE	0.000075 J	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053
MW-06A	MW6A-ROX-112111	11/21/2011	34.83 - 44.83	25.49	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	0.0023	0.00077 J	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052
	MW6A-ROX-112111-DUP	11/21/2011		25.49	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	0.0011 J	0.00054 J	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051
	MW6A-ROX-011712	1/17/2012		26.74	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000064 U	<0.00008 U	<0.00009 U	<0.00015 U	0.000094 J	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00014 U	<0.0054	<0.011	<0.0054	<0.011	<0.0054
	MW6A-ROX-050212	5/2/2012		27.77	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.0029 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005
	MW6A-ROX-080112	8/1/2012		28.36	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005
	MW6A-ROX-102412	10/24/2012		30.06	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053
	MW6A-ROX-011413	1/14/2013		31.00	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	0.000073 J	<0.0001	<0.01 UJ	<0.01	<0.0051	0.00054 J	<0.0051	<0.01	<0.0051	<0.0001	0.000066 J	<0.002	<0.01	<0.0051	<0.01	<0.0051 UJ
	MW6A-ROX-040313	4/3/2013		31.62	NE	<0.00011	<0.00011 UJ	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0053	0.00052 J	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053
	MW6A-ROX-070913	7/9/2013		28.25	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055
	MW6A-ROX-070913-DUP	7/9/2013		28.25	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055
	MW6A-ROX-100713	10/7/2013		28.87	NE	0.0001 J	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.00082 U	<0.011	<0.0056 UJ
	MW6A-ROX-100713-DUP	10/7/2013		28.87	NE	0.000093 J	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	0.00078 J	<0.011	<0.0054 UJ
	MW6A-ROX-011614	1/16/2014		31.62	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052
	MW6A-ROX-011614-DUP	1/16/2014		31.62	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053
	MW6A-ROX-040814	4/8/2014		32.16	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0056	<0.00057 U	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
	MW6A-ROX-040814-DUP	4/8/2014		32.16	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0054	<0.00066 U	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
	MW6A-ROX-071014	7/10/2014	34.83 - 44.83	30.75	NE	<0.00011	0.000075 J	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054

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

						SVOCs																			
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
				Screening Values (mg/L)		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]	
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																					
MW-06B	MW6B-ROX-110311	11/3/2011	64.05 - 69.05	24.67	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	<0.005
	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	<0.01 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
	MW6B-ROX-080112	8/1/2012		28.39	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.00049 J	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051
	MW6B-ROX-102412	10/24/2012		30.11	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	0.00057 J	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051
	MW6B-ROX-011713	1/17/2013		31.11	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005
	MW6B-ROX-040313	4/3/2013		31.68	NE	<0.00011	<0.00011 UJ	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
	MW6B-ROX-070913	7/9/2013		28.25	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
	MW6B-ROX-100713	10/7/2013		28.93	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.00057 U	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.00084 U	<0.011	<0.0054 UJ
	MW6B-ROX-011614	1/16/2014		31.67	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	0.000051 J	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	0.000042 J	<0.0022	<0.011	<0.0054	<0.011	<0.0054
	MW6B-ROX-040814	4/8/2014		32.21	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053
	MW6B-ROX-071014	7/10/2014	64.05 - 69.05	30.81	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
MW-06C	MW6C-ROX-110311	11/3/2011	84.95 - 89.95	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	<0.005
	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	<0.0054
	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	<0.005
	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	<0.005
	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	<0.0051
	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	<0.005
	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	<0.0052
	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	<0.0056
	MW6C-ROX-100713	10/7/2013		28.72	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.00056 U	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0013 U	<0.011	<0.0055 UJ
	MW6C-ROX-011614	1/16/2014		31.48	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	0.000041 J	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053
	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	<0.0059
	MW6C-ROX-071014	7/10/2014	84.95 - 89.95	30.60	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	0.000034 J	<0.00011	<0.000056	0.000035 J	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	0.000037 J	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
MW-06D	MW6D-ROX-110311	11/3/2011	104.72 - 109.72	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	<0.0052
	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	<0.0055
	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	<0.005
	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	<0.0051
	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	<0.0052
	MW6D-ROX-011713	1/17/2013		30.75	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005
	MW6D-ROX-040313	4/3/2013		31.27	NE	<0.00011	<0.00011 UJ	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053
	MW6D-ROX-070913	7/9/2013		27.91	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055
	MW6D-ROX-100713	10/7/2013		28.58	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.001 U	<0.011	<0.0054 UJ
	MW6D-ROX-011614	1/16/2014		31.33	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052
	MW6D-ROX-040814	4/8/2014		31.85	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055
	MW6D-ROX-071014	7/10/2014	104.72 - 109.72	31.47	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
	MW6D-ROX-071014-DUP	7/10/2014		31.47	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054

SEE LAST PAGE OF TABLE FOR NOTES

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

						SVOCs																			
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
				Screening Values (mg/L)		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]	
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																					
MW-07	MW-7-ROX-110211	11/2/2011	42.92 - 52.92	35.95	NE	<0.00026 U	<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	<0.005
	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		<0.01 UJ	<0.005	<0.002	0.00049 J	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005
	MW7-ROX-011812-DUP	1/18/2012		38.10	NE	0.00027	<0.00011	<0.011	<0.00011	<0.000056	<0.00003 U	<0.000056	<0.00011	<0.00011		<0.011 UJ	<0.0056	0.00044 J	0.00048 J	<0.011	<0.0056	<0.00011	<0.00011	<0.0056	<0.011	<0.0056	<0.011	<0.0056
	MW7-ROX-050412	5/4/2012		39.19	NE	0.00028	<0.0001	<0.01	<0.0001	0.00011	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.00071 J	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005
	MW7-ROX-080712	8/7/2012		39.50	NE	0.00024	0.000037 J	<0.01 UJ	0.000022 J	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.0006 J	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.00058 U	<0.01	<0.0051
	MW7-ROX-103012	10/30/2012		41.23	NE	0.00031	<0.00012	<0.012 UJ	<0.00012	<0.000058	<0.00012	<0.000058	<0.00012	<0.00012	<0.012	<0.012	<0.0058	0.0015 J	<0.0058	<0.012	<0.0058	<0.00012	<0.00012	<0.0023	<0.012	<0.0058	<0.012	<0.0058
	MW7-ROX-103012-DUP	10/30/2012		41.23	NE	0.00034	<0.00011	<0.011 UJ	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	0.0007 J	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
	MW7-ROX-011513	1/15/2013		42.21	NE	0.00073	0.00011	<0.011 UJ	0.000059 J	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	0.00061 J	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053 UJ
	MW7-ROX-011513-DUP	1/15/2013		42.21	NE	0.00066	0.000093 J	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	0.00055 J	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052 UJ
	MW7-ROX-041013	4/10/2013		42.70	NE	0.0012	0.00015	<0.011	0.000089 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.00083 J	<0.011	<0.0054	<0.011	<0.0054
	MW7-ROX-041013-DUP	4/10/2013		42.70	NE	0.0012	0.00016	<0.011	0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.00088 J	<0.011	<0.0053	<0.011	<0.0053
	MW7-ROX-071713	7/17/2013		39.60	NE	0.00019	0.000031 J	<0.011	0.000028 J	0.00004 J	0.000044 J	0.000045 J	0.00008 J	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	0.000077 J	<0.0022	<0.011	<0.0054	<0.011	<0.0054
	MW7-ROX-101613	10/16/2013		40.64	NE	0.00035	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055
	MW7-ROX-013014	1/30/2014		42.94	NE	0.00028	<0.0001	<0.01	0.00029	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005
	MW7-ROX-041614	4/16/2014		43.79	NE	0.00034	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052
	MW7-ROX-071614	7/16/2014	42.92 - 52.92	42.05	NE	0.00024	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052
	MW7-ROX-071614-DUP	7/16/2014		42.05	NE	0.00022	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052
MW-08	MW-8-ROX-110211	11/2/2011	33.60 - 43.60	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	<0.0048
	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	<0.0053
	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	<0.0053
	MW8-ROX-050412-DUP	5/4/2012		30.21	NE	<0.0001	<0.0001	<0.01	<0.0001	0.00012	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.00047 J	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	0.0557	<0.005
	MW8-ROX-080712	8/7/2012		30.97	NE	0.00023	0.00013	<0.011 UJ	0.000055 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00051 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.00035 J	<0.011	<0.0016 U	0.015	<0.0054
	MW8-ROX-080712-DUP	8/7/2012		30.97	NE	0.0002	0.00029	<0.011 UJ	0.000071 J	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	0.00043 J	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	0.0004 J	<0.011	<0.0018 U	0.0158	<0.0056
	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	<0.0053
	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	<0.0056 UJ
	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	<0.0053
	MW8-ROX-071713	7/17/2013		30.43	NE	0.0002	<0.0001	<0.01	0.000049 J	<0.000052	0.000021 J	<0.000052	0.00004 J	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	0.009 J	<0.0052
	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	<0.0054
	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	<0.0054
	MW8-ROX-101613-DUP	10/16/2013		31.59	NE	0.0002	0.000058 J	<0.012	<0.00012	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.012	<0.012	<0.0059	<0.0024	<0.0059	<0.012	<0.0059	<0.00012	<0.00012	0.0004 J	<0.012	<0.0059	0.0062 J	<0.0059
	MW8-ROX-013014	1/30/2014		34.02	NE	0.0002	0.000089 J	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.00053 J	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	0.0005 J	<0.01	<0.0051	0.0124	<0.0051
	MW8-ROX-013014-DUP	1/30/2014		34.02	NE	0.00021	0.000083 J	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00072 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.00053 J	<0.011	<0.0054	0.0121	<0.0054
	MW8-ROX-041614	4/16/2014		34.73	NE	0.00018	0.000074 J	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	0.0005 J	<0.011	<0.0056	<0.011	<0.0056
	MW8-ROX-041614-DUP	4/16/2014		34.73	NE	0.00016	0.000063 J	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	0.00045 J	<0.01	<0.0051	<0.01	<0.0051
	MW8-ROX-071614	7/16/2014	33.60 - 43.60	33.01	NE	0.00018	0.000068 J	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.00038 J	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	0.00041 J	<0.01	0.00057 J	<0.01	<0.0052

SEE LAST PAGE OF TABLE FOR NOTES

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

						SVOCs																			
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
				Screening Values (mg/L)		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]	
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																					
MW-09	MW9-ROX-110111	11/1/2011	46.45 - 56.45	37.78	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
	MW9-ROX-011612	1/16/2012		39.50	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000057	0.000058 J	0.000051 J	<0.000096 U	<0.00011	<0.011 UJ	<0.011	<0.0057	<0.00085 U	<0.00037 U	<0.011	<0.0057	<0.00011	<0.000078 U	<0.0057	<0.011	<0.0057	<0.011	<0.0057
	MW9-ROX-050312	5/3/2012		41.03	NE													0.0016 J J	0.00045 JB J									
	MW9-ROX-072712	7/27/2012		41.30	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001 UJ	<0.0001	<0.01	<0.01	<0.005	<0.00043 U	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005
	MW9-ROX-102912	10/29/2012		43.17	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052
	MW9-ROX-011113	1/11/2013		43.90	NE	0.000068 J	0.000064 J	<0.011 UJ	0.00006 J	<0.000054	<0.00011	0.000026 J	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054 UJ
	MW9-ROX-040913	4/9/2013		44.67	NE	<0.0001 UJ	<0.0001 UJ	<0.01 UJ	<0.0001 UJ	<0.000052 UJ	<0.0001 UJ	<0.000052 UJ	<0.0001 UJ	<0.0001 UJ	<0.01 UJ	<0.01 UJ	<0.0052 UJ	<0.0021 UJ	<0.0052 UJ	<0.01 UJ	<0.0052 UJ	<0.0001 UJ	<0.0001 UJ	<0.0021 UJ	<0.01 UJ	<0.0016 UJ	<0.01 UJ	<0.0052 UJ
	MW9-ROX-070813	7/8/2013		42.35	NE							0.000035 J																
	MW9-ROX-100313	10/3/2013		42.27	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005
	MW9-ROX-011414	1/14/2014		44.47	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011 UJ	<0.0053 UJ	<0.00011	<0.00011	<0.0021	<0.011 UJ	<0.0053	<0.011 UJ	<0.0053 UJ
	MW9-ROX-040714	4/7/2014		44.99	NE	<0.00011	<0.00011	<0.011	<0.00011	0.000024 J	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0056	<0.00054 U	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
	MW9-ROX-070914	7/9/2014	46.45 - 56.45	44.35	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00036 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
MW-10	MW10-ROX-110111	11/1/2011	44.43 - 54.43	37.72	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
	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	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005 UJ
	MW10-ROX-012113	1/21/2013		44.10	NE	<0.0001	<0.0001	<0.02	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.05	<0.02	<0.01	<0.006	<0.01	<0.02	<0.01	<0.0001	<0.0001	<0.01	<0.01	<0.01	<0.01	<0.01
	MW10-ROX-040913	4/9/2013		44.60	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0018 U	<0.011	<0.0054 UJ
	MW10-ROX-070813	7/8/2013		42.27	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0027 U	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
	MW10-ROX-100313	10/3/2013		42.38	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
	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
	MW10-ROX-040714	4/7/2014		45.00	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0053	<0.00068 U	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053
	MW10-ROX-070914	7/9/2014	44.43 - 54.43	44.35	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00052 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
MW-11	MW-11-ROX-110211	11/2/2011	41.66 - 51.66	35.44	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	<0.0054	<0.011	<0.0054	<0.011 UJ	<0.0054
	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	<0.0058
	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	<0.0054
	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	<0.0053
	MW11-ROX-070813	7/8/2013		39.24	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0052 U	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
	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	<0.0055 UJ
	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	<0.0055
	MW11-ROX-040714	4/7/2014		42.70	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0056	<0.0056 U	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
	MW11-ROX-070914	7/9/2014	41.66 - 51.66	41.75	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011	<0.0057

SEE LAST PAGE OF TABLE FOR NOTES

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

						SVOCs																				
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
				Screening Values (mg/L)		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]	
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																					
MW-12	MW-12-ROX-110211	11/2/2011	41.92 - 51.92	35.70	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	<0.0019	<0.0048	<0.0095	<0.0048	<0.000095	<0.000095	<0.0048	<0.0095	<0.0048	<0.0095 UJ	<0.0048
	MW-12-ROX-110211-DUP	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	<0.0095	<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	<0.0048
	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	<0.0054
	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	<0.0056
	MW12-ROX-043012	4/30/2012		38.98	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051
	MW12-ROX-072712	7/27/2012		39.22	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011 UJ	<0.00011	<0.011	<0.011	<0.0053	<0.0019 U	0.00029 J	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053
	MW12-ROX-102512	10/25/2012		40.95	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.00077 U	<0.011	<0.0053
	MW12-ROX-011013	1/10/2013		41.83	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	<0.0001	0.000026 J	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051 UJ
	MW12-ROX-040813	4/8/2013		42.46	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052
	MW12-ROX-070913	7/9/2013		39.28	NE	<0.00011	<0.00011	<0.011	<0.00011	0.00012 J	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055
	MW12-ROX-100713	10/7/2013		40.22	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0055	<0.0022	<0.0055	<0.011 UJ	<0.0053 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.00062 U	<0.011 UJ	<0.0055 UJ
	MW12-ROX-011514	1/15/2014		42.54	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01 UJ	<0.0052 UJ	<0.0001	<0.0001	<0.0021	<0.01 UJ	<0.0052	<0.01 UJ	<0.0052
	MW12-ROX-040814	4/8/2014		43.15	NE	<0.00011	<0.00011	<0.01	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.01	<0.01 UJ	<0.0051	<0.00039 U	<0.0051	<0.01	<0.0051	<0.00011	<0.00011	<0.002	<0.01	<0.0051	<0.01	<0.0051
	MW12-ROX-070914	7/9/2014	41.92 - 51.92	41.97	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
MW-13	MW13-ROX-110311	11/3/2011	25.57 - 35.57	22.85	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0056	<0.011	<0.0056	<0.011 UJ	<0.0056
	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	0.0087 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	<0.0053
	MW13-ROX-050712	5/7/2012		25.79	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052
	MW13-ROX-080812	8/8/2012		26.67	NE	0.0001 J	0.00019	<0.011 UJ	0.000063 J	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053
	MW13-ROX-110812	11/8/2012		25.30	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005
	MW13-ROX-012313	1/23/2013		29.26	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055 UJ	<0.011	<0.0055 UJ
	MW13-ROX-041213	4/12/2013		29.44	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051
	MW13-ROX-071213	7/12/2013		25.67	NE	<0.00011	<0.000063 U	<0.011	<0.000058 U	<0.00014 U	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	0.00079 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054 UJ
	MW13-ROX-100913	10/9/2013		26.94	NE	0.000098 J	0.000071 J	<0.01	<0.0001	0.000022 J	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.00068 J	<0.0052	<0.01	<0.0052	0.000034 J	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052
	MW13-ROX-012914	1/29/2014		29.63	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055
	MW13-ROX-041114	4/11/2014		30.15	NE	0.00013	0.000066 J	<0.012	<0.00012	<0.00006	<0.00012	<0.00006	<0.00012	<0.00012	<0.012	<0.012	<0.006	<0.00069 U	<0.006	<0.012	<0.006	<0.00012	<0.00012	<0.0024	<0.012	<0.006	<0.012	<0.006
	MW13-ROX-070714	7/7/2014	25.57 - 35.57	28.49	NE	<0.00011	0.000061 J	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055
MW-14	MW14-ROX-110911	11/9/2011	Unknown	27.00	NE	<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	<0.0053
	MW14-ROX-051012	5/10/2012	33.42 - 43.42	NM	NE	0.00046	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.00042 U	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	0.00084 J	<0.0052	<0.01	<0.0052
	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	<0.0053
	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	<0.005
	MW14-ROX-011813	1/18/2013		33.05	NE	0.00092	0.00013	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005 UJ
	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	<0.0054
	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	<0.0053 UJ
	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	<0.0057
	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	<0.0054
	MW14-ROX-041114	4/11/2014		34.30	NE	0.00037	0.000089 J	<0.012	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.012	<0.012	<0.006	<0.00069 U	<0.006	<0.012	<0.006	<0.00011	<0.00011	<0.0024	<0.012	<0.006	<0.012	<0.006
	MW14-ROX-070714	7/7/2014	33.42 - 43.42	32.82	NE	0.00033	0.000063 J	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00048 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
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	<0.0053 UJ
	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	<0.0052
	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	<0.0056
	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	<0.0052 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	<0.0052
	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	<0.0059
	MW16-ROX-071014	7/10/2014	37.06 - 47.06	43.15	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054

SEE LAST PAGE OF TABLE FOR NOTES

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

						SVOCs																				
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
				Screening Values (mg/L)		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]	
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-22	MW22-ROX-012313	1/23/2013	37.88 - 47.88	41.80	NE	0.00018	<0.0001	<0.01 UJ	0.00002 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	0.0031 J	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052 UJ	0.0146	<0.0052 UJ
	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	<0.0053 UJ
	MW22-ROX-040513	4/5/2013		42.23	NE	0.00018	0.000049 J J	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	0.0269	<0.0053
	MW22-ROX-071113	7/11/2013		39.35	NE	0.00026	0.00048	<0.011	0.000035 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	0.0017 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.104	<0.0054
	MW22-ROX-071113-DUP	7/11/2013		39.35	NE	0.00018	0.00047	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	0.0021 J	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	0.0978	<0.0056
	MW22-ROX-100913	10/9/2013		40.39	NE	0.00019	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.0863	<0.0054
	MW22-ROX-100913-DUP	10/9/2013		40.39	NE	0.00018	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.0826	<0.0054
	MW22-ROX-012014	1/20/2014		42.49	NE	0.00015	<0.00011	<0.053	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.053	<0.053	<0.027	<0.011	<0.027	<0.053	<0.027	<0.00011	<0.00011	<0.011	<0.053	<0.027	0.0399 J	<0.027
	MW22-ROX-012014-DUP	1/20/2014		42.49	NE	0.00014	<0.00011	<0.054	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.054	<0.054	<0.027	<0.011	<0.027	<0.054	<0.027	<0.00011	<0.00011	<0.011	<0.054	<0.027	0.0364 J	<0.027
	MW22-ROX-041014	4/10/2014		43.15	NE	0.0001 J	<0.00011	<0.056	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.056 UJ	<0.056	<0.028	<0.011	<0.028	<0.056	<0.028	<0.00011	<0.00011	<0.011	<0.056	<0.028	0.0316 J	<0.028
	MW22-ROX-041014-DUP	4/10/2014		43.15	NE	0.00012	<0.00011	<0.056	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.056 UJ	<0.056	<0.028	<0.011	<0.028	<0.056	<0.028	<0.00011	<0.00011	<0.011	<0.056	<0.028	0.032 J	<0.028
	MW22-ROX-071414	7/14/2014	37.88 - 47.88	41.85	NE	0.00013	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00045 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.0281	<0.0054
MW-24	MW24-ROX-040513	4/5/2013	38.89 - 48.89	43.39	NE	<0.0001	<0.0001 UJ	<0.01 UJ	<0.0001	<0.000052	<0.0001	0.000057	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052
	MW24-ROX-071113	7/11/2013		40.35	NE	0.000024 J	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011		<0.011	<0.0054	<0.0022	<0.0054			<0.00011	<0.00011	<0.0022		<0.0054		<0.0054
	MW24-ROX-100913	10/9/2013		41.27	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053
	MW24-ROX-011514	1/15/2014		43.47	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053
	MW24-ROX-040914	4/9/2014		44.13	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
	MW24-ROX-071114	7/10/2014	38.89 - 48.89	42.97	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053
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	<0.0048
	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	<0.0051
	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	<0.0052
	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	<0.005
	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	<0.0052
	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	<0.0053 UJ
	P114-ROX-041513	4/15/2013		31.80	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.0052	0.0023	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052
	P114-ROX-071813	7/18/2013		27.22	NE	0.00013 B	<0.00011	<0.011	0.00011	0.000045 J	0.000034 J	0.000064	0.000067 J	<0.00011	<0.011 UJ	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	0.000073 J	<0.0022	<0.011	<0.0055	<0.011	<0.0055
	P114-ROX-071813-DUP	7/18/2013		27.22	NE	<0.00011	<0.00011	<0.011	0.00013	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053
	P114-ROX-101713	10/17/2013		29.43	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
	P114-ROX-012814	1/28/2014		32.11	NE	<0.00011	<0.00011	<0.011	0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00066 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
	P114-ROX-042114	4/21/2014		32.22	NE	0.00011	<0.0001	<0.01	0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051
	P114-ROX-071814	7/18/2014	32.67 - 52.67	30.87	NE	0.000082 J	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051
P-54	P54-ROX-110311	11/3/2011	38.00 -63.00	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
	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
	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
	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
	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
	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 UJ
	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 UJ
	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
	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
	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
	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
	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
	P54-ROX-071114	7/10/2014	38.00 - 63.00	41.71	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054

SEE LAST PAGE OF TABLE FOR NOTES

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

						SVOCs																				
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
			Screening Values (mg/L)			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]	
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																						
P-55	P55-ROX-103111	10/31/2011	39.82 - 64.82	39.15	NE	<0.0001	<0.0001	<0.01 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
	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
	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
	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
	P55-ROX-012113	1/21/2013	40.43 - 50.43	43.60	NE	0.00069	0.00019	<0.02	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.05	<0.02	<0.01	<0.006	<0.01	<0.02	<0.01	<0.0001	<0.0001	0.001 J	<0.01	<0.01	0.004 J	<0.01
	P55-ROX-012113	1/21/2013		43.60	NE	0.00054	0.00014	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	0.001 J	<0.01	0.00073 J	0.0024 J	<0.0051
	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
	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	<0.0056
	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	<0.0055
P-56	P56-ROX-102711	10/27/2011	40.82 - 65.82	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
	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
	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
	P56-ROX-080612	8/6/2012		43.60	NE	0.00058	0.000087 J		0.00013	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	0.00051 J	<0.01	<0.0014 U	<0.01	<0.0051
	P56-ROX-103112	10/31/2012		44.80	NE	0.0011	<0.0001	<0.01 UJ	0.00012	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	0.00066 J	<0.01	<0.0051	<0.01 UJ	<0.0051
	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
	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
	P56-ROX-071513	7/15/2013		43.25	NE	0.00065	0.00013	<0.011	0.00014	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055 UJ	<0.0022	<0.0055	<0.011	<0.0055 UJ	<0.00011	<0.00011	0.00075 J	<0.011	<0.0055	0.0086 J	<0.0055
	P56-ROX-101013	10/10/2013		44.48	NE	0.0006	0.000092 J	<0.011	0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	0.00059 J	<0.011	<0.0055	0.0042 J	<0.0055
	P56-ROX-012214	1/22/2014		46.35	NE	0.00055	<0.0001	<0.01	0.00013	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	0.00047 J	<0.01	<0.0052	<0.01	<0.0052
	P56-ROX-041414	4/14/2014		47.32	NE	0.00051	0.000081 J	<0.012	<0.00012	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.012	<0.012	<0.0059	<0.0024	<0.0059	<0.012	<0.0059	<0.00012	<0.00012	0.00067 J	<0.012	<0.0059	<0.012	<0.0059
	P56-ROX-070814	7/8/2014	40.82 - 65.82	45.97	NE	0.00035	0.000081 J	<0.011 UJ	0.0001 J	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	0.00049 J	<0.011	<0.0056	<0.011	<0.0056
P-57	P57-ROX-110811	11/8/2011	40.46 - 65.46	39.20	NE	0.00055	<0.00054	<0.011 UJ	<0.00054	<0.00027	<0.00054	<0.00027	<0.00054	<0.00054	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00054	<0.00054	<0.0054	<0.011	<0.0054	<0.011	<0.0054
	P57-ROX-021312	2/13/2012		42.13	NE	0.00056	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.00043 J	<0.00043 U	<0.01	<0.0051	<0.0001	<0.0001	0.00087 J	<0.01	<0.0051	0.0045 J	<0.0051
	P57-ROX-050712	5/7/2012		42.92	NE	0.00033	<0.0001	<0.01	<0.0001	0.00011	0.00012	<0.000052	<0.0001	<0.0001	<0.01	<0.01	0.0008 J	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052
	P57-ROX-080612	8/6/2012		43.53	NE	0.00056	0.0001		0.000073 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	0.00079 J	<0.01	<0.00096 U	0.0029 J	<0.005
	P57-ROX-080612-DUP	8/6/2012		43.53	NE	0.00051	0.0001		0.000064 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	0.00073 J	<0.01	<0.001 U	0.0029 J	<0.005
	P57-ROX-110512	11/5/2012		44.98	NE	0.00053	<0.0001	<0.01	0.000061 J	<0.00005	<0.0001	<0.00005	0.00005 J	<0.0001	<0.01 UJ	<0.01	<0.005	0.00052 J	<0.005	<0.01	<0.005	<0.0001	0.000049 J	0.0006 J	<0.01	<0.005	<0.01 UJ	<0.005
	P57-ROX-012913	1/29/2013		45.92	NE	0.00061	0.00013	<0.012 UJ	0.000076 J	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.012	<0.012	<0.0059	<0.0024	<0.0059	<0.012	<0.0059	<0.00012	<0.00012	<0.0024	<0.012	<0.0059	0.0023 J J	<0.0059
	P57-ROX-041113	4/11/2013		46.29	NE	0.00063	0.00012	<0.01	0.000073 J	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051
	P57-ROX-071613	7/16/2013		43.38	NE	0.00047	0.0001 J	<0.011	0.000077 J	0.00012	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056 UJ	<0.0022	<0.0056	<0.011	<0.0056 UJ	<0.00011	<0.00011	0.00088 J	<0.011	<0.0056	0.002 J	<0.0056
	P57-ROX-101413	10/14/2013		44.38	NE	0.00045	0.000071 J	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.0012 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.00082 J	<0.011	<0.0054	0.0029 J	<0.0054
	P57-ROX-020314	2/3/2014		46.57	NE	0.00041	0.000075 J	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.00067 J	<0.011	<0.0053	<0.011	<0.0053
	P57-ROX-041514	4/15/2014		46.70	NE	0.00036	0.000074 J	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	0.0007 J	<0.011	<0.0056	<0.011 UJ	<0.0056
	P57-ROX-070814	7/8/2014	40.46 - 65.46	45.95	NE	0.00029	0.000069 J	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.0007 J	<0.011	<0.0053	<0.011	<0.0053
	P57-ROX-070814-DUP	7/8/2014		45.95	NE	0.00029	0.000075 J	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.00071 J	<0.011	<0.0054	<0.011	<0.0054

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						SVOCs																				
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
			Screening Values (mg/L)			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]	
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																						
P-58	P58-ROX-102811	10/28/2011	40.21 - 65.21	37.31	NE	0.0011	<0.000097	<0.0097 UJ	<0.000097	<0.000049	<0.000097	<0.000049	<0.000097	<0.000097	<0.0097	<0.0097	<0.0049	0.003	<0.0049	<0.0097	<0.0049	<0.000097	<0.000097	<0.0049	<0.0097	<0.0049	<0.0097	<0.0049
	P58-ROX-011912	1/19/2012		39.73	NE	0.001	<0.00011	<0.011	<0.00011	0.000039 J	0.000051 J	0.000032 J	0.000047 J	<0.00011		<0.011 UJ	<0.0053	0.0361 J	<0.00059 U	<0.011	<0.0053	<0.00011	<0.00011	0.0026 J	<0.011	<0.0053	<0.011	<0.0053	
	P58-ROX-011912-D	1/19/2012		39.73	NE	0.00092	<0.00011	<0.011	<0.00011	0.000036 J	0.000036 J	<0.000053	<0.00011	<0.00011		<0.011 UJ	<0.0053	0.024 J	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.0023 J	<0.011	<0.0053	<0.011	<0.0053	
	P58-ROX-050712	5/7/2012		40.90	NE	0.00059	0.00019	<0.01	0.00057 J	0.00017	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	0.0017 J	<0.01	<0.0051	<0.01	<0.0051	
	P58-ROX-050712-DUP	5/7/2012		40.90	NE	0.00044	0.00015	<0.01	<0.0001 UJ	0.00015	0.000032 J	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	
	P58-ROX-080612	8/6/2012		41.63	NE	0.00086	0.00029		0.000094 J	0.00024	0.00011	0.000064	0.000043 J	<0.0001	<0.01	<0.01	<0.005	0.00043 J	<0.005	<0.01	<0.005	0.0001	<0.0001	0.0022	<0.01	<0.005	<0.01	<0.005	
	P58-ROX-080612-DUP	8/6/2012		41.63	NE	0.00098	0.0003		0.00011	0.00021	0.000098 J	0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.00042 J	<0.005	<0.01	<0.005	0.000099 J	<0.0001	0.0025	<0.01	<0.005	<0.01	<0.005	
	P58-ROX-110612	11/6/2012		43.09	NE																							
	P58-ROX-121012	12/10/2012		43.09	NE	0.00093	0.00024	<0.011	0.00083	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.0103	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.002 J	<0.011	<0.0054	<0.011	<0.0054 UJ	
	P58-ROX-012213	1/22/2013		44.21	NE	0.0011	0.0006	<0.011 UJ	<0.00011	0.00038	0.00022	0.00012	0.00012	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	0.00039	0.000068 J	0.0038	<0.011	<0.0054	<0.011	<0.0054	
	P58-ROX-041113	4/11/2013		44.40	NE	0.0015	0.0005	<0.011	<0.00011	0.0003	0.00019	0.000095	0.000074 J	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	0.00032	<0.00011	0.0044	<0.011	<0.0054	<0.011	<0.0054	
	P58-ROX-071613	7/16/2013		41.49	NE	0.00076	0.00027	<0.011	0.000096 J	0.00018	0.000073 J	0.000045 J	<0.00011	<0.00011	<0.011	<0.011	<0.0055 UJ	<0.0022	<0.0055	<0.011	<0.0055 UJ	0.00012	<0.00011	0.0025	<0.011	<0.0055	<0.011	<0.0055	
	P58-ROX-101413	10/14/2013		42.19	NE	0.00084	<0.00011	<0.011	<0.00011	<0.000054	0.000067 J	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.0099	<0.0054	<0.011	<0.0054	0.000099 J	<0.00011	0.0024	<0.011	<0.0054	0.0016 J	<0.0054	
	P58-ROX-020314	2/3/2014		44.66	NE	0.00061	0.00018	<0.01	<0.0001	0.000035 J	0.000047 J	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	0.000079 J	<0.0001	0.0016 J	<0.01	<0.0052	<0.01	<0.0052	
	P58-ROX-041514	4/15/2014		45.66	NE	0.0011	0.00072	0.0028 J	0.00071	0.00082	0.00063	0.00072	0.00071	0.00071	<0.011 UJ	0.0051 J	0.0015 J	<0.00099 U	0.00091 J	0.0044 J	0.0043 J	0.00073	0.00075	0.0023	<0.011 UJ	0.00077 J	<0.011 UJ	<0.0053 UJ	
	P58-ROX-071814	7/18/2014		43.80	NE	0.00067	0.00021	<0.011	<0.00011	0.000083	0.000086 J	0.000045 J	0.000035 J	<0.00011	<0.011 UJ	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	0.00015	<0.00011	0.0018 J	<0.011	<0.0055	<0.011	<0.0055	
P-59	P59-ROX-102711	10/27/2011	47.91 - 72.91	41.06	NE	0.00077	0.00012	<0.011 UJ	0.00046	0.00019	<0.00011	0.000073	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.0028	<0.0053	<0.011	<0.0053	0.00034	<0.00011	<0.0053	<0.011	<0.0053	<0.011	<0.0053	
	P59-ROX-011912	1/19/2012		42.88	NE	0.00036	<0.00011	<0.011	0.00025	0.000055 J	0.000038 J	0.000037 J	0.000052 J	<0.00011		0.0011 J	<0.0057	<0.00079 U	<0.0011 U	<0.011	<0.0057	0.000085 J	<0.00011	<0.0057	0.0133	<0.0057			
	P59-ROX-011912-DUP	1/19/2012		42.88	NE	0.00037	<0.0001	<0.01	0.00015	0.00005 J	0.000029 J	0.000027 J	<0.0001	<0.0001		0.00091 J	<0.0051	<0.002	<0.00061 U	<0.01	<0.0051	0.000074 J	<0.0001	0.00042 J	<0.01	<0.0051	0.0108	<0.0051	
	P59-ROX-050912	5/9/2012		44.11	NE	0.00022	<0.0001	<0.01	0.000095 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	0.0161	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	0.0085 J	<0.005	
	P59-ROX-080212	8/2/2012		44.07	NE	0.00042	0.0001 J	<0.011 UJ	0.00014	0.00021	0.000036 J	0.000047 J	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.00036 J	<0.011	<0.0053	0.0088 J	<0.0053	
	P59-ROX-110212	11/2/2012		45.98	NE	0.00043	<0.00011	<0.011	0.000086 J	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.00031 J	<0.011	<0.0053	0.0102 J J	<0.0053	
	P59-ROX-110212-DUP	11/2/2012		45.98	NE	0.00042	<0.0001	<0.01	0.000084 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	0.00029 J	<0.01	<0.0052	0.0092 J J	<0.0052	
	P59-ROX-013013	1/30/2013		46.60	NE	0.00047	<0.0001	<0.01 UJ	0.00012	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0041	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	0.0581	<0.0052 UJ	
	P59-ROX-041213	4/12/2013		46.95	NE	0.00057	0.00013	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	0.0831 J	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.0919	<0.0054	
	P59-ROX-041213-DUP	4/12/2013		46.95	NE	0.00058	0.00012	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	0.0518 J	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	0.0914	<0.0053	
	P59-ROX-071613	7/16/2013		44.13	NE	0.00035	0.000071 J	<0.011	0.000092 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054 UJ	<0.0022	<0.0054	<0.011	<0.0054 UJ	<0.00011	<0.00011	0.00041 J	<0.011	<0.0054	0.0583	<0.0054	
	P59-ROX-101013	10/10/2013		45.50	NE	0.00055	0.000084 J	<0.011	0.00021	0.000068	<0.00011	0.000039 J	<0.00011	<0.00011	<0.011 UJ	0.0009 J	<0.0054	0.00069 J	<0.0054	<0.011	<0.0054	0.000088 J	<0.00011	<0.0022	<0.011	<0.0054	0.078	<0.0054	
	P59-ROX-020314	2/3/2014		47.35	NE	0.00046	<0.0001	<0.01	0.00018	0.000035 J	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	0.000046 J	<0.0001	<0.0021	<0.01	<0.0052	0.147 J	<0.0052	
	P59-ROX-041514	4/15/2014		48.60	NE	0.0013	<0.00011	<0.011	0.00018	0.00006	0.000042 J	0.000044 J	0.000035 J	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	0.0001 J	<0.00011	<0.0021	<0.011	<0.0053	<0.011 UJ	<0.0053	
	P59-ROX-070814	7/8/2014		47.69	NE	0.0015	0.000091 J	<0.011 UJ	0.00012	0.000029 J	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.0057	0.000027 J	<0.00011	<0.0023	<0.011	<0.0057	0.17	<0.0057	
P-66	P66-ROX-110111	11/1/2011	34.72 - 59.72	28.92	NE	0.0018	<0.0001	<0.01	<0.0001	<0.000095 U	<0.0001	<0.000088 U	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.00011 U	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	
	P66-ROX-051012	5/10/2012		32.48	NE	0.00078	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	0.000024 J	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.00053 U	<0.005	<0.01	<0.005	<0.0001	<0.0001	0.0018 J	<0.01	<0.005	<0.01	<0.005	
	P66-ROX-080312	8/3/2012		30.51	NE	0.00073	0.00025	<0.011 UJ	<0.00011	0.00018	0.000066 J	0.00008	0.000066 J	<0.00011	<0.011	<0.011	<0.0053	0.00075 J	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	
	P66-ROX-103112	10/31/2012		34.75	NE	0.00078	0.00022	<0.01 UJ	0.0006	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	0.0019 J	<0.01	<0.005	<0.01 UJ	<0.005	
	P66-ROX-011813	1/18/2013		35.70	NE	0.00074	0.00034	<0.011 UJ	<0.000055 U	<0.000053	<0.00011	<0.000028 U	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.0018 J	<0.011	<0.0053	<0.011	<0.0053 UJ	
	P66-ROX-041113	4/11/2013		36.03	NE	0.0011	0.00028	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.0025	<0.011	<0.0053	<0.011	<0.0053	
	P66-ROX-071213	7/12/2013		33.20	NE	0.00087	<0.00011	<0.011	<0.0002 U	0.00018 B	<0.00015 U	0.00017 B	<0.00019 U	0.00015	<0.011 UJ	<0.011	<0.0056	0.0124	<0.0056	<0.011	<0.0056	0.00017	0.00017	0.0016 J	<0.011	<0.0056	<0.011	<0.0056 UJ	
	P66-ROX-101013	10/10/2013		33.66	NE	0.00066	0.0002	<0.011	<0.00011	0.000028 J	<0.00011	<0.000056	0.000036 J	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	0.0016 J	<0.011	<0.0056	<0.011	<0.0056	
	P66-ROX-110713	11/7/2013		33.66	NE																							
	P66-ROX-012914	1/29/2014		36.39	NE	0.00099	0.00032	<0.011	<0.00011	0.000039 J	0.000044 J	0.000048 J	0.000052 J	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	0.000047 J	0.000035 J	0.0019 J	<0.011	<0.0053	<0.011	<0.0053	
	P66-ROX-041114	4/11/2014		37.10	NE	0.00058	0.00017	<0.012	<0.00012	<0.000058	<0.00012	<0.000058	<0.00012	<0.00012	<0.012	<0.012	<0.0058	<0.00068 U	<0.0058	<0.012	<0.0058	<0.00012	<0.00012	<0.0023	<0.012	<0.0058	<0.012	<0.0058	
	P66-ROX-070714	7/7/2014		35.60	NE	0.00033	0.00016	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056	

SEE LAST PAGE OF TABLE FOR NOTES

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

						SVOCs																				
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
			Screening Values (mg/L)			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]	
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																						
P-74	P74-ROX-103111	10/31/2011	44.43 - 69.43	36.26	NE	0.00033	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		<0.0095 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
	P74-ROX-050712	5/7/2012		39.92	NE	<0.0001	<0.0001	<0.01	<0.0001	0.00012	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<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	<0.01	<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	<0.005
	P74-ROX-110112	11/1/2012		41.72	NE	0.00023	<0.0001	<0.01 UJ	0.000044 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	0.00044 J	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	0.00031 J	0.001 J	<0.0052	0.008 J J	<0.0052
	P74-ROX-011713	1/17/2013		42.65	NE	0.00019	0.0001	<0.01 UJ	0.000063 J	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	0.0028 J	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	0.0021 J	<0.0051
	P74-ROX-041113	4/11/2013		42.83	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052
	P74-ROX-071513	7/15/2013		40.11	NE	<0.000063 U	<0.00011	<0.011	0.000032 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	0.0013 J	<0.0054	<0.011	<0.0054
	P74-ROX-101413	10/14/2013		41.72	NE	0.0002	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00097 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.00033 J	0.0012 J	<0.0054	0.0019 J	<0.0054
	P74-ROX-012414	1/24/2014		43.35	NE	0.00023	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.00063 J	0.00097 J	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051
	P74-ROX-041514	4/15/2014		44.74	NE	<0.00012	<0.00012	<0.012	<0.00012	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.012	<0.012	<0.0059	<0.0024	<0.0059	<0.012	<0.0059	<0.00012	<0.00012	<0.0024	<0.012	<0.0059	<0.012 UJ	<0.0059
	P74-ROX-070814	7/8/2014	44.43 - 69.43	43.02	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011	<0.0057
P-93A	P93A-ROX-102611	10/26/2011	48.17 - 63.17	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	<0.0048
	P93A-ROX-050812	5/8/2012		42.75	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.0001 U	<0.00012 U	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.0029	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051
	P93A-ROX-080912	8/9/2012		43.66	NE	0.00015	<0.00011	<0.011	0.000048 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	0.0032 J	<0.011	<0.0054	0.0153	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
	P93A-ROX-110712	11/7/2012		45.00	NE	<0.00022 U	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0026	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	0.00027 J	<0.01	<0.0052	<0.01	<0.0052
	P93A-ROX-110712-DUP	11/7/2012		45.00	NE	0.00029 B	<0.0001	<0.01	0.000061 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0023	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052
	P93A-ROX-012313	1/23/2013		45.89	NE	0.00016	<0.0001	<0.01 UJ	0.000028 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0099	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052 UJ	<0.01	<0.0052 UJ
	P93A-ROX-012313-DUP	1/23/2013		45.89	NE	0.00014	<0.0001	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.011	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052 UJ	<0.01	<0.0052 UJ
	P93A-ROX-041113	4/11/2013		46.29	NE	0.00023	<0.0001	<0.01	0.000074 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005
	P93A-ROX-041113-DUP	4/11/2013		46.29	NE	0.00021	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005
	P93A-ROX-071813	7/18/2013		43.25	NE	<0.00011	0.000032 J	<0.011	0.00003 J	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	0.00024 J	<0.011	<0.0056	<0.011	<0.0056
	P93A-ROX-101113	10/11/2013		44.18	NE	0.00017	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005
	P93A-ROX-012914	1/29/2014		46.53	NE	0.00022	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
	P93A-ROX-041714	4/17/2014		47.41	NE	0.00013	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
	P93A-ROX-071814	7/18/2014	48.17 - 63.17	45.70	NE	0.00017	<0.00011	<0.011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0057	0.0041	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	<0.0023	<0.011	<0.00037 U	<0.011	<0.0057
	P93A-ROX-071814-DUP	7/18/2014		45.70	NE	0.00016	<0.00011	<0.011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011	<0.0057
P-93B	P93B-ROX-102611	10/26/2011	74.60 - 76.60	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	<0.0052
	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	<0.0048
	P93B-ROX-050812	5/8/2012		42.79	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.00012 U	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051
	P93B-ROX-080912	8/9/2012		43.69	NE	<0.00011	0.000087 J	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.0036	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.00051 U	<0.011	<0.0054
	P93B-ROX-110712	11/7/2012		45.05	NE	<0.0001	0.000073 JB	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.0017 J	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051
	P93B-ROX-110712-DUP	11/7/2012		45.05	NE	<0.000047 U	0.000058 J	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.00057 J	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005
	P93B-ROX-012313	1/23/2013		45.89	NE	0.00014	0.000072 J	<0.011 UJ	0.00013	0.00022	0.00011	0.00013	0.00012	0.00012	<0.011	<0.011	<0.0053	0.0055	0.0032 J	0.0013 J	<0.0053	0.00012	0.00012	<0.0021	<0.011	<0.0053 UJ	0.0021 J	0.00024 J J
	P93B-ROX-041113	4/11/2013		46.32	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051
	P93B-ROX-071813	7/18/2013		43.30	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
	P93B-ROX-101613	10/16/2013		44.43	NE	<0.0001	0.000065 J	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005
	P93B-ROX-101613-DUP	10/16/2013		44.43	NE	<0.0001	0.000091 J	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051
	P93B-ROX-012814	1/28/2014		46.58	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	0.00072 J	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055
	P93B-ROX-012814-DUP	1/28/2014		46.58	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.0012 J	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051
	P93B-ROX-041714	4/17/2014		47.46	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	0.0015 J	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051
	P93B-ROX-041714-DUP	4/17/2014		47.46	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	0.00045 J	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053
	P93B-ROX-071714	7/17/2014	74.60 - 76.60	45.75	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052

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

						SVOCs																		
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
				Screening Values (mg/L)		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]	
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																						
P-93C	P93C-ROX-102611	10/26/2011	94.26 - 96.26	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	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052
	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	<0.0051
	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	<0.0053
	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	<0.0052
	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	<0.005
	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	<0.0055 UJ
	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	<0.005 UJ
	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	<0.0056
	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	<0.0051
	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	<0.0051
	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	<0.0052
	P93C-ROX-071714	7/17/2014	94.26 - 96.26	45.61	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052
P-93D	P93D-ROX-102711	10/27/2011	125.75 - 127.75	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	<0.005
	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	<0.0054
	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	<0.0051
	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	<0.0052
	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	<0.0055
	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	<0.0053
	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	<0.0052
	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	<0.0056 UJ
	P93D-ROX-101113	10/11/2013		44.24	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01 UJ	<0.005 UJ	<0.0001	<0.0001	<0.002	<0.01 UJ	<0.005	<0.01 UJ	<0.005
	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	<0.0053
	P93D-ROX-041414	4/14/2014		47.54	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0005 U	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053
	P93D-ROX-071714	7/17/2014	125.75 - 127.75	45.78	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052
ROST-3-PZ	ROST3PZ-ROX-051412	5/14/2012	40.00 - 50.00	38.82	NE	0.000023 J	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.00065 J	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052
	ROST3PZ-ROX-080712	8/7/2012		39.00	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	0.0016 J	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	0.0033 J	<0.011	<0.0054
	ROST3PZ-ROX-110112	11/1/2012		40.82	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011 UJ	<0.0053
ROST-3-MW	ROST3MW-ROX-012313	1/23/2013	37.81 - 47.81	41.50	NE	0.00025	0.000059 J	<0.01 UJ	0.000074 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005 UJ	<0.01	<0.005 UJ
	ROST3MW-ROX-040513	4/5/2013				0.00016	<0.00011 UJ	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
	ROST3MW-ROX-071113	7/11/2013		39.50	NE	0.00029	<0.00011	<0.011	0.000091 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	0.00061 J	<0.0054	<0.011 UJ	<0.0054 UJ	<0.00011	<0.00011	0.00025 J	<0.011 UJ	<0.0054	0.0016 J J	<0.0054
	ROST3-MW-ROX-100913	10/9/2013		40.16	NE	0.0001 J	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011 UJ	<0.0054 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.0054	<0.011 UJ	<0.0054
	ROST3MW-ROX-011714	1/17/2014		42.20	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011 UJ	<0.0053 UJ	<0.00011	<0.00011	<0.0021	<0.011 UJ	<0.0053	<0.011 UJ	<0.0053
	ROST3MW-ROX-041014	4/10/2014		42.80	NE	<0.00012	<0.00012	<0.012	<0.00012	<0.00006	<0.00012	<0.00006	<0.00012	<0.00012	<0.012 UJ	<0.012	<0.006	<0.0024	<0.006	<0.012	<0.006	<0.00012	<0.00012	<0.0024	<0.012	<0.006	<0.012	<0.006
	ROST3MW-ROX-071414	7/14/2014	37.81 - 47.81	41.88	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
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	<0.005
	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	<0.0053
	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	<0.0052
	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	<0.0053 UJ
	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	<0.0055
	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	<0.0054
	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	<0.0053
	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	<0.0059
	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	<0.0056
	ROST4C-ROX-071114	7/10/2014	34.95 - 44.95	42.22	NE	<0.0001	<0.0001	<0.011	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.011	<0.011	<0.0053	0.0007 J	<0.0053	<0.011	<0.0053	<0.0001	<0.0001	<0.0021	<0.011	<0.0053	<0.011	<0.0053

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

						SVOCs																			
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
				Screening Values (mg/L)		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]	
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																					
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	<0.0051
	T12-ROX-011912	1/19/2012		41.00	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	<0.0056
	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	<0.005
	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	<0.0054
	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	<0.005
	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	<0.0053 UJ
	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	<0.0051
	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	<0.0054
	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	<0.0054
	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	<0.0051
	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	<0.0056
	T12-ROX-070814	7/8/2014	46.46 - 72.46	45.13	NE	0.00024	<0.00011	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054

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CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																		
						Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
					Screening Values (mg/L)	0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-01	MW1-ROX-120511	12/5/2011	43.41 - 58.41	37.10	NE	<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		37.75	NE	<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	<0.00054 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	<0.00043 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	<0.011	<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	48.80 - 58.80	41.89	NE	<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	<0.0012 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	<0.01	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	<0.011	<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	<0.011	<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	<0.00029 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011 UJ	<0.011 UJ	<0.011	<0.0054	<0.0054	<0.0054	<0.011 UJ	<0.000023 U	<0.0057 UJ	<0.00011
	MW1-ROX-070914	7/9/2014	48.80 - 58.80	42.09	NE	0.0016 JB	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.000085 J	0.00012 JB J	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
MW-02	MW2-ROX-112811	11/28/2011	49.87 - 59.87	38.03	NE	<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	0.00056 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	<0.0005 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	<0.00047 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	<0.011	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	<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	<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	<0.011	<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	<0.011	<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	<0.011	<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	<0.00046 U	<0.006	<0.012	<0.00012	<0.00012	<0.006		<0.00012	<0.006	0.0083	0.0193	<0.012	<0.012	<0.012	<0.006	<0.006	<0.006	<0.012	<0.00006	<0.006	<0.00012
	MW2-ROX-071414	7/14/2014	49.87 - 59.87	43.13	NE	<0.00045 U	<0.0054	<0.011	0.00012	0.00014	<0.0054		<0.00011	<0.0054	0.01	0.0215	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.00017 U	<0.0054	0.000096 J
MW-03	MW3-ROX-112911	11/29/2011	34.67 - 44.67	24.06	NE	<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	<0.01	<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	<0.01	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	<0.00047 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	<0.00066 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	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051 UJ	<0.0001
	MW3-ROX-010913	1/9/2013		29.35	NE	0.0025 J	<0.005	<0.01	0.000047 J	0.000052 J	<0.005		<0.0001	<0.005	<0.0002	0.000081 J	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.000068	<0.005 UJ	0.000036 J
	MW3-ROX-040813	4/8/2013		29.74	NE	<0.0057	<0.0057	<0.011	<0.00011	<0.00011	<0.0057		<0.00011	<0.0057	<0.00023	<0.00023	<0.011	<0.011	<0.011	<0.0057	<0.0057	<0.0057	<0.011	<0.000057	<0.0057	<0.00011
	MW3-ROX-071113	7/11/2013		26.32	NE	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.00044 J	0.00038	<0.011	<0.011	<0.011 UJ	<0.0054	<0.0054	<0.0054	<0.011	<0.000039 U	<0.0054 UJ	<0.000072 U
	MW3-ROX-100813	10/8/2013		27.38	NE	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.00013 J	0.00014 J	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW3-ROX-011614	1/16/2014		29.91	NE	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011 UJ	<0.011 UJ	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011 UJ	<0.000053	<0.0053 UJ	<0.00011
	MW3-ROX-040914	4/9/2014		30.50	NE	<0.00056 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000019 U	<0.0056	<0.00011
	MW3-ROX-071114	7/10/2014	34.67 - 44.67	29.05	NE	<0.00028 U	<0.0054	<0.011	<0.0001	<0.0001	<0.0054		<0.0001	<0.0054	0.000067 J	<0.0002	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.00003 U	<0.0054	<0.0001

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

						SVOCs																		
						Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
			Screening Values (mg/L)			0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-04	MW4-ROX-121511	12/15/2011	42.63 - 57.63	33.99	NE	<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		36.00	NE	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	<0.00062 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	<0.00061 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	0.00075 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	0.00057 J	<0.0051	<0.01	<0.000047 U	<0.0001	<0.0051		<0.0001	<0.0051	0.00049	0.0004 B	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000031 U	0.0023 J	<0.0001
	MW4-ROX-102912	10/29/2012		39.45	NE	<0.0052	<0.0052	<0.01	<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	<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	46.06 - 56.06	40.20	NE	<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	<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	<0.00062 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	<0.011	<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	<0.011	<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	<0.0013 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	<0.00076 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	0.000072 J	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	MW4-ROX-071614	7/16/2014	46.06 - 56.06	40.18	NE	<0.00043 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	0.00024	0.00022	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000041 U	<0.0052	<0.0001
MW-05	MW5-ROX-112111	11/21/2011	33.97 - 43.97	23.46	NE	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		24.76	NE	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.0016	<0.00021	<0.011	<0.011	<0.011	<0.0053	0.00078 J	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	MW5-ROX-050312	5/3/2012		25.89	NE	<0.0005 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	0.00057 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	<0.01	<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	<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	<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	<0.01	<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	<0.011	<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	<0.011	<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	<0.00087 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	0.0038	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	MW5-ROX-071414	7/14/2014	33.97 - 43.97	28.59	NE	<0.00037 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.00052 B	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000088 U	<0.0053	<0.00011
MW-06A	MW6A-ROX-112111	11/21/2011	34.83 - 44.83	25.49	NE	0.00053 J	0.00093 J	<0.01	<0.0001	<0.0001	<0.0052		0.0015 J	<0.0052	<0.00021 UJ	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	MW6A-ROX-112111-DUP	11/21/2011		25.49	NE	0.00069 J	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001 UJ	<0.0051	<0.0002 UJ	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	MW6A-ROX-011712	1/17/2012		26.74	NE	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00015 U	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW6A-ROX-050212	5/2/2012		27.77	NE	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW6A-ROX-080112	8/1/2012		28.36	NE	0.00049 J	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW6A-ROX-102412	10/24/2012		30.06	NE	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	MW6A-ROX-011413	1/14/2013		31.00	NE	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		0.000072 J	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051 UJ	<0.0051	<0.01	<0.000051	<0.0051 UJ	<0.0001
	MW6A-ROX-040313	4/3/2013		31.62	NE	0.0018 J	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	0.000084	<0.0053 UJ	0.000053 J
	MW6A-ROX-070913	7/9/2013		28.25	NE	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011 UJ	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW6A-ROX-070913-DUP	7/9/2013		28.25	NE	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011 UJ	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW6A-ROX-100713	10/7/2013		28.87	NE	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	MW6A-ROX-100713-DUP	10/7/2013		28.87	NE	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW6A-ROX-011614	1/16/2014		31.62	NE	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052 UJ	<0.0052	<0.01	<0.000052	<0.0052 UJ	<0.0001
	MW6A-ROX-011614-DUP	1/16/2014		31.62	NE	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	<0.000053	<0.0053 UJ	<0.00011
	MW6A-ROX-040814	4/8/2014		32.16	NE	<0.00075 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000054	<0.0056	<0.00011
	MW6A-ROX-040814-DUP	4/8/2014		32.16	NE	<0.00077 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000055	<0.0054	<0.00011
	MW6A-ROX-071014	7/10/2014	34.83 - 44.83	30.75	NE	<0.00026 U	<0.0054	<0.011	<0.00011	0.00013	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.000046 J	<0.0054	<0.00011

SEE LAST PAGE OF TABLE FOR NOTES

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

						SVOCs																			
						Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
			Screening Values (mg/L)			0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-06B	MW6B-ROX-110311	11/3/2011	64.05 - 69.05	24.67	NE	<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	0.00055 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	0.00039 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	0.0007 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	0.00079 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	0.0026 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	0.0012 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	<0.011	<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	<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	<0.011	<0.00011	<0.00011	<0.0054		0.000043 J	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054 UJ	<0.0054	<0.011	<0.000054	<0.0054 UJ	<0.00011
	MW6B-ROX-040814	4/8/2014		32.21	NE	<0.00043 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.000018 J	<0.0053	<0.00011
	MW6B-ROX-071014	7/10/2014	64.05 - 69.05	30.81	NE	<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
MW-06C	MW6C-ROX-110311	11/3/2011	84.95 - 89.95	24.47	NE	<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	<0.011	<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	<0.01	<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	0.001 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	<0.01	<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	0.0022 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	0.00077 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	<0.011	<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	0.00043 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	<0.011	<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	<0.0004 U	<0.0059	<0.012	<0.00012	<0.00012	<0.0059		<0.00012	<0.0059	<0.00024	<0.00024	<0.012	<0.012	<0.012	<0.0059	<0.0059	<0.0059	<0.012	<0.000059	<0.0059	<0.00012
	MW6C-ROX-071014	7/10/2014	84.95 - 89.95	30.60	NE	<0.00032 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		0.000035 J	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
MW-06D	MW6D-ROX-110311	11/3/2011	104.72 - 109.72	24.31	NE	<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	0.00047 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	0.00047 J	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.0005 U	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.000052	<0.005	<0.0001
	MW6D-ROX-080212	8/2/2012		30.56	NE	<0.0051	<0.0051	<0.01	<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	<0.01	<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	<0.01	<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	0.00069 J	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	<0.000053	<0.0053 UJ	<0.00011
	MW6D-ROX-070913	7/9/2013		27.91	NE	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011 UJ	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW6D-ROX-100713	10/7/2013		28.58	NE	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW6D-ROX-011614	1/16/2014		31.33	NE	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052 UJ	<0.0052	<0.01	<0.000052	<0.0052 UJ	<0.0001
	MW6D-ROX-040814	4/8/2014		31.85	NE	<0.00039 U	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW6D-ROX-071014	7/10/2014	104.72 - 109.72	31.47	NE	<0.00027 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	MW6D-ROX-071014-DUP	7/10/2014		31.47	NE	<0.00029 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011

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

						SVOCs																		
						Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
					Screening Values (mg/L)	0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-07	MW-7-ROX-110211	11/2/2011	42.92 - 52.92	35.95	NE	<0.005	<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	<0.01	<0.00033 U	0.0702	<0.0001
	MW7-ROX-011812	1/18/2012		38.10	NE	0.00045 J	<0.005	<0.01	<0.0001	0.00018	<0.005		<0.0001	<0.005	0.0055	0.0069	<0.01	<0.01	<0.01 UJ	<0.005	<0.005	<0.005	<0.01	0.00029	0.15	<0.000042 U
	MW7-ROX-011812-DUP	1/18/2012		38.10	NE	<0.0056	<0.0056	<0.011	<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	<0.00095 U	<0.005	<0.01	0.000039 J	0.00019	<0.005		<0.0001	<0.005	0.0075	0.0087	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00028	0.0944	<0.0001
	MW7-ROX-080712	8/7/2012		39.50	NE	<0.0051	<0.0051	<0.01	<0.0001	0.00016	<0.0051		<0.0001	<0.0051	0.0055	0.0065	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.00019	0.0576	<0.0001
	MW7-ROX-103012	10/30/2012		41.23	NE	<0.0058	<0.0058	<0.012	<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	<0.011	<0.00011	0.00026	<0.0056		<0.00011	<0.0056	0.008 J	0.0098	<0.011	<0.011	<0.011	<0.0056	<0.0056 UJ	<0.0056	<0.011	0.00037	0.0812 J	<0.00005 U
	MW7-ROX-011513	1/15/2013		42.21	NE	<0.0053	<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	<0.0052	<0.01	<0.0001	0.00057	<0.0052		<0.0001	<0.0052	0.0173	0.0207	<0.01	<0.01	<0.01	<0.0052	<0.0052 UJ	<0.0052	<0.01	0.00078	0.0735 J	0.000078 J
	MW7-ROX-041013	4/10/2013		42.70	NE	<0.0054	<0.0054	<0.011	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	<0.011	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	<0.011	<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	<0.011	<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	<0.0007 U	<0.005	<0.01	<0.0001	0.00021	<0.005		<0.0001	<0.005	0.0059	0.0083	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00029	0.0314	<0.0001
	MW7-ROX-041614	4/16/2014		43.79	NE	<0.00071 U	<0.0052	<0.01	<0.0001	0.00026	<0.0052		<0.0001	<0.0052	0.0074	0.0103	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00033 B	0.0988	<0.0001
	MW7-ROX-071614	7/16/2014	42.92 - 52.92	42.05	NE	<0.00027 U	<0.0052	<0.01	<0.0001	0.00021	<0.0052		<0.0001	<0.0052	0.0052	0.0079	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00028	0.0618	<0.0001
	MW7-ROX-071614-DUP	7/16/2014		42.05	NE	<0.00038 U	<0.0052	<0.01	<0.0001	0.00019	<0.0052		<0.0001	<0.0052	0.0052	0.0077	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00026	0.0638	<0.0001
MW-08	MW-8-ROX-110211	11/2/2011	33.60 - 43.60	27.02	NE	<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	<0.011	<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	<0.00063 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	<0.01	<0.0001	0.00031	<0.005		<0.0001	<0.005	0.0086	0.0102	0.0275	0.0569	<0.01	<0.005	<0.005	<0.005	<0.01	0.00014	0.12 J	<0.0001
	MW8-ROX-080712	8/7/2012		30.97	NE	<0.0054	<0.0054	<0.011	<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	<0.011	<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	0.00082 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	<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	0.0013 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	<0.01	<0.0001	0.00033	<0.0052		<0.0001	<0.0052	0.0097 J	0.0113	0.0046 J	0.0106	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00015	0.328	0.000062 J
	MW8-ROX-071713-DUP	7/17/2013		30.43	NE	<0.0054	<0.0054	<0.011	<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	<0.011	<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	<0.012	<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	<0.0011 U	<0.0051	<0.01	<0.0001	0.00054	<0.0051		<0.0001	<0.0051	0.0137	0.0123	0.0128	0.0198	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.00018	0.105	<0.0001
	MW8-ROX-013014-DUP	1/30/2014		34.02	NE	<0.00092 U	<0.0054	<0.011	<0.00011	0.00052	<0.0054		<0.00011	<0.0054	0.0136	0.0123	0.0129	0.019	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00019	0.135	<0.00011
	MW8-ROX-041614	4/16/2014		34.73	NE	<0.00073 U	<0.0056	<0.011	<0.00011	0.00046	<0.0056		<0.00011	<0.0056	0.0142	0.0097	<0.011	0.0062 J	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.00015 B J	0.135	<0.00011
	MW8-ROX-041614-DUP	4/16/2014		34.73	NE	<0.0006 U	<0.0051	<0.01	<0.0001	0.00043	<0.0051		<0.0001	<0.0051	0.0129	0.0086	<0.01	0.0053 J	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.00016 B J	0.118	<0.0001
	MW8-ROX-071614	7/16/2014	33.60 - 43.60	33.01	NE	<0.00045 U	<0.0052	<0.01	<0.0001	0.00038	<0.0052		<0.0001	<0.0052	0.0125	0.0048	0.0037 J	0.0045 J	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.0002 B	0.111	<0.0001

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						SVOCs																			
						Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
				Screening Values (mg/L)		0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																			
MW-09	MW9-ROX-110111	11/1/2011	46.45 - 56.45	37.78	NE	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW9-ROX-011612	1/16/2012		39.50	NE	0.00048 J	<0.0057	<0.011	<0.00011	<0.00011	<0.0057		<0.000098 U	<0.0057	<0.00023	<0.00023	<0.011	<0.011	<0.011	<0.0057	<0.0057	<0.0057	<0.011	<0.000057	<0.0057	<0.00011
	MW9-ROX-050312	5/3/2012		41.03	NE																				
	MW9-ROX-072712	7/27/2012		41.30	NE	<0.00054 U	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01 UJ	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW9-ROX-102912	10/29/2012		43.17	NE	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	MW9-ROX-011113	1/11/2013		43.90	NE	<0.0054	<0.0054	<0.011	0.000066 J	0.00011	<0.0054		<0.00011	<0.0054	<0.00022	0.00014 J	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00012	<0.0054	0.000057 J
	MW9-ROX-040913	4/9/2013		44.67	NE	<0.0018 UJ	<0.0052 UJ	<0.01 UJ	<0.0001 UJ	<0.0001 UJ	<0.0052 UJ		<0.0001 UJ	<0.0052 UJ	<0.00021 UJ	<0.00021 UJ	<0.01 UJ	<0.01 UJ	<0.01 UJ	<0.0052 UJ	<0.0052 UJ	<0.0052 UJ	<0.01 UJ	<0.000052 UJ	<0.0052 UJ	<0.0001 UJ
	MW9-ROX-070813	7/8/2013		42.35	NE																		<0.000028 U		
	MW9-ROX-100313	10/3/2013		42.27	NE	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW9-ROX-011414	1/14/2014		44.47	NE	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011 UJ	<0.011 UJ	<0.011	<0.0053	<0.0053	<0.0053	<0.011 UJ	<0.000053	<0.0053 UJ	<0.00011
	MW9-ROX-040714	4/7/2014		44.99	NE	<0.00062 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	0.0001 J	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056 U	<0.0056	<0.00011
	MW9-ROX-070914	7/9/2014	46.45 - 56.45	44.35	NE	<0.0006 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
MW-10	MW10-ROX-110111	11/1/2011	44.43 - 54.43	37.72	NE	<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	0.00081 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	<0.00041 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	<0.00043 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	<0.011	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	<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	<0.001	<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	<0.0019 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	<0.011	<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	<0.011	<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	<0.011	<0.00011	<0.00011	<0.0053		0.000072 J	<0.0053	<0.00021	<0.00021	<0.011 UJ	<0.011 UJ	<0.011	<0.0053	<0.0053	<0.0053	<0.011 UJ	0.000037 JB	<0.0054 UJ	<0.00011
	MW10-ROX-040714	4/7/2014		45.00	NE	<0.00085 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000042 U	<0.0053	<0.00011
	MW10-ROX-070914	7/9/2014	44.43 - 54.43	44.35	NE	<0.00065 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
MW-11	MW-11-ROX-110211	11/2/2011	41.66 - 51.66	35.44	NE	<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	<0.01	<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	<0.00057 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	<0.011	<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	<0.01 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	<0.011	<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	<0.011	<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	<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	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000026 U	<0.0055	<0.00011
	MW11-ROX-040714	4/7/2014		42.70	NE	<0.0007 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000023 U	<0.0056	<0.00011
	MW11-ROX-070914	7/9/2014	41.66 - 51.66	41.75	NE	<0.00042 U	<0.0057	<0.011	<0.00011	<0.00011	<0.0057		<0.00011	<0.0057	<0.00023	<0.00023	<0.011	<0.011	<0.011	<0.0057	<0.0057	<0.0057	<0.011	0.00003 J	<0.0057	<0.00011

SEE LAST PAGE OF TABLE FOR NOTES

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

						SVOCs																		
						Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
					Screening Values (mg/L)	0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-12	MW-12-ROX-110211	11/2/2011	41.92 - 51.92	35.70	NE	<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
	MW-12-ROX-110211-DUP	11/2/2011		35.70	NE	<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	<0.011	<0.00011	<0.00011	<0.0054		<0.00023 U	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW12-ROX-011712-DUP	1/17/2012		37.70	NE	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00007 U	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	MW12-ROX-043012	4/30/2012		38.98	NE	<0.0051	<0.0051	<0.01	<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	<0.00063 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011 UJ	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	MW12-ROX-102512	10/25/2012		40.95	NE	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053 UJ	<0.00011
	MW12-ROX-011013	1/10/2013		41.83	NE	<0.0051	<0.0051	<0.01	0.000045 J	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000032 U	<0.0051	<0.0001
	MW12-ROX-040813	4/8/2013		42.46	NE	<0.0052	<0.0052	<0.01	0.000044 J	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	MW12-ROX-070913	7/9/2013		39.28	NE	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011 UJ	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW12-ROX-100713	10/7/2013		40.22	NE	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011 UJ	<0.011 UJ	<0.011	<0.0055	<0.0055	<0.0055	0.0018 J J	<0.000055	<0.0053 UJ	<0.00011
	MW12-ROX-011514	1/15/2014		42.54	NE	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01 UJ	<0.01 UJ	<0.01	<0.0052	<0.0052	<0.0052	<0.01 UJ	<0.000022 U	<0.0052 UJ	<0.0001
	MW12-ROX-040814	4/8/2014		43.15	NE	<0.0006 U	<0.0051	<0.01	<0.00011	<0.00011	<0.0051		<0.00011	<0.0051	<0.00023	<0.00023	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.000021 J	<0.0051	<0.00011
	MW12-ROX-070914	7/9/2014	41.92 - 51.92	41.97	NE	<0.00098 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
MW-13	MW13-ROX-110311	11/3/2011	25.57 - 35.57	22.85	NE	<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	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00018 U
	MW13-ROX-012012	1/20/2012		24.77	NE	<0.00058 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.00022	<0.00027 U	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	0.0015 J	0.000065 J
	MW13-ROX-050712	5/7/2012		25.79	NE	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	MW13-ROX-080812	8/8/2012		26.67	NE	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.00021	<0.00014 UJ	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	MW13-ROX-110812	11/8/2012		25.30	NE	0.00054 J	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW13-ROX-012313	1/23/2013		29.26	NE	0.0027 J	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	0.00011 J	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW13-ROX-041213	4/12/2013		29.44	NE	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	0.00011 J	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	MW13-ROX-071213	7/12/2013		25.67	NE	<0.0054	<0.0054	<0.011	<0.000042	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.000067 U	<0.011	<0.011	<0.011	<0.0054	<0.0054 UJ	<0.0054	<0.011	<0.000076	<0.0054 UJ	<0.00004
	MW13-ROX-100913	10/9/2013		26.94	NE	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	MW13-ROX-012914	1/29/2014		29.63	NE	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.000096 U	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW13-ROX-041114	4/11/2014		30.15	NE	<0.00079 U	<0.006	<0.012	<0.00012	<0.00012	<0.006		<0.00012	<0.006	<0.00024	<0.00024	<0.012	<0.012	<0.012	<0.006	<0.006	<0.006	<0.012	0.000033 J	<0.006	<0.00012
	MW13-ROX-070714	7/7/2014	25.57 - 35.57	28.49	NE	<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
MW-14	MW14-ROX-110911	11/9/2011	Unknown	27.00	NE	<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	0.00043 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	<0.011	<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	0.00044 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	<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	<0.011	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	0.00043 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	<0.011	<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	<0.0054	<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	<0.00082 U	<0.006	<0.012	<0.00011	0.0003	<0.006		<0.00011	<0.006	0.0018	<0.00023	<0.012	<0.012	<0.012	<0.006	<0.006	<0.006	<0.012	<0.000057	<0.006	<0.00011
	MW14-ROX-070714	7/7/2014	33.42 - 43.42	32.82	NE	0.00031 J	<0.0054	<0.011	<0.00011	0.00024	<0.0054		<0.00011	<0.0054	0.0014	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00024 J	<0.0054	<0.00011
MW-16	MW16-ROX-012313	1/23/2013	37.06 - 47.06	43.05	NE	<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	<0.01	<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	<0.011	<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	<0.01 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	<0.01	<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	<0.00067 U	<0.0059	<0.012	<0.00012	<0.00012	<0.0059		<0.00012	<0.0059	<0.00024	<0.00024	<0.012	<0.012	<0.012	<0.0059	<0.0059	<0.0059	<0.012	<0.000059	<0.0059	<0.00012
	MW16-ROX-071014	7/10/2014	37.06 - 47.06	43.15	NE	<0.00021 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011

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

						SVOCs																			
						Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
			Screening Values (mg/L)			0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-22	MW22-ROX-012313	1/23/2013	37.88 - 47.88	41.80	NE	0.0024 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	0.0024 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	0.00057 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	<0.011	<0.00011	0.00027	<0.0054		<0.00011	<0.0054	0.0232 J	0.0393	0.0159	0.029	<0.011 UJ	<0.0054	<0.0054	<0.0054	<0.011	0.0002 B	0.0094 J	<0.00011
	MW22-ROX-071113-DUP	7/11/2013		39.35	NE	0.00052 J	<0.0056	<0.011	<0.00011	0.00017	<0.0056		<0.00011	<0.0056	0.0216 J	0.037	0.0147	0.0269	<0.011 UJ	<0.0056	<0.0056	<0.0056	<0.011	0.0002 B	0.0088 J	<0.00011
	MW22-ROX-100913	10/9/2013		40.39	NE	<0.0054	<0.0054	<0.011	<0.00011	0.00019	<0.0054		<0.00011	<0.0054	0.0276	0.0468	0.0152	0.0319	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00019	<0.0054	<0.00011
	MW22-ROX-100913-DUP	10/9/2013		40.39	NE	<0.0054	<0.0054	<0.011	<0.00011	0.0002	<0.0054		<0.00011	<0.0054	0.0265	0.0451	0.0139	0.0296	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00016	<0.0054	<0.00011
	MW22-ROX-012014	1/20/2014		42.49	NE	<0.027	<0.027	<0.053	<0.00011	0.00017	<0.027		<0.00011	<0.027	0.0258	0.0459	0.0124 J	0.0313 J	<0.053	<0.027	<0.027	<0.027	<0.053	0.0002 B	0.0071 J	<0.00011
	MW22-ROX-012014-DUP	1/20/2014		42.49	NE	<0.027	<0.027	<0.054	<0.00011	0.00015	<0.027		<0.00011	<0.027	0.0232	0.0416	0.0118 J	0.0296 J	<0.054	<0.027	<0.027	<0.027	<0.054	0.0002 B	0.007 J	<0.00011
	MW22-ROX-041014	4/10/2014		43.15	NE	<0.0016 U	<0.028	<0.056	<0.00011	<0.00011	<0.028		<0.00011	<0.028	0.0174	0.0287	0.0156 J	0.035 J	<0.056	<0.028	<0.028	<0.028	<0.056	0.0001	<0.028	<0.00011
	MW22-ROX-041014-DUP	4/10/2014		43.15	NE	<0.0018 U	<0.028	<0.056	<0.00011	0.00012	<0.028		<0.00011	<0.028	0.0199	0.0322	0.0159 J	0.038 J	<0.056	<0.028	<0.028	<0.028	<0.056	0.0001	<0.028	<0.00011
	MW22-ROX-071414	7/14/2014	37.88 - 47.88	41.85	NE	<0.00057 U	<0.0054	<0.011	<0.00011	0.00015	<0.0054		<0.00011	<0.0054	0.0198	0.0355	0.0102 J	0.0204	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.00018 U	<0.0054	<0.00011
MW-24	MW24-ROX-040513	4/5/2013	38.89 - 48.89	43.39	NE	0.00049 J	<0.0052	<0.01	0.000088 J	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	0.00015 J	<0.01	<0.01	<0.01	<0.0052	<0.0052 UJ	<0.0052	<0.01	<0.000052	<0.0052 UJ	0.000066 J
	MW24-ROX-071113	7/11/2013		40.35	NE	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022 UJ	0.000062 J			<0.011 UJ	<0.0054	<0.0054	<0.0054		<0.000038 U		<0.00011
	MW24-ROX-100913	10/9/2013		41.27	NE	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	MW24-ROX-011514	1/15/2014		43.47	NE	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	MW24-ROX-040914	4/9/2014		44.13	NE	<0.00092 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	MW24-ROX-071114	7/10/2014		42.97	NE	<0.0053	<0.0053	<0.011	<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
P-114	P114-ROX-102811	10/28/2011	32.67 - 52.67	24.73	NE	<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	<0.01	<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	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.00005	<0.0052	<0.0001
	P114-ROX-080912	8/9/2012		29.13	NE	<0.005	<0.005	<0.01	<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	<0.01	<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	0.0024 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	0.00047 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	<0.011	<0.00011	<0.00011	<0.0055		0.000071 J	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.000059	<0.0055	<0.00011
	P114-ROX-071813-DUP	7/18/2013		27.22	NE	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.000052 J	<0.0053	<0.00011
	P114-ROX-101713	10/17/2013		29.43	NE	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	P114-ROX-012814	1/28/2014		32.11	NE	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00015 B	<0.0054	<0.00011
	P114-ROX-042114	4/21/2014		32.22	NE	0.0026 JB	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01 UJ	<0.000051	<0.0051	<0.0001
	P114-ROX-071814	7/18/2014	32.67 - 52.67	30.87	NE	<0.00028 U	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.00012 U	<0.0051	<0.0001
P-54	P54-ROX-110311	11/3/2011	38.00 -63.00	35.49	NE	<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
	P54-ROX-011712	1/17/2012		37.17	NE	<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	<0.00085 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	<0.011	<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	<0.01	<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	<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	<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	<0.011	<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	<0.01	<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	<0.011	<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	<0.011	<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	<0.00062 U	<0.006	<0.012	<0.00012	<0.00012	<0.006		<0.00012	<0.006	<0.00024	<0.00024	<0.012	<0.012	<0.012	<0.006	<0.006	<0.006	<0.012	<0.00006	<0.006	<0.00012
	P54-ROX-071114	7/10/2014	38.00 - 63.00	41.71	NE	<0.00028 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.00011 J	0.00013 J	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000051 U	<0.0054	<0.00011

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

						SVOCs																		
						Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
					Screening Values (mg/L)	0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			
P-55	P55-ROX-103111	10/31/2011	39.82 - 64.82	39.15	NE	<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	<0.01	<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	<0.011	<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	<0.01	<0.0001	0.00069	<0.0051		<0.0001	<0.0051	0.0118	0.0179	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.00066	<0.0051	<0.0001
	P55-ROX-012113	1/21/2013	40.43 - 50.43	43.60	NE	<0.01	<0.01	<0.001	<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	0.00069 J	<0.0051	<0.01	<0.0001	0.00093	<0.0051		<0.0001	<0.0051	0.0176	0.0254	<0.01	0.0018 J	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.0017	0.0034 J	<0.0001
	P55-ROX-041513	4/15/2013		43.63	NE	<0.0052	<0.0052	<0.01	<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	<0.011	<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	<0.011	<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	<0.01	<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	<0.00044 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	<0.01	<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	<0.00075 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	<0.01	<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	<0.01	<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	<0.011	<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	<0.011	<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	<0.011	<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	<0.01	<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	0.00051 J	<0.0059	<0.012	<0.00012	0.00038	<0.0059		<0.00012	<0.0059	0.0223	0.0269	<0.012	0.0008 J	<0.012	<0.0059	<0.0059	<0.0059	<0.012	0.0012	<0.0059	<0.00012
	P56-ROX-070814	7/8/2014	40.82 - 65.82	45.97	NE	<0.0056	<0.0056	<0.011	<0.00011	0.00036	<0.0056		<0.00011	<0.0056	0.0181	0.0243	<0.011	0.0165	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.001	<0.0056	<0.00011
P-57	P57-ROX-110811	11/8/2011	40.46 - 65.46	39.20	NE	<0.0054	<0.0054	<0.011	<0.00054	0.00076	<0.0054		<0.00054	<0.0054	0.0288	0.0388	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.0006	0.286	<0.00054
	P57-ROX-021312	2/13/2012		42.13	NE	<0.00046 U	<0.0051	<0.01	<0.0001	0.00087	<0.0051		<0.0001	<0.0051		0.0403	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.00051	0.297	<0.0001
	P57-ROX-050712	5/7/2012		42.92	NE	<0.0052	<0.0052	<0.01	<0.0001	0.00045	<0.0052		<0.0001	<0.0052	0.0169	0.0212	<0.01	0.0023 J	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00035	0.141	<0.0001
	P57-ROX-080612	8/6/2012		43.53	NE	<0.00087 U	<0.005	<0.01	<0.0001	0.0006	<0.005		<0.0001	<0.005	0.0244	0.0326	<0.01	0.0013 J	<0.01	<0.005	<0.005	<0.005	<0.01	0.00053	0.0697 J	<0.0001
	P57-ROX-080612-DUP	8/6/2012		43.53	NE	<0.00089 U	<0.005	<0.01	<0.0001	0.00063	<0.005		<0.0001	<0.005	0.0242	0.0321	<0.01	0.0013 J	<0.01	<0.005	<0.005	<0.005	<0.01	0.00054	0.0921 J	<0.0001
	P57-ROX-110512	11/5/2012		44.98	NE	<0.005	<0.005	<0.01	<0.0001	0.00062	<0.005		0.00005 J	<0.005	0.0249	0.0305	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00048	0.0547 J	<0.0001
	P57-ROX-012913	1/29/2013		45.92	NE	<0.0059	<0.0059	<0.012	<0.00012	0.00094	<0.0059		<0.00012	<0.0059	0.0369	0.0447	<0.012	<0.012	<0.012	<0.0059	<0.0059	<0.0059	<0.012	0.00074	<0.0059 UJ	<0.00012
	P57-ROX-041113	4/11/2013		46.29	NE	<0.0051	<0.0051	<0.01	<0.0001	0.00076	<0.0051		<0.0001	<0.0051	0.0348	0.0453	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.00074	0.146	<0.0001
	P57-ROX-071613	7/16/2013		43.38	NE	<0.0056	<0.0056	<0.011	0.000038 J	0.0008	<0.0056		<0.00011	<0.0056	0.0267	0.0365	<0.011 UJ	0.0086 J	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.00073	0.164 J	<0.000052 U
	P57-ROX-101413	10/14/2013		44.38	NE	0.00049 J	<0.0054	<0.011	<0.00011	0.00067	<0.0054		<0.00011	<0.0054	0.0252	0.0324	<0.011	<0.011	<0.011	<0.0054	<0.0054 UJ	<0.0054	<0.011	0.00049	0.202	0.000047 J
	P57-ROX-020314	2/3/2014		46.57	NE	<0.0053	<0.0053	<0.011	<0.00011	0.00062	<0.0053		<0.00011	<0.0053	0.0234	0.0314	<0.011	0.0027 J	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00052	0.168 J	<0.00011
	P57-ROX-041514	4/15/2014		46.70	NE	<0.00058 U	<0.0056	<0.011	<0.00011	0.00061	<0.0056		<0.00011	<0.0056	0.0238	0.032	<0.011	<0.011	<0.011	<0.0056	<0.0056 UJ	<0.0056	<0.011	0.00045 J	0.106 J	<0.00011
	P57-ROX-070814	7/8/2014	40.46 - 65.46	45.95	NE	0.00026 J	<0.0053	<0.011	<0.00011 UJ	0.00055	<0.0053	0.024 JN	<0.00011	<0.0053	0.022	0.0306	<0.011	0.0303	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00047	0.141	<0.00011
	P57-ROX-070814-DUP	7/8/2014		45.95	NE	0.00027 J	<0.0054	<0.011	<0.00011 UJ	0.00054	<0.0054	0.023 JN	<0.00011	<0.0054	0.022	0.03	<0.011	0.0299	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00048	0.136	<0.00011

SEE LAST PAGE OF TABLE FOR NOTES

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

						SVOCs																		
						Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
					Screening Values (mg/L)	0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
P-58	P58-ROX-102811	10/28/2011	40.21 - 65.21	37.31	NE	<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	<0.0049	<0.0097	0.00085	0.137	0.00012
	P58-ROX-011912	1/19/2012		39.73	NE	<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	<0.00059 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	<0.01	<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	<0.01	<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	<0.00053 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	<0.00063 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	<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	<0.011	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	<0.011	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	<0.011	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	0.00058 J	<0.0054	<0.011	0.000066 J	0.0014	<0.0054		<0.00011	<0.0054	0.0488	0.0628	<0.011	0.0481	<0.011	<0.0054	<0.0054 UJ	<0.0054	<0.011	0.00095	0.213	0.00021
	P58-ROX-020314	2/3/2014		44.66	NE	<0.0052	<0.0052	<0.01	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	<0.0013 U	0.00072 J	<0.011 UJ	0.00079	0.0017	0.00088 J		0.00072	<0.0053 UJ	0.0284	0.0381	<0.011 UJ	0.0136 J	<0.011 UJ	<0.0053	0.0021 J J	<0.0053 UJ	<0.011 UJ	0.0013	0.123 J	0.00085
	P58-ROX-071814	7/18/2014	40.21 - 65.21	43.80	NE	<0.00032 U	<0.0055	<0.011	0.000062 J	0.0012	<0.0055		0.0005	<0.0055	0.0412	0.0554	<0.011	0.012	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.00092	0.173	0.00022
P-59	P59-ROX-102711	10/27/2011	47.91 - 72.91	41.06	NE	<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	<0.0005 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	<0.00041 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	<0.01	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	<0.011	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	<0.011	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	<0.01	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	0.0022 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	<0.011	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	<0.011	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	<0.011	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	0.00091 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	<0.01	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	<0.011	0.00015	0.00066	<0.0053		<0.00011	<0.0053	0.0233	0.0317	<0.011	0.0186 J	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	0.0016	0.13 J	0.0003
	P59-ROX-070814	7/8/2014	47.91 - 72.91	47.69	NE	0.00045 J	<0.0057	<0.011	0.000053 J J	0.00046	<0.0057		<0.00011	<0.0057	0.0181	0.0291	0.0793	0.0184	<0.011	<0.0057	<0.0057	<0.0057	<0.011	0.00088	<0.0057	0.0001 J
P-66	P66-ROX-110111	11/1/2011	34.72 - 59.72	28.92	NE	<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	0.00054 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	<0.011	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	<0.01	<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	<0.0053	<0.011	0.000076 J	0.0019	<0.0053		<0.00011	<0.0053	0.0655	0.0315	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00082	0.0019 J	0.00011
	P66-ROX-041113	4/11/2013		36.03	NE	<0.0053	<0.0053	<0.011	0.000072 J	0.0017	<0.0053		<0.00011	<0.0053	0.0681	0.0131	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00091	<0.0053	0.000087 J
	P66-ROX-071213	7/12/2013		33.20	NE	<0.0056	<0.0056	<0.011	<0.00019 U	0.0018	<0.0056		0.00017	<0.0056	0.0688	0.0642	<0.011	<0.011	<0.011	<0.0056	<0.0056 UJ	<0.0056	<0.011	0.00088	0.0035 J J	<0.0002 U
	P66-ROX-101013	10/10/2013		33.66	NE	<0.0056	<0.0056	<0.011	0.000052 J	0.0013	<0.0056		<0.00011	<0.0056	0.0571	0.0218	<0.011	0.0034 J	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.0005	<0.0056	0.00009 J
	P66-ROX-110713	11/7/2013		33.66	NE																					
	P66-ROX-012914	1/29/2014		36.39	NE	<0.0053	<0.0053	<0.011	0.000065 J	0.0016	<0.0053		0.000041 J	<0.0053	0.0701	0.0284	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00077	<0.0053	0.000099 J
	P66-ROX-041114	4/11/2014		37.10	NE	<0.00088 U	<0.0058	<0.012	<0.00012	0.0013	<0.0058		<0.00012	<0.0058	0.0649	0.023	<0.012	<0.012	<0.012	<0.0058	<0.0058	<0.0058	<0.012	0.00049	<0.0058	0.000049 J
	P66-ROX-070714	7/7/2014	34.72 - 59.72	35.60	NE	0.0003 J	<0.0056	<0.011	<0.00011	0.00078	<0.0056		<0.00011	<0.0056	0.0445	0.006	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.00041 J	<0.0056	<0.00011

SEE LAST PAGE OF TABLE FOR NOTES

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

						SVOCs																				
						Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
			Screening Values (mg/L)			0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
P-74	P74-ROX-103111	10/31/2011	44.43 - 69.43	36.26	NE	<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	<0.0095	<0.000095	<0.000095	<0.0048		<0.000095	<0.0048	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095 UJ	<0.0048	<0.0048	<0.0048	<0.0095	<0.000048	0.002 J	<0.000095
	P74-ROX-050712	5/7/2012		39.92	NE	<0.0052	<0.0052	<0.01	<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	<0.00082 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	<0.01	<0.0001	0.0003	<0.0052		<0.0001	<0.0052	0.0123	0.0136	0.0054 J	0.002 J	<0.01	<0.0052	<0.0052 UJ	<0.0052	<0.01	0.00013	0.0307 J	<0.0001
	P74-ROX-011713	1/17/2013		42.65	NE	<0.0051	<0.0051	<0.01	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	<0.01	<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	<0.011	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	0.00047 J	<0.0054	<0.011	0.00015	0.00025	<0.0054		<0.00011	<0.0054	0.0073	0.0079	<0.011	<0.011	<0.011	<0.0054	<0.0054 UJ	<0.0054	<0.011	0.000079	0.0125	0.000057 J
	P74-ROX-012414	1/24/2014		43.35	NE	0.00048 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	<0.0014 U	<0.0059	<0.012	<0.00012	<0.00012	<0.0059		<0.00012	<0.0059	0.0017 J	0.0022 J	<0.012	<0.012	<0.012	<0.0059	<0.0059 UJ	<0.0059	<0.012	0.000054 JB J	<0.0059 UJ	<0.00012
	P74-ROX-070814	7/8/2014	44.43 - 69.43	43.02	NE	0.00039 J	<0.0057	<0.011	<0.00011	0.00011	<0.0057		<0.00011	<0.0057	0.0034	0.003	<0.011	<0.011	<0.011	<0.0057	<0.0057	<0.0057	<0.011	0.000054 J	<0.0057	<0.00011
P-93A	P93A-ROX-102611	10/26/2011	48.17 - 63.17	39.43	NE	<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	<0.00038 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	<0.01	<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	<0.011	<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	<0.01	<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	<0.01	<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	<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	<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	<0.01	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	<0.01	<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	<0.011	<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	<0.01	<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	<0.011	<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	<0.0012 U	<0.0056	<0.011	<0.00011	0.00027	<0.0056		<0.00011	<0.0056	0.0086	0.0048	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.00018 B J	0.0735	<0.00011
	P93A-ROX-071814	7/18/2014	48.17 - 63.17	45.70	NE	<0.00077 U	<0.0057	<0.011	<0.00011	0.00024	<0.0057		<0.00011	<0.0057	0.0084	0.0053	<0.011	<0.011	<0.011	0.0059	<0.0057	<0.0057	<0.011	0.00017 B	0.0355	<0.00011
	P93A-ROX-071814-DUP	7/18/2014		45.70	NE	<0.00041 U	<0.0057	<0.011	<0.00011	0.00025	<0.0057		<0.00011	<0.0057	0.0095	0.0062	<0.011	<0.011	<0.011	0.0052 J	<0.0057	<0.0057	<0.011	0.00017 B	0.0396	<0.00011
P-93B	P93B-ROX-102611	10/26/2011	74.60 - 76.60	39.48	NE	<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	<0.0095	<0.000095	<0.000095	<0.0048		<0.000095	<0.0048	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0.0048	<0.0048	<0.0048	<0.0095	<0.000048	0.107	<0.000095
	P93B-ROX-050812	5/8/2012		42.79	NE	<0.0051	<0.0051	<0.01	<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	<0.011	<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	<0.01	<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	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	0.0003	0.0005 B	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	0.114	<0.0001
	P93B-ROX-012313	1/23/2013		45.89	NE	0.003 J	<0.0053	<0.011	0.00013	0.00012	0.00058 J		0.00012	<0.0053	<0.00021	0.00012 J	<0.011	0.0014 J	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00016	0.176	0.00013
	P93B-ROX-041113	4/11/2013		46.32	NE	0.0013 J	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	0.122	<0.0001
	P93B-ROX-071813	7/18/2013		43.30	NE	0.0005 J	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.000034 J	0.151	<0.00011
	P93B-ROX-101613	10/16/2013		44.43	NE	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	0.069	<0.0001
	P93B-ROX-101613-DUP	10/16/2013		44.43	NE	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	0.082	<0.0001
	P93B-ROX-012814	1/28/2014		46.58	NE	0.00045 J	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000022 U	0.074	<0.00011
	P93B-ROX-012814-DUP	1/28/2014		46.58	NE	0.00048 J	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000024 U	0.0927	<0.0001
	P93B-ROX-041714	4/17/2014		47.46	NE	<0.0024 U	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	0.0719	<0.0001
	P93B-ROX-041714-DUP	4/17/2014		47.46	NE	<0.00098 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	0.0861	<0.00011
	P93B-ROX-071714	7/17/2014	74.60 - 76.60	45.75	NE	<0.00046 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000023 U	<0.0052 UJ	<0.0001

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

						SVOCs																		
						Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
				Screening Values (mg/L)		0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
P-93C	P93C-ROX-102611	10/26/2011	94.26 - 96.26	39.36	NE	<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	<0.01	<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	<0.011	<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	<0.01	<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	<0.01	<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	0.0025 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	<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	<0.011	<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	<0.01	<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	0.00051 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	<0.00048 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052 UJ	<0.0001
	P93C-ROX-071714	7/17/2014	94.26 - 96.26	45.61	NE	<0.00035 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000024 U	<0.0087 UJ	<0.0001
P-93D	P93D-ROX-102711	10/27/2011	125.75 - 127.75	39.59	NE	<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	<0.011	<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	<0.01	<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	<0.01	<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	<0.011	<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	<0.011	<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	<0.01	<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	0.00045 J	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.000059 U	<0.011	<0.011	<0.011	<0.0056	<0.0056 UJ	<0.0056	<0.011	<0.000056	<0.0056 UJ	<0.00011
	P93D-ROX-101113	10/11/2013		44.24	NE	<0.005	<0.005	<0.01	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	<0.011	<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	0.00036 J	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.00003 U	<0.0053	<0.00011
	P93D-ROX-071714	7/17/2014	125.75 - 127.75	45.78	NE	<0.00025 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000022 U	<0.0052 UJ	<0.0001
ROST-3-PZ	ROST3PZ-ROX-051412	5/14/2012	40.00 - 50.00	38.82	NE	<0.00043 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	0.0002 J	0.00017 J	<0.01	0.0087 J	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.000043 J	<0.0052	<0.0001
	ROST3PZ-ROX-080712	8/7/2012		39.00	NE	0.0049 J	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.00031	0.00038 J	<0.011	0.0056 J	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	ROST3PZ-ROX-110112	11/1/2012		40.82	NE	0.0017 J	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.00028	0.00031	<0.011	0.0019 J	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	<0.000053	<0.0053 UJ	<0.00011
ROST-3-MW	ROST3MW-ROX-012313	1/23/2013	37.81 - 47.81	41.50	NE	<0.005	<0.005	<0.01	<0.0001	0.00031	<0.005		<0.0001	<0.005	0.0061	0.0087	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00068	<0.005	<0.0001
	ROST3MW-ROX-040513	4/5/2013				0.00044 J	<0.0054	<0.011	<0.00011	0.00017	<0.0054		<0.00011	<0.0054	0.0029	0.0039	<0.011	<0.011	<0.011	<0.0054	<0.0054 UJ	<0.0054	<0.011	0.00055	<0.0054 UJ	<0.00011
	ROST3MW-ROX-071113	7/11/2013		39.50	NE	<0.0054	<0.0054	<0.011	<0.00011	0.00043	<0.0054		<0.00011	<0.0054	0.0105 J	0.0142	<0.011 UJ	<0.011 UJ	<0.011 UJ	<0.0054	<0.0054	<0.0054	<0.011 UJ	0.00073	<0.0054 UJ	<0.000044 U
	ROST3-MW-ROX-100913	10/9/2013		40.16	NE	<0.0054	<0.0054	<0.011	<0.00011	0.00012	<0.0054		<0.00011	<0.0054	0.0024	0.0026	<0.011 UJ	<0.011 UJ	<0.011	<0.0054	<0.0054	<0.0054	<0.011 UJ	0.00014	<0.0054 UJ	0.000044 J
	ROST3MW-ROX-011714	1/17/2014		42.20	NE	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.0011	0.00099	<0.011 UJ	<0.011 UJ	<0.011	<0.0053	<0.0053	<0.0053	<0.011 UJ	0.0002	<0.0053 UJ	<0.00011
	ROST3MW-ROX-041014	4/10/2014		42.80	NE	<0.00076 U	<0.006	<0.012	<0.00012	<0.00012	<0.006		<0.00012	<0.006	0.00075	0.0008	<0.012	<0.012	<0.012	<0.006	<0.006	<0.006	<0.012	0.0001	<0.006	<0.00012
	ROST3MW-ROX-071414	7/14/2014	37.81 - 47.81	41.88	NE	<0.0004 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.00092	0.00097	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.00016 U	<0.0054	<0.00011
ROST-4-PZ(C)	ROST4PZ-C-051412	5/14/2012	34.95 - 44.95	39.04	NE	<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	0.0015 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	0.0018 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	<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	<0.011	<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	<0.011	0.000099 J	0.00027	<0.0054		<0.00011	<0.0054	0.0027 J	0.0021	<0.011	<0.011 UJ	<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	<0.011	<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	<0.012	<0.00012	<0.00012	<0.0059		<0.00012	<0.0059	0.00019 J	<0.00024	<0.01 UJ	<0.01 UJ	<0.012	<0.0059	<0.0059	<0.0059	<0.01 UJ	0.000077	<0.005 UJ	<0.00012
	ROST4PZC-ROX-041014	4/10/2014		42.05	NE	<0.00038 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	0.000065 J	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.000051 J	<0.0056	<0.00011
	ROST4C-ROX-071114	7/10/2014		42.22	NE	<0.00031 U	<0.0053	<0.011	<0.0001	<0.0001	<0.0053		<0.0001	<0.0053	0.00021	<0.0002	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.00012 U	<0.0053	<0.0001

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

						SVOCs																		
						Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
					Screening Values (mg/L)	0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
T-12	T12-ROX-102711	10/27/2011	46.46 - 72.46	38.54	NE	<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		41.00	NE	<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	<0.01	<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	<0.011	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	<0.01	<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	<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	<0.01	<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	<0.011	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	<0.011	<0.00011	0.00029	<0.0054		<0.00011	<0.0054	0.0199	0.0319	0.0018 J	0.0032 J	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00077	0.0083	0.00009 J
	T12-ROX-012414	1/24/2014		45.26	NE	0.00044 J	<0.0051	<0.01	<0.0001	0.00035	<0.0051		<0.0001	<0.0051	0.0215	0.0326	0.0022 J	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.001	0.0498	0.00006 J
	T12-ROX-041514	4/15/2014		46.72	NE	<0.00034 U	<0.0056	<0.011	<0.00011	0.0003	<0.0056		<0.00011	<0.0056	0.0189	0.0283	<0.011	<0.011	<0.011	<0.0056	<0.0056 UJ	<0.0056	<0.011	0.00078	0.0672 J	0.00005 J
	T12-ROX-070814	7/8/2014	46.46 - 72.46	45.13	NE	0.00038 J	<0.0054	<0.011	<0.00011	0.00022	<0.0054		<0.00011	<0.0054	0.015	0.0245	0.0092 J	0.0033 J	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00051	<0.0054	<0.00011

Notes:

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

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

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

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

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

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

	Indicates a historical exceedance of screening criteria.
	Indicates a current exceedance of screening criteria.
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.
UJ = Estimated non-detect.

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

EVS Descriptions and Assumptions:

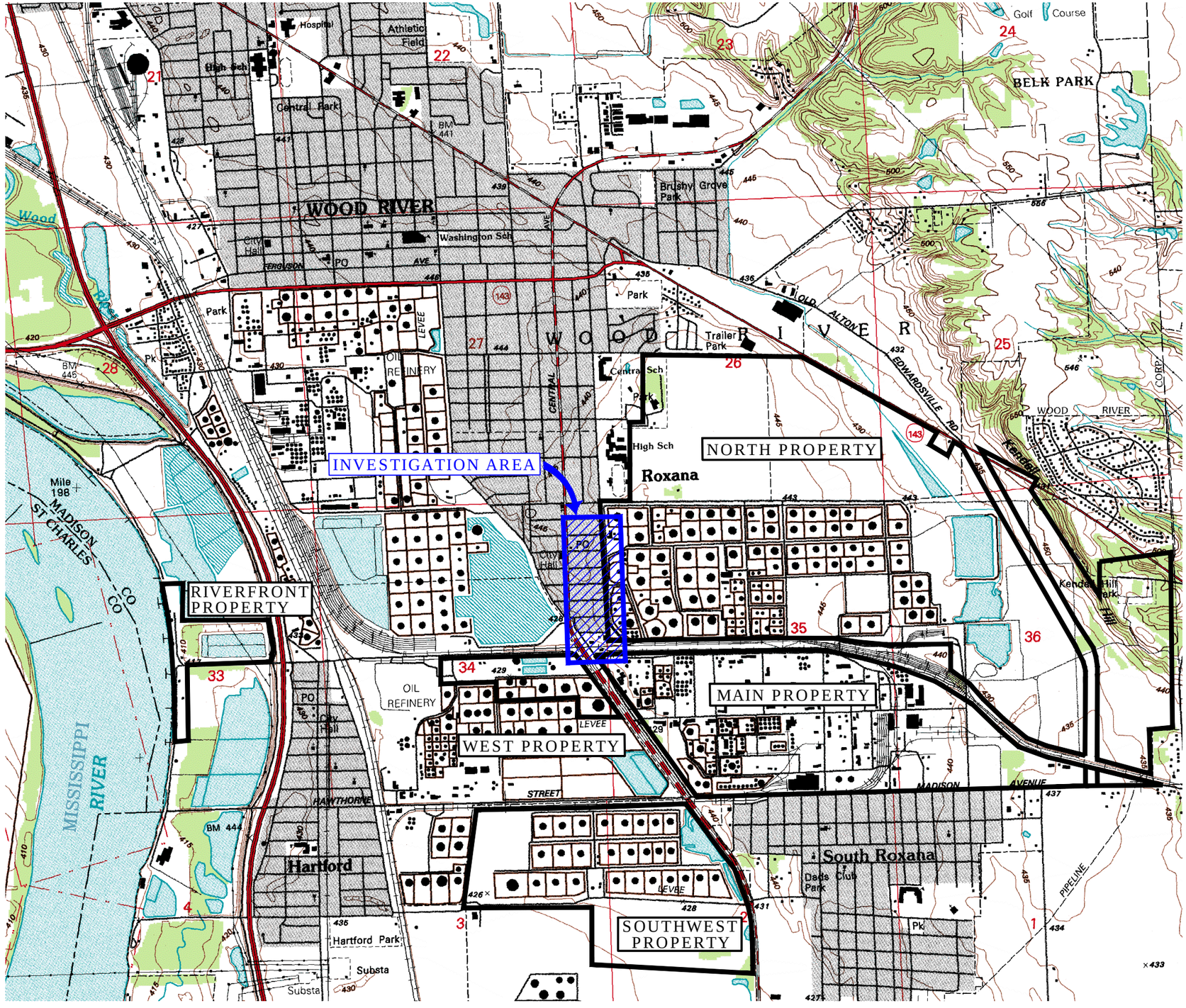
Plan View Model Output – The data input for the plan view model was not limited by depth and was modeled in two dimensions (2D). Regardless of sample depth, benzene concentrations were modeled on a flat horizontal plane.

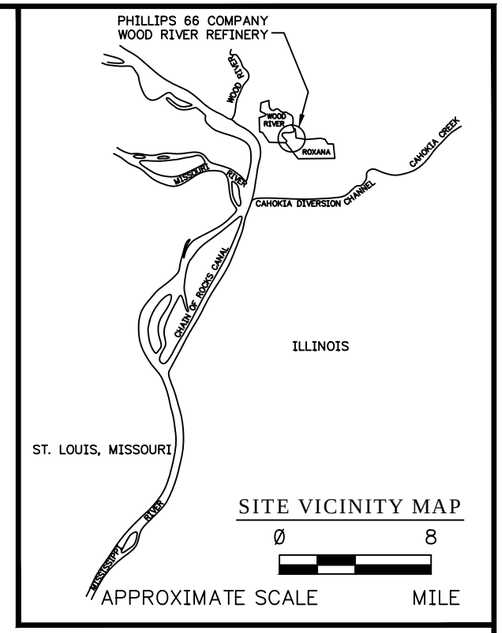
Inward Kriging / Boundary Cut-off – This method of Kriging limits the horizontal extent of data modeling to the extent of the data on the x/y plane in a convex hull.

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

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

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





LEGEND

- WOOD RIVER REFINERY PROPERTY BOUNDARY
- INVESTIGATION AREA

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

CONTOUR INTERVAL = 5 FT

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APPROXIMATE SCALE MILE

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SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS	PROJECT NO. 21562973
URS	
DRN. BY:djd October 2Ø14 DSGN. BY:djd CHKD. BY:b3	3Q14 Investigation Area Location Map
	FIG. NO. 1

File: P:\PROJECTS\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\10_GROUNDWATER MONITORING\2014 GW MONITORING\FIGURES\FIG 1 INVESTIGATION AREA LOCATION MAP.DWG Last edited: 10/03/14 @ 09:32 a.m. @ WCC-ST.LOUIS

File: P:\PROJECTS\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\10_GROUNDWATER MONITORING\3Q14 GW MONITORING\FIGURES\FIGURE 2 GROUNDWATER MONITORING WELL SAMPLING LOCATIONS.DWG Last edited: OCT. 03, 14 @ 09:34 a.m. by: david_deguire

LEGEND

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

NOTE:
* INDICATES PERCHED GROUNDWATER MONITORING WELLS.

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

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

0 200
SCALE FEET
N

SHELL OIL PRODUCTS US
INTERIM GROUNDWATER MONITORING PROGRAM
ROXANA, ILLINOIS

PROJECT NO. 21562973

URS

DRN. BY:djd October 2014
DSGN. BY:lr
CHKD. BY:b3

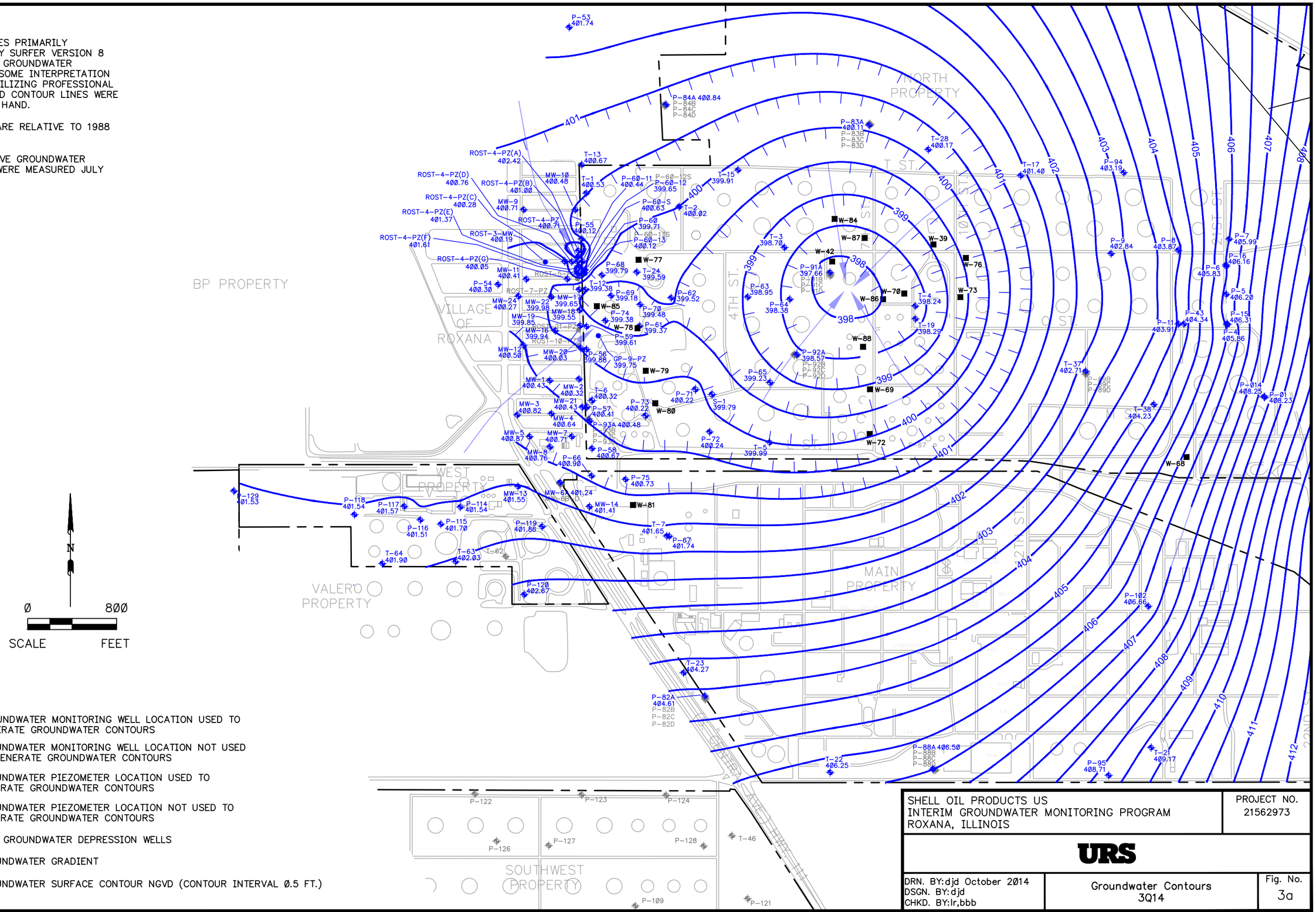
3Q14
Groundwater Monitoring Well Sampling Locations

FIG. NO. 2

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

2) ELEVATIONS ARE RELATIVE TO 1988 USGS DATUM.

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



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0 800

SCALE FEET

LEGEND

- GROUNDWATER MONITORING WELL LOCATION USED TO GENERATE GROUNDWATER CONTOURS
- GROUNDWATER MONITORING WELL LOCATION NOT USED TO GENERATE GROUNDWATER CONTOURS
- GROUNDWATER PIEZOMETER LOCATION USED TO GENERATE GROUNDWATER CONTOURS
- GROUNDWATER PIEZOMETER LOCATION NOT USED TO GENERATE GROUNDWATER CONTOURS
- WRR GROUNDWATER DEPRESSION WELLS
- GROUNDWATER GRADIENT
- 407 GROUNDWATER SURFACE CONTOUR NGVD (CONTOUR INTERVAL 0.5 FT.)

SHELL OIL PRODUCTS US
INTERIM GROUNDWATER MONITORING PROGRAM
ROXANA, ILLINOIS

PROJECT NO. 21562973

URS

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

Groundwater Contours 3Q14

Fig. No. 3a

File: P:\PROJECTS\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\10_GROUNDWATER MONITORING\3Q14 GW MONITORING\FIGURES\FIGURE 3A ROXANNA 3Q14 CONTOUR MAP.DWG Last edited: OCT. 03, 14 @ 09:36 a.m. by: david_deguire

File: P:\PROJECTS\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\10_GROUNDWATER MONITORING\3Q14 GW MONITORING\FIGURES\FIGURE 3B ROXANNA 3Q14 CONTOUR MAP.DWG Last edited: OCT. 03, 14 @ 09:38 a.m. by: david_deguire

LEGEND

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

NOTES:

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

2) ELEVATIONS ARE RELATIVE TO 1988 USGS DATUM.

3) COMPREHENSIVE GROUNDWATER ELEVATIONS WERE MEASURED JULY 1-3, 2Ø14.

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

T-1 400.53
PZ-1(101) PZ-1(85)
MW-10 400.48
MW-9 400.71
ROST-4-PZ(A) 402.42
P-55 400.12
ROST-4-PZ 400.71
ROST-4-PZ(B) 401.00
P-60-11 400.44
ROST-4-PZ(C) 400.28
ROST-4-PZ(D) 400.76
P-60 399.71
P-60-S
ROST-3-MW 400.19
ROST-4-PZ(E) 401.37
P-60-12 399.65
P-60-12S
ROST-4-PZ(F) 401.61
MW-11 400.41
P-60-13 400.12
P-60-13S
P-54 400.30
ROST-4-PZ(G) 400.05
P-68 399.79
ROST-5-PZ
T-12 399.38
MW-17 399.65
MW-22 399.98
P-69 399.18
MW-24 400.27
ROST-7-PZ
P-70 399.48
MW-18 399.55
W-85
A-27
P-74 399.38
MW-19 399.85
P-59 399.61
P-61 399.37
W-78
GP-9-PZ 399.75
ROST-21-PZ
MW-16 399.94
PZ-2(84) PZ-2(70.5)
MW-12 400.50
ROST-10-PZ
P-56 399.88
MW-20 400.03
MW-1 400.43
MW-2 400.32
W-79
T-6 400.32
MW-21 400.43
P-57 400.41
MW-4 400.64
MW-3 400.82
P-93A 400.48
P-93B
P-93C
P-93D
P-73 400.22
MW-5 400.87
MW-8 400.76
MW-7 400.71
P-58 400.67
P-66 400.90
P-75 400.73
401.24 MW-6A
MW-6B
MW-6C
MW-6D
MW-13 401.55
MW-14 401.41
W-81
P-114 401.54
T-24 399.59
W-77
A-28
400
401

Ø 200 SCALE FEET
N

SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS	PROJECT NO. 21562973
URS	
DRN. BY:djd October 2Ø14 DSGN. BY:lr CHKD. BY:bbb	Groundwater Contours 3Q14- West Fenceline
	FIG. NO. 3b

File: P:\PROJECTS\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\10_GROUNDWATER MONITORING\3Q14 GW MONITORING\FIGURES\FIGURE 4A THICKNESS OF LNAPL (WEST FENCLINE).DWG Last edited: OCT. 03, 14 @ 09:49 a.m. by: david_deguire

LEGEND

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

NOTE:
1. THIS MAP DEPICTS THE EXTENT AND THICKNESS OF LNAPL BENEATH THE WEST FENCE LINE AREA. REFER TO TABLE 1 FOR GROUNDWATER GAUGING INFORMATION.
2. LNAPL THICKNESS WAS MEASURED DURING THE COMPREHENSIVE GROUNDWATER MONITORING GAUGING EVENT ON JULY 1-3, 2014.

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

P-84A P-84B P-84C P-84D
T-13 T-1 T-2 T-24 0.17
MW-9 MW-10 MW-11 MW-17 MW-24 MW-22 MW-18 MW-19 MW-16 MW-12 MW-20 MW-2 MW-1 MW-21 MW-3 MW-4 MW-5 MW-8 MW-7 MW-13 MW-6 MW-14
ROST-4-PZ(A) ROST-4-PZ(B) ROST-4-PZ(D) ROST-4-PZ(C) ROST-3-MW ROST-4-PZ(E) ROST-4-PZ(G) ROST-4-PZ(F) ROST-4-PZ
P-55 0.13 0.10
P-60-S 0.02
P-60-11 P-60-12 P-60-12S
R-77
0.01 0.01 0.10
A-28 A-33 A-27
P-68 0.05
P-60 0.08
P-60-13 P-60-13S
T-12 P-69 P-74 P-59 P-56 P-54 P-117 P-114 P-116 P-115 P-119 P-66 P-75 P-71 P-73 P-72 P-57 P-93A P-93B P-93C P-93D P-58
1.00 0.10 P-62 1.11
P-70 0.66*
P-61 0.74* R-78 0.10
R-79 R-80 R-81
S-1 0.01
T-6 T-7 P-67

0 300 SCALE FEET N

SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS	PROJECT NO. 21562973
URS	
DRN. BY: djd October 2014 DSGN. BY: lr CHKD. BY: bbb	3Q14 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 JULY 1–3, 2014.

NORTH PROPERTY

BP PROPERTY

SHELL OIL COMPANY PROPERTY

WEST PROPERTY

VILLAGE OF HARTFORD

VALERO PROPERTY

MAIN PROPERTY

ILLINOIS TERMINAL RAILROAD

RAND AVE.

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

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

ROUTE 1

SCALE Ø 1ØØØ FEET

REFERENCE: SHELL DRAWING E–36137–12

SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562973
URS		
DRN. BY: djd October 2Ø14 DSGN. BY: lr CHKD. BY: bbb	3Q14 Thickness of LNAPL	FIG. NO. 4b

File: P:\PROJECTS\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\10 GROUNDWATER MONITORING\3Q14 GW MONITORING\FIGURES\FIGURE 4B THICKNESS OF LNAPL (REFINERY).DWG Last edited: Oct. 03, 14 @ 09:51 a.m. by: david.deguire

File: P:\PROJECTS\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\10 GROUNDWATER MONITORING\3Q14 GW MONITORING\FIGURES\FIGURE 5 3Q14 GROUNDWATER ANALYTICAL RESULTS SUMMARY.DWG Last edited: OCT. 03, 14 @ 09:53 a.m. by: david_deguire

LEGEND

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

NOTES:

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

Analyte	Screening Criteria (mg/L)
Benzene	0.005
Ethylbenzene	0.7
MTBE	0.07
Naphthalene	0.14
Toluene	1.0
1,3,5-Trimethylbenzene	0.07
2,4-Dimethylphenol	0.14
Indeno(1,2,3-cd)pyrene	0.00043
2-Methylnaphthalene	0.028
Phenol	0.1

3. J = THE TARGET ANALYTE DETECTED BELOW THE REPORTING LIMIT AND THE RESULT IS ESTIMATED.
4. MULTIPLE RESULTS (e.g., 1290/1390) 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 7/14/14	Result (mg/L)
Benzene	0.0058

Sample Location	ROST-4-PZ (C)
Sampled 7/10/14	Result (mg/L)
Benzene	0.0751

Sample Location	T-12
Sampled 7/8/14	Result (mg/L)
Benzene	2.14
Naphthalene	0.146

Sample Location	MW-22
Sampled 7/14/14	Result (mg/L)
Benzene	1.76
Ethylbenzene	1.93
Naphthalene	0.282 J
Toluene	3.14
1,3,5-Trimethylbenzene	0.262 J
2-Methylnaphthalene	0.0355

Sample Location	P-74
Sampled 7/8/14	Result (mg/L)
Benzene	0.309

Sample Location	P-56
Sampled 7/8/14	Result (mg/L)
Benzene	0.127 J
Ethylbenzene	1.71 J
Naphthalene	0.156 J
1,3,5-Trimethylbenzene	0.166 J

Sample Location	MW-2
Sampled 7/14/14	Result (mg/L)
Benzene	0.0102 J
Ethylbenzene	0.955
1,3,5-Trimethylbenzene	0.15 J

Sample Location	P-57
Sampled 7/8/14	Result (mg/L)
Benzene	384 / 377
Ethylbenzene	1.12 / 1.21
1,3,5-Trimethylbenzene	0.0913 J / 0.0954 J
2-Methylnaphthalene	0.0306 / 0.03
Phenol	0.141 / 0.136

Sample Location	P-59
Sampled 7/8/14	Result (mg/L)
Benzene	12.4
Ethylbenzene	1.92
Naphthalene	0.228 J
Toluene	1.55
1,3,5-Trimethylbenzene	0.285 J
2,4-Dimethylphenol	0.17
2-Methylnaphthalene	0.0291

Sample Location	MW-4
Sampled 7/16/14	Result (mg/L)
Benzene	1.880

Sample Location	P93A	P93B	P93C
Sampled 7/17/14, 7/18/14	Result (mg/L)	Result (mg/L)	Result (mg/L)
Benzene	170 / 174	175	1.55

Sample Location	MW-7
Sampled 7/16/14	Result (mg/L)
Benzene	1290 / 1390

Sample Location	P-58
Sampled 7/18/14	Result (mg/L)
Benzene	406
Indeno(1,2,3-cd)pyrene	0.0005
2-Methylnaphthalene	0.0554
Phenol	0.173

Sample Location	MW-8
Sampled 7/16/14	Result (mg/L)
Benzene	280
MTBE	0.392 J
1,3,5-Trimethylbenzene	0.0904 J
Phenol	0.111

Sample Location	P-66
Sampled 7/7/14	Result (mg/L)
Benzene	0.0429

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

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

0 200 SCALE FEET

N

SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562973
URS		
DRN. BY: djd October 2014 DSGN. BY: lr CHKD. BY: bbb	3Q14 Groundwater Monitoring Well Analytical Exceedances	FIG. NO. 5

File: P:\PROJECTS\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\10_GROUNDWATER MONITORING\3Q14 GW MONITORING\FIGURES\FIGURE 6 DISSOLVED PHASE BENZENE CONCENTRATIONS IN GROUNDWATER.DWG Last edited: OCT. 03, 14 @ 10:45 a.m. by: david_deguire

LEGEND

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

NOTES:

1. IMAGES GENERATED UTILIZING CTECH ENVIRONMENTAL VISUALIZATION SYSTEM MODELING SOFTWARE. CONCENTRATIONS BETWEEN KNOWN DATA POINTS (E.G. GROUNDWATER MONITORING WELLS) ARE INTERPOLATIONS AND EXTRAPOLATIONS OF THE MEASURED DATA. SOME INTERPRETATION WAS COMPLETED UTILIZING PROFESSIONAL JUDGEMENT AND CONTOUR LINES WERE MODIFIED BY HAND.
2. ALL RESULTS SHOWN IN mg/L.
3. ANALYTICAL REPORTING LIMITS ARE SHOWN FOR SAMPLES WITH NON-DETECT RESULTS (e.g., <Ø.ØØØ5 mg/L).
4. J = THE TARGET ANALYTE WAS DETECTED BELOW THE REPORTING LIMIT AND THE RESULT IS ESTIMATED.
   U = RESULTS IS NON-DETECT.
5. NON-DETECT VALUES ARE MODELED AT HALF THE REPORTING LIMIT.
6. MULTIPLE RESULTS (e.g. 129Ø/139Ø) INDICATE DUPLICATE SAMPLES.
7. CONTOUR LINES IN AREA OF P-55 ADJUSTED BASED ON AVAILABLE 3Q14 AND HISTORICAL ANALYTICAL DATA FROM WELLS IN THE AREA.

LNAPL THICKNESS WAS MEASURED DURING THE COMPREHENSIVE GROUNDWATER MONITORING GAUGING EVENT ON JULY 1-3, 2Ø14. REFER TO TABLE 1 FOR GROUNDWATER GAUGING INFORMATION.

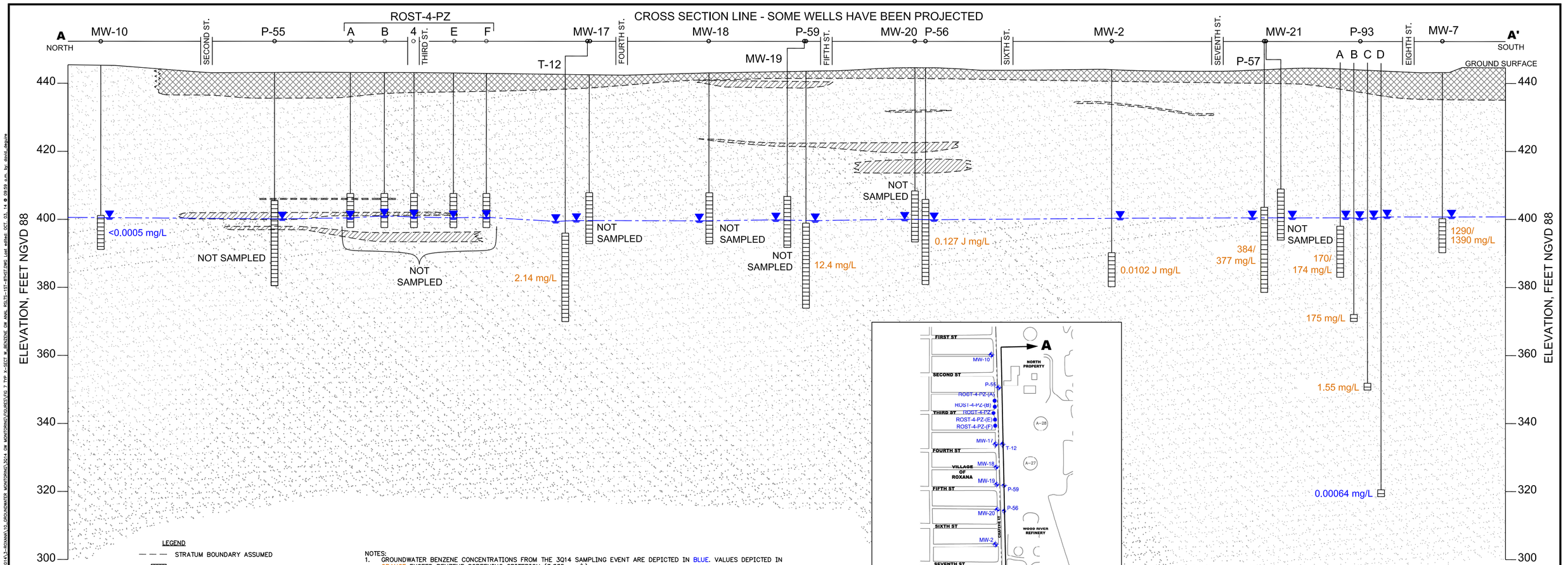
SECOND ST
THIRD ST
FOURTH ST
FIFTH ST
SIXTH ST
SEVENTH ST
EIGHTH ST
CHAFFEE ST
HIGHWAY 111 (S. CENTRAL AVE)
VILLAGE OF ROXANA
NORTH PROPERTY
WOOD RIVER REFINERY
MAIN PROPERTY
WEST PROPERTY
PUBLIC WORKS YARD
BP
RAND AVENUE
1986 APPROXIMATE BENZENE RELEASE SITE

MW-9 <Ø.ØØØ5
MW-10 <Ø.ØØØ5
MW-11 <Ø.ØØØ5
MW-24 <Ø.ØØØ5
MW-22 1.76
MW-18
MW-19
MW-16 <Ø.ØØØ5
MW-12 <Ø.ØØØ5
MW-20
MW-1 <Ø.ØØØ5
MW-2 Ø.Ø1Ø2J
MW-17
MW-21
MW-3 Ø.ØØØ62
MW-4 1.88
MW-5 Ø.ØØ1
MW-7 129Ø/139Ø
MW-8 28Ø
MW-13 <Ø.ØØØ5
MW-6A <Ø.ØØØ5
MW-6B <Ø.ØØØ5
MW-6C <Ø.ØØØ5
MW-6D <Ø.ØØØ5/<Ø.ØØØ5
MW-14 <Ø.ØØØ5
P-54 <Ø.ØØØ5
P-114 <Ø.ØØØ5
P-116
P-115
P-55 Ø.13
P-6Ø-11
P-6Ø-S Ø.Ø2
P-6Ø Ø.Ø8
P-68 Ø.Ø5
P-59 12.4
P-74 Ø.3Ø9
P-56 Ø.127J
P-66 Ø.Ø429
P-57 384/377
P-93A 17Ø/174
P-93B 175
P-93C 1.55
P-93D Ø.ØØØ64
P-58 4Ø6
P-69
P-7Ø Ø.66*
P-61 Ø.74*
P-75
P-73
T-12 2.14
T-24 Ø.17
T-6
A-28
A-27
ROST-4-PZ(A)
ROST-4-PZ(B)
ROST-4-PZ(C) Ø.Ø751
ROST-4-PZ(D)
ROST-4-PZ(E)
ROST-4-PZ(F)
ROST-4-PZ(G)
ROST-3-MW Ø.ØØ58

0.10
0.01
0.10
0.01
0.10
0.01
5.0
0.5
0.05
0.005
500.0
50.0
5.0
0.5
0.05
0.005

Ø 2ØØ
SCALE FEET
N

SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562973
URS		
DRN. BY: djd October 2Ø14 DSGN. BY:nm/lr CHKD. BY:bbb	3Q14 Dissolved Phase Benzene Concentrations in Groundwater	FIG. NO. 6



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

KEYMAP
NOT TO SCALE

VERTICAL SCALE 0 20 FEET
HORIZONTAL SCALE 0 100 FEET

SHELL OIL PRODUCT US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562973
URS		
DRN. BY: djd October 2014 DSGN. BY: lr CHKD. BY: bbb	Cross-Section of Benzene 3Q14 Groundwater Analytical Results- Chaffer Street	FIG. NO. 7

File: P:\PROJECTS\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\10_GROUNDWATER MONITORING\2014 GW MONITORING\FIGURES\FIG 7 TYP X-SECT W_BENZENE GW ANAL RSLTS-1ST-8THST.DWG Last edited: OCT. 03, 14 @ 09:59 a.m. by: david_dejulio

CROSS SECTION LINE - SOME WELLS HAVE BEEN PROJECTED

WEST B — B' EAST

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

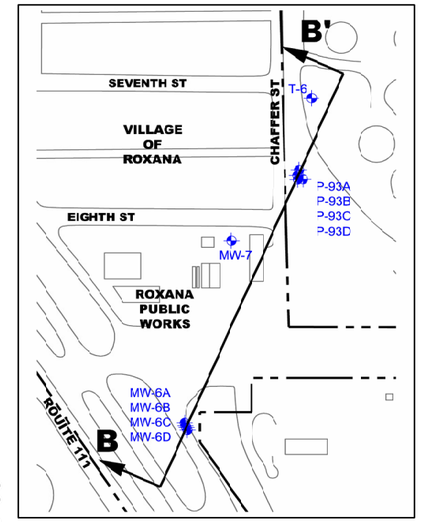
(S. CENTARL AVE) HIGHWAY 111 — EIGHTH ST — SEVENTH ST

GROUND SURFACE

ELEVATION, FEET NGVD 88

440 420 400 380 360 340 320

<0.0005 mg/L
<0.0005 mg/L
<0.0005 mg/L
<0.0005/<0.0005 mg/L
1290/ 1390 mg/L
170/ 174 mg/L
175 mg/L
1.55 mg/L
0.00064 mg/L
NOT SAMPLED



KEYMAP
NOT TO SCALE

LEGEND

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

VERTICAL SCALE: Ø — 2Ø FEET

HORIZONTAL SCALE: Ø — 1ØØ FEET

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

SHELL OIL PRODUCT US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS	PROJECT NO. 21562973
URS	
DRN. BY: djd October 2Ø14 DSGN. BY: lr CHKD. BY: wmp	Cross-Section of Benzene 3Q14 Groundwater Analytical Results– Roxana Public Works Yard
	FIG. NO. 8

File: P:\PROJECTS\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\10_GROUNDWATER MONITORING\3Q14 GW MONITORING\FIGURES\FIG 8 TYP X-SECT W_BENZENE GW ANAL RSLTS-HWY111-CHAFFER.DWG Last edited: OCT. 03, 14 @ 10:01 a.m. by: david_deguire

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: C. Williams, B. Koza, L. Cheadle

DATE: 7-9-14 WEATHER: Sunny

MONITORING WELL ID: MW-1 SAMPLE ID: MW-1-ROX-070914

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 59.13 ft
Depth to Water (btoc): 42.09 ft
Depth to LNAPL/DNAPL (btoc): N/E ft
Depth to Top of Screen (btoc): 48.80 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 17.04 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 54.13 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 935* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2804 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 3.4 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	0925	42.09	clear	slight	6.74	1.751	-62	0.20	51.91	19.55
800	0928	42.09	"	"	6.75	1.774	-62	0.10	46.90	19.58
1600	0930	"	"	"	6.76	1.784	-61	0.07	48.17	19.70
2400 3200	0933	"	"	"	6.76	1.783	-61	0.04	30.86	19.73
3200 4000	0935	"	"	"	6.77	1.792	-60	0.02	29.18	19.73
4000 4800	0937	"	"	"	6.77	1.799	-60	0.01	29.49	19.70
4800 5600	0940	"	"	"	6.76	1.788	-60	0.00	10.00	19.68
5600 6400	0942	"	"	"	6.76	1.749	-59	0.00	7.117	19.63

Start Time: 0925 Elapsed Time (min): 18 Water Quality Meter ID & SN: TROLL 9500 -- R23799

Stop Time: 0943 Average Purge Rate (mL/min): 400 Date Calibrated: 7-9-14

SAMPLING DATA

Sample Date: 7-9-14 Sample Time: 0950 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☑ Initials: CW

COMMENTS:

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

Total Purge Volume: 9600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: L Cheadle C Williams

DATE: 7/14/14 WEATHER: sunny

MONITORING WELL ID: MW-2 SAMPLE ID: MW2-ROX-071414

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 60.20 ft
Depth to Water (btoc): 43.13 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 49.87 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 17.07 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 55.20 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 946* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2837 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 221.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	12:20	43.13	clear	moderate	6.77	3.435	-90	0.52	32.54	23.55
800	12:22	"	"	"	6.78	3.681	-95	0.15	40.20	22.17
1600	12:25	"	"	"	6.77	3.723	-97	0.05	20.72	21.77
2400	12:27	43.16	"	"	6.76	3.708	-98	0.01	22.47	21.66
3200	12:29	"	"	"	6.75	3.710	-99	0.00	10.95	21.60
4000	12:32	"	"	"	6.74	3.708	-99	-0.01	8.235	21.58

Start Time: 12:20 Elapsed Time (min): 12 Water Quality Meter ID & SN: TROLL 9500 – R23799

Stop Time: 12:32 Average Purge Rate (mL/min): 400 Date Calibrated: 7/14/14

SAMPLING DATA

Sample Date: 7/14/14 Sample Time: 12:35 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: LC

COMMENTS:

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

Total Purge Volume: 4000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: L Cheadle B Koca C Williams

DATE: 7/11/14 WEATHER: Sunny

MONITORING WELL ID: MW-3 SAMPLE ID: MW-3-ROX-071114

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 45.00 ft
Depth to Water (btoc): 29.05 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 34.67 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 15.95 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 40.00 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = – ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = – ft btoc

Volume of Flow Through Cell : 851* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2553 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.3 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	13:11	29.05	clear	none	6.94	2.345	-129	0.12	38.07	21.26
800	13:13	"	"	"	6.95	2.411	-131	0.03	32.07	20.74
1600	13:16	"	"	"	6.95	2.445	-132	-0.00	24.96	20.50
2400	13:18	"	"	"	6.95	2.461	-133	-0.01	19.91	20.42
3200	13:20	"	"	"	6.95	2.478	-133	-0.03	13.15	20.25
4000	13:22	"	"	"	6.95	2.489	-133	-0.05	11.98	20.18
4800	13:24	"	"	"	6.95	2.512	-134	-0.05	9.401	20.03
5600	13:26	"	"	"	6.95	2.509	-134	-0.06	8.433	20.06

Start Time: 13:11 Elapsed Time (min): 15 Water Quality Meter ID & SN: TROLL 9500 -- R23799

Stop Time: 13:26 Average Purge Rate (mL/min): 400 Date Calibrated: 7/11/14

SAMPLING DATA

Sample Date: 7/11/14 Sample Time: 13:30 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: LC

COMMENTS:

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

Total Purge Volume: 5600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: L Cheadle C Williams

DATE: 7/16/14 WEATHER: sunny

MONITORING WELL ID: MW-4 SAMPLE ID: MW4-ROX-071614

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 56.39 ft
Depth to Water (btoc): 40.18 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 46.06 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 16.21 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 51.39 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 918* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2753 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 103.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
		STABLE: (over 3 readings)			+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C
0	09:18	40.21	cloudy	moderate	6.80	3.490	-100	0.35	356.6	20.03
800	09:20	"	"	"	6.81	3.569	-105	0.12	315.3	19.77
1600	09:22	"	"	"	6.81	3.613	-108	0.08	175.3	19.60
2400	09:25	"	"	"	6.82	3.639	-110	0.05	112.7	19.55
3200	09:27	"	"	"	6.82	3.650	-111	0.04	83.13	19.54
4000	09:29	"	"	"	6.83	3.659	-113	0.03	57.95	19.51
4800	09:31	"	"	"	6.83	3.676	-114	0.03	42.80	19.51
5600	09:34	"	"	"	6.84	3.676	-115	0.01	25.46	19.55
6400	09:36	"	"	"	6.84	3.679	-116	0.01	15.61	19.55
7200	09:39	"	"	"	6.85	3.676	-117	(0.01 to) 0.01	18.58	19.57
8000	09:41	"	"	"	6.85	3.715	-117	0.00	12.13	19.55
8800	09:43	"	"	"	6.85	3.747	-116	-0.00	8.290	19.57

Start Time: 09:18 Elapsed Time (min): 25 Water Quality Meter ID & SN: TROLL 9500 – R23799

Stop Time: 09:43 Average Purge Rate (mL/min): 400 Date Calibrated: 7/16/14

SAMPLING DATA

Sample Date: 7/16/14 Sample Time: 09:50 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: LC

COMMENTS:

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

Total Purge Volume: 8800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: L Cheadle C Williams

DATE: 7/14/14 WEATHER: sunny

MONITORING WELL ID: MW-5 SAMPLE ID: MW5-ROX-071414

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 44.30 ft
Depth to Water (btoc): 28.59 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 33.97 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 15.71 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 39.30 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 845* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2536 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 1.2 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	10:09	28.62	clear	none	6.77	3.275	-104	0.77	62.93	21.10
900	10:11	"	"	"	6.78	3.420	-110	0.21	71.18	20.41
1800	10:13	"	"	"	6.78	3.464	-111	0.14	82.84	20.15
2400	10:15	"	"	"	6.79	3.493	-112	0.14	62.88	20.09
3200	10:18	"	"	"	6.79	3.511	-113	0.11	39.84	20.09
4000	10:20	"	"	"	6.79	3.537	-114	0.06	28.13	19.99
4800	10:22	"	"	"	6.79	3.549	-116	0.03	19.11	19.95
5600	10:24	"	"	"	6.79	3.565	-117	0.00	14.52	19.94
6400	10:26	"	"	"	6.79	3.569	-117	-0.01	12.45	19.94
7200	10:28	"	"	"	6.79	3.502	-118	-0.02	9.318	19.91

Start Time: 10:09 Elapsed Time (min): 19 Water Quality Meter ID & SN: TROLL 9500 -- R23799

Stop Time: 10:28 Average Purge Rate (mL/min): 400 Date Calibrated: 7/14/14

SAMPLING DATA

Sample Date: 7/14/14 Sample Time: 10:35 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: LC

COMMENTS:

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

Total Purge Volume: 7200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: LChendle B Koca C Williams

DATE: 7/10/14 WEATHER: sunny

MONITORING WELL ID: MW-6A SAMPLE ID: MW-6A-ROX-071014

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 45.16 ft
Depth to Water (btoc): 30.75 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 34.83 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 14.41 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 40.16 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = – ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = – ft btoc

Volume of Flow Through Cell : 856* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2569 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 3.9 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	12:32	30.74	clear	none	6.74	2.504	-104	0.36	74.56	21.23
800	12:35	"	"	"	6.72	2.690	-109	0.04	73.84	20.23
1600	12:37	"	"	"	6.72	2.757	-111	-0.04	72.81	19.88
2400	12:39	"	"	"	6.72	2.813	-112	-0.05	58.51	19.70
3200	12:41	"	"	"	6.72	2.851	-113	-0.07	31.91	19.61
4000	12:43	"	"	"	6.71	2.873	-114	-0.08	21.76	19.56
4800	12:45	"	"	"	6.71	2.879	-114	-0.09	16.98	19.51
5600	12:47	"	"	"	6.71	2.885	-114	-0.09	14.98	19.55
6400	12:50	"	"	"	6.70	2.898	-114	-0.06	16.01	19.59
7200	12:52	"	"	"	6.69	2.895	-114	-0.07	7.300	19.70

Start Time: 12:32 Elapsed Time (min): 20 Water Quality Meter ID & SN: TROLL 9500 – R23799

Stop Time: 12:52 Average Purge Rate (mL/min): 400 Date Calibrated: 7/10/14

SAMPLING DATA

Sample Date: 7/10/14 Sample Time: 1300 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: LC

COMMENTS:

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

Total Purge Volume: 7200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: L Cheadle B Koca C Williams

DATE: 7/10/14 WEATHER: Sunny

MONITORING WELL ID: MW-6B SAMPLE ID: MW-6b-ROX-071014

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 69.38 ft
Depth to Water (btoc): 30.81 (CW) ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 64.05 ft
Screen Length): 5 ft

Water Column Height (do not include LNAPL or DNAPL): ~~56.57~~ 6 74.57 (CW) ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 66.88 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = - ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = - ft btoc

Volume of Flow Through Cell : 1001* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 3004 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 20.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	11:34	30.81	slt cloudy	none	6.94	2.091	-79	0.55	145.4	20.64
800	11:36	"	"	"	6.94	2.197	-84	0.12	88.51	19.97
1600	11:39	"	"	"	6.93	2.239	-86	0.03	57.78	19.76
2400	11:41	"	"	"	6.93	2.278	-88	-0.00	34.43	19.64
3200	11:44	"	"	"	6.93	2.310	-88	-0.03	20.34	19.52
4000	11:47	"	"	"	6.93	2,327	-89	-0.04	14.46	19.49
4800	11:49	"	"	"	6.93	2.338	-89	-0.05	11.79	19.46
5600	11:52	"	"	"	6.92	2.343	-89	-0.05	11.47	19.54
6400	11:54	"	"	"	6.92	2.336	-89	-0.03	10.39	19.57
7200	11:57	"	"	"	6.92	2.344	-89	-0.04	9.104	19.60

Start Time: 11:34 Elapsed Time (min): 23 Water Quality Meter ID & SN: TROLL 9500 -- R23799

Stop Time: 11:57 Average Purge Rate (mL/min): 400 Date Calibrated: 7/10/14

SAMPLING DATA

Sample Date: 7/10/14 Sample Time: 12:00 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: LC

COMMENTS:

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

Total Purge Volume: 7200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: LCheadle B Koca C Williams

DATE: 7/10/14 WEATHER: sunny

MONITORING WELL ID: MW-6C SAMPLE ID: MW-6C-ROX-071014

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 90.28 ft
Depth to Water (btoc): 30.60 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 84.95 ft
Screen Length): 5 ft

Water Column Height (do not include LNAPL or DNAPL): 59.68 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) = 87.78 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 1119* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 3356 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 9.9 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	10:50	~~30.0~~ 30.6	clear	none	7.24	1.639	-118	0.40	90.07	20.16
800	10:52	"	"	"	7.17	1.814	-122	0.07	60.65	19.36
1600	10:55	30.63	"	"	7.14	1.900	-123	-0.00	35.49	19.11
2400	10:58	"	"	"	7.11	1.955	-124	-0.03	15.32	19.01
3200	11:01	"	"	"	7.10	1.998	-125	-0.04	10.73	18.97
4000	11:04	"	"	"	7.09	2.028	-125	-0.05	6.216	18.96
4800	11:06	"	"	"	7.08	2.055	-125	-0.05	4.811	18.97

Start Time: 10:50 Elapsed Time (min): 16 Water Quality Meter ID & SN: TROLL 9500 – R23799

Stop Time: 11:06 Average Purge Rate (mL/min): 400 Date Calibrated: 7/10/14

SAMPLING DATA

Sample Date: 7/10/14 Sample Time: 11:10 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: LC

COMMENTS:

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

Total Purge Volume: 4800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: L Cheadle C Williams B Koca

DATE: 07/10/14 WEATHER: Sunny

MONITORING WELL ID: MW-6D SAMPLE ID: MW-6d-ROX-071014

INITIAL DATA

Well Diameter): 2 in (LC)
Total Well Depth (btoc): 110.85 ft
Depth to Water (btoc): 31.47 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 104.72 ft
Screen Length): 5 ft

Water Column Height (do not include LNAPL or DNAPL): 79.58 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at: 107.55 (LC)
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ~~68.76~~ ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 1230* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 3690 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 60.4 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	09:28	30.48	cloudy	slight	6.91	2.332	-130	0.17	966.8	18.85
800	09:31	30.48	"	"	6.96	2.424	-134	0.02	761.5	18.68
1600	09:34	"	"	"	6.99	2.496	-135	-0.01	373.8	18.60
2400	09:37	34.8	"	"	7.00	2.533	-136	-0.02	186.3	18.57
3200	09:40	"	"	"	6.99	2.544	-136	-0.03	97.18	18.51
4000	09:43	"	"	"	7.01	2.560	-136	-0.04	59.41	18.54
4800	09:46	"	"	"	7.01	2.595	-136	-0.05	42.68	18.50
5600	09:49	"	"	"	7.01	2.622	-136	-0.06	(LC) ~~41.14~~	18.51
6400	09:53	"	"	"	7.01	2.641	-135	-0.06	29.73	18.55
7200	09:56	"	"	"	7.01	2.664	-135	-0.07	24.39	18.52
8000	09:59	"	"	"	7.01	2.682	-135	-0.07	16.69	18.53
8800	10:02	"	"	"	7.01	2.702	-135	-0.08	16.77	18.50
9600	10:05	"	"	"	7.01	2.714	-135	-0.08	18.02	18.57

Start Time: 09:28 Elapsed Time (min): 00:37 Water Quality Meter ID & SN: TROLL 9500 – R23799

Stop Time: 10:05 Average Purge Rate (mL/min): 400 Date Calibrated: 7/10/14

SAMPLING DATA

Sample Date: 7/10/14 Sample Time: 10:15 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: LC

COMMENTS:

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

Total Purge Volume: 9600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: L Cheadle C Williams

DATE: 7/16/14 WEATHER: Sunny

MONITORING WELL ID: MW-7 SAMPLE ID: MW7-ROX-071614

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 52.92 ft
Depth to Water (btoc): 42.05 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 42.92 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 10.87 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) = 47.92 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at: —
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 896* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2687 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 62.6 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	13:47	42.08	clear	none	6.86	3.276	-78	0.66	24.03	21.04
800	13:49	"	"	"	6.83	3.331	-81	0.32	27.81	20.54
1600	13:51	"	"	"	6.82	3.344	-83	0.16	28.24	20.42
2400	13:53	"	"	"	6.82	3.352	-86	0.11	27.20	20.32
3200	13:56	"	"	"	6.82	3.341	-88	0.10	21.39	20.36
4000	13:58	"	"	"	6.83	3.336	-90	0.08	16.07	20.37
4800	14:00	"	"	"	6.83	3.335	-91	0.08	13.09	20.35
5600	14:02	"	"	"	6.83	3.340	-92	0.07	11.13	20.31
6400	14:05	"	"	"	6.83	3.348	-93	0.05	9.551	20.22

Start Time: 13:47 Elapsed Time (min): 18 Water Quality Meter ID & SN: TROLL 9500 -- R23799

Stop Time: 14:05 Average Purge Rate (mL/min): 400 Date Calibrated: 7/16/14

SAMPLING DATA

Sample Date: 7/16/14 Sample Time: 14:15 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: LC

COMMENTS:

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

Total Purge Volume: 6400 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: L Cheadle C Williams

DATE: 7/16/14 WEATHER: Sunny

MONITORING WELL ID: MW-8 SAMPLE ID: MW8-ROX-071614

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 43.60 ft
Depth to Water (btoc): 33.01 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 33.60 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 10.59 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 38.60 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 845* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2536 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 178.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	10:39	33.08	clear	none	6.76	5.019	-89	0.12	21.07	19.79
800	10:41	"	"	"	6.75	5.041	-91	0.08	20.35	19.79
1600	10:43	"	"	"	6.75	5.066	-93	0.04	20.70	19.80
2400	10:45	"	"	"	6.74	5.084	-94	0.03	18.03	19.82
3200	10:47	"	"	"	6.73	5.105	-94	0.02	15.07	19.80
4000	10:49	"	"	"	6.73	5.130	-95	0.03	12.96	19.76
4800	10:52	"	"	"	6.73	5.129	-95	0.01	10.02	19.83
5600	10:54	"	"	"	6.72	5.146	-95	0.00	8.397	19.81

Start Time: 10:39 Elapsed Time (min): 15 Water Quality Meter ID & SN: TROLL 9500 -- R23799

Stop Time: 10:54 Average Purge Rate (mL/min): 400 Date Calibrated: LC 7/16/14

SAMPLING DATA

Sample Date: 7/16/14 Sample Time: 11:00 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: LC

COMMENTS:

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

Total Purge Volume: 5600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: LC CW BK

DATE: 07 09 14 WEATHER: Sunny

MONITORING WELL ID: MW-9 SAMPLE ID: MW9-ROX-070914

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 56.78 ft
Depth to Water (btoc): ~~44.35~~ 44.40 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): 12.43 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 51.78 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ~~50.575~~ ok ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ft btoc

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

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1524	44.40	None	None	6.77	2.251	-37	0.94	39.81	21.54
800	1527	" "			6.76	2.389	-51	0.50	20.92	20.32
1600	1529	" "			6.76	2.456	-58	0.32	12.97	19.89
2400	1531	" "			6.75	2.498	-62	0.19	8.456	19.68
3200	1534	" "			6.75	2.520	-65	0.12	6.915	19.70
4000	1536	" "			6.75	2.533	-67	0.11	7.033	19.67

Start Time: 1524 Elapsed Time (min): 13 Water Quality Meter ID & SN: TROLL 9500 R23799

Stop Time: 1537 Average Purge Rate (mL/min): 400 Date Calibrated: 070914

SAMPLING DATA

Sample Date: 07 09 14 Sample Time: 1540 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: BAK

COMMENTS:

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

Total Purge Volume: 4000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: BK LC CW

DATE: 070914 WEATHER: Partly cloudy

MONITORING WELL ID: MW-10 SAMPLE ID: MW10-Rox-070914

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 54.76 ft
Depth to Water (btoc): 44.35 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 44.43 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 10.41 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 45.24 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 907* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2720 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.8 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1405	44.40	None	None	6.92	2.488	-118	0.24	47.26	20.50
800 ~~400~~	1407	44.41			6.92	2.537	-120	0.13	44.92	20.03
1600 ~~800~~	1410	44.40			6.92	2.555	-121	0.05	41.77	19.82
2400 ~~1200~~	1412	44.40			6.92	2.559	-122	0.06	36.68	19.78
3200 ~~1600~~	1414	" "			6.92	2.555	-122	0.02	26.82	19.81
4000 ~~2000~~	1416	" "			6.91	2.570	-123	0.02	22.13	19.68
4800	1419	" "			6.91	2.548	-123	-0.00	20.79	19.99
5600	1421	" "			6.90	2.557	-123	0.00	17.08	19.95
6400	1423	" "			6.90	2.562	-123	-0.00	16.75	19.91
7200	1426	" "			6.90	2.569	-123	0.01	18.94	19.87
8000	1428	" "			6.90	2.566	-123	-0.02	13.10	19.92
8800	1430	" "			6.90	2.546	-123	-0.02	11.53	20.18
9600	1433	" "			6.90	2.564	-123	-0.01	10.02	20.02
10400	1435	" "			6.89	2.586	-123	-0.02	9.708	19.83
11200	1437	" "			6.89	2.606	-123	-0.03	8.359	19.68
12000	1440	" "			6.89	2.614	-123	-0.03	8.643	19.60

Start Time: 1405 Elapsed Time (min): 38 Water Quality Meter ID & SN: TROLL 9500 – R23799

Stop Time: 1443 Average Purge Rate (mL/min): 400 Date Calibrated: 070914

SAMPLING DATA

Sample Date: 070914 Sample Time: 1450 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: BAR

COMMENTS:

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

Total Purge Volume: 12800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW

PROJECT NUMBER: 21562973.03003

FIELD PERSONNEL: BK LC CW

DATE: 070914

MONITORING WELL ID: MW-10

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp. (°C)
12800	1442	44.40	None	None	6.89	2.624	-123	-0.03	7.274	19.54



LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: CW LC BK

DATE: 0709 2014 WEATHER: Sunny

MONITORING WELL ID: MW-11 SAMPLE ID: MW11-Rox-070914

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 51.99 ft
Depth to Water (btoc): 41.75 ft
Depth to LNAPL/DNAPL (btoc): ft
Depth to Top of Screen (btoc): 41.66 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 10.24 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) = 46.87 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ft btoc

Volume of Flow Through Cell : 890* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2670 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.6 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1141	41.77	clear	None	6.80	2.244	-96	0.35	23.79	20.16
800	1143				6.79	2.308	-97	0.19	27.07	19.79
1600	1145				6.79	2.342	-97	0.1	28.31	19.56
2400	1147				6.79	2.372	-98	0.05	23.16	19.45
3200	1150				6.78	2.393	-99	0.04	18.94	19.38
4000	1152				6.79	2.415	-99	0.03	17.02	19.33
4800	1154				6.78	2.428	-99	0.02	15.10	19.32
5600	1156				6.78	2.445	-99	0.01	16.88	19.29
6400	1159				6.78	2.458	-99	0.03	12.52	19.27
7200	1201				6.78	2.465	-99	0.01	10.16	19.27
8000	1204				6.78	2.482	-99	0.01	7.694	19.16

Start Time: 1141 Elapsed Time (min): 25 Water Quality Meter ID & SN: TROLL 9500 -- R23 799

Stop Time: 1204 Average Purge Rate (mL/min): 400 Date Calibrated: 0709 14

SAMPLING DATA

Sample Date: 0709 2014 Sample Time: 1210 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☑ Initials: BAK

COMMENTS:

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

Total Purge Volume: 8000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW | PROJECT NUMBER: 21562973.03003 | FIELD PERSONNEL: C. Williams, B. Koca, L. Cheadle

DATE: 7-9-14 | WEATHER: Sunny

MONITORING WELL ID: MW-12 | SAMPLE ID: MW-12-ROX-070914

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 52.25 ft
Depth to Water (btoc): 41.97 ft
Depth to LNAPL/DNAPL (btoc): N/E ft
Depth to Top of Screen (btoc): 41.92 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 10.28 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — 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) = 47.11 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 890* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2670 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.6 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C
Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	10:42	41.97	Clear	None	6.88	1.749	98	0.34	19.91	19.79
800	10:45	↓	↓	↓	6.87	1.752	93	0.29	16.23	19.65
1600	10:47				6.87	1.751	97	0.20	14.3	19.63
2400	10:49				6.86	1.744	100	0.19	93.09	19.66
3200	10:51				6.85	1.737	103	0.20	9,272	19.69

Start Time: 1042 | Elapsed Time (min): 11 | Water Quality Meter ID & SN: TROLL 9500 -- R23799
Stop Time: 1053 | Average Purge Rate (mL/min): 400 | Date Calibrated: 07/09/2014

SAMPLING DATA

Sample Date: 070914 | Sample Time: 1100 | Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow | Sample Flow Rate (mL/min): 400 | QA/QCSamples: None
VOA Vials, No Headspace ☒ Initials: BAR

COMMENTS:

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

Total Purge Volume: 3200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: C. Williams, B. Koca, L. Rathman

DATE: 7-7-14 WEATHER: Partly Cloudy

MONITORING WELL ID: MW-13 SAMPLE ID: MW-13 - ROX - 070714

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 35.82 ft
Depth to Water (btoc): 28.49 ft
Depth to LNAPL/DNAPL (btoc): N/E ft
Depth to Top of Screen (btoc): 25.57 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 7.33 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — 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) = 32.20 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 801* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2402 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 429 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	1334	28.49	Clear	Slight	6.86	1.485	-117	0.19	44.00	21.89
800	1336	28.49	Clear	Slight	6.87	1.484	-119	0.12	55.41	21.80
1600	1338	"	"	"	6.87	1.475	-121	0.11	62.81	21.68
3200	1340	"	"	"	6.87	1.469	-122	0.03	59.80	21.47
6400	1342	"	"	"	6.86	1.455	-123	0.02	47.99	21.38
~~7200~~ ~~8800~~	1344	"	"	"	6.86	1.432	-124	0.00	34.46	21.31
8000 ~~25600~~	1346	"	"	"	6.86	1.329	-124	0.00	29.83	21.28
		shutdown for weather			~~6.85~~					
10,400 ~~51200~~	1352	"	"	"	6.85	1.485	-115	0.23	20.91	21.05
11,200 ~~102400~~	1354	"	"	"	6.85	1.487	-118	0.06	14.93	20.90
12,000 ~~204800~~	1356				6.85	1.488	-120	0.00	11.47	20.83
12,800 ~~409600~~	1358				6.85	1.490	-121	-0.02	12.43	20.79
13,600 ~~819200~~	1400				6.85	1.492	-122	0.02	10.59	20.81
14,400 ~~1638400~~	1402				6.85	1.493	-123	0.03	10.92	~~00.87~~
15,200 00	1404				6.85	1.494	-124	0.03	13.23	~~00.85~~
16,000	1406				6.84	1.494	-124	-0.04	9.209	20.85

Start Time: 1334 Elapsed Time (min): 33 Water Quality Meter ID & SN: TROLL 9500 – R23799

Stop Time: 1407 Average Purge Rate (mL/min): 400 Date Calibrated: 7/7/14

SAMPLING DATA

Sample Date: 7-7-14 Sample Time: 1410 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: CW

COMMENTS:

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

Total Purge Volume: 16,000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: L. Rathnow, B. Koca, C. Williams

DATE: 7-7-14 WEATHER: cloudy

MONITORING WELL ID: MW-14 SAMPLE ID: MW14-ROX-070714

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 44.00 ft
Depth to Water (btoc): 32.82 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 33.42 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 11.18 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 38.42 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 845* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2536 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 93.6 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	0955	32.85	clear	slight	6.77	1094	-98	0.23	3.796	21.24
800	0957	32.85	clear	slight	6.78	1091	-106	0.20	3.067	20.98
1600	0959	32.85	clear	slight	6.79	1091	-110	0.08	3.890	21.13
3200	1002	"	clear	slight	6.79	1094	-114	0.06	3.537	21.16
6400	1004	"			6.80	1093	-117	0.06	3.921	21.27

Start Time: 0955 Elapsed Time (min): 10 min Water Quality Meter ID & SN: TROLL 9500 – R23799

Stop Time: 1005 Average Purge Rate (mL/min): 400 Date Calibrated: 7-7-14

SAMPLING DATA

Sample Date: 7-7-14 Sample Time: 1010 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: No

VOA Vials, No Headspace ☑ Initials: aw

COMMENTS:

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

Total Purge Volume: 6400 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: L Cheadle B Koca C Williams

DATE: 7/10/14 WEATHER: Sunny

MONITORING WELL ID: MW-16 SAMPLE ID: MW-16-ROX-071014

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 47.31 ft
Depth to Water (btoc): 43.15 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 37.43 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 4.16 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) = 45.23 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 890* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2670 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 1.9 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	15:09	43.17	yellow	slight	6.60	3.032	-75	0.91	450.1	23.60
800	15:11	"	"	"	6.59	3.243	-78	0.39	330.1	22.30
1600	15:13	43.20	"	"	6.59	3.345	-91	0.19	(W) ZZ 255.4	21.79
2400	15:16	"	"	"	6.58	3.406	-94	0.11	218.3	21.50
3200	15:18	"	"	"	6.58	3.437	-85	.0.06	153.5	21.37
4000	15:20	"	"	"	6.58	3.465	-86	0.03	113.3	21.21
4800	15:23	"	"	"	6.58	3.500	-87	0.02	90.63	21.02
5600	15:25	"	"	"	6.57	3.510	-87	0.01	73.24	20.97
6400	15:27	"	"	"	6.57	3.510	-87	-0.00	56.36	21.07
7200	15:30	"	"	"	6.56	3.528	-88	-0.00	41.22	20.98
8000	15:32	"	"	"	6.56	3.541	-87	-0.00	35.70	20.89
8800	15:34	"	"	"	6.56	3.554	-87	-0.00	28.20	20.85
9600	15:37	"	"	"	6.56	3.565	-87	-0.00	23.57	20.83
10400	15:39	"	"	"	6.56	3.582	-87	-0.02	35.68	20.84
11200	15:41	"	"	"	6.55	3.594	-87	-0.02	19.95	20.89
12000	15:43	"	"	"	6.55	3.600	-87	-0.03	15.24	20.80

Start Time: 15:09 Elapsed Time (min): 39 Water Quality Meter ID & SN: TROLL 9500 -- R23799

Stop Time: 15:48 Average Purge Rate (mL/min): 400 Date Calibrated: 7/10/14

SAMPLING DATA

Sample Date: 7/10/14 Sample Time: 15:55 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: LC

COMMENTS:

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

Total Purge Volume: 13600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW

PROJECT NUMBER: 21562973.03003

FIELD PERSONNEL: L Cheadle B Roca C Williams

DATE: 7/10/14

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)
12800	15:46	43.20	yellow	Slight	6.55	3.609	-87	-0.03	11.79	20.80
13600	15:48	"	"	"	6.55	3.614	-87	-0.03	9.787	20.83

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: L Cheadle C Williams

DATE: 7/14/14 WEATHER: sunny

MONITORING WELL ID: MW-22 SAMPLE ID: MW22-ROX-071414

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 48.13 ft
Depth to Water (btoc): 41.85 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 38.21 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 6.28 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = 44.99 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell: 884* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2653 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.9 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
STABLE: (over 3 readings)					+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C
0	13:24	41.88	clear	Slight	6.80	2.870	-97	0.47	14.18	24.47
800	13:26	"	"	"	6.79	2.987	-101	0.18	10.24	23.99
1600	13:28	"	"	"	6.79	3.056	-103	0.09	9.250	23.68
2400	13:31	"	"	"	6.78	3.110	-104	0.07	9.938	23.42
3200	13:33	"	"	"	6.78	3.152	-105	0.02	9.808	23.19
4000	13:35	"	"	"	6.77	3.190	-105	-0.01	9.390	23.00
4800	13:37	"	"	"	6.77	3.200	-106	-0.02	7.607	23.02

Start Time: 13:24 Elapsed Time (min): 13 Water Quality Meter ID & SN: TROLL 9500 – RZ3799

Stop Time: 13:37 Average Purge Rate (mL/min): 400 Date Calibrated: 7/14/14

SAMPLING DATA

Sample Date: 7/14/14 Sample Time: 13:45 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: LC

COMMENTS:

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

Total Purge Volume: 4800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: L Cheadle B Koca C Williams

DATE: 7/11/14 WEATHER: Sunny

MONITORING WELL ID: MW-24 SAMPLE ID: MW-24-ROX-071114

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 49.14 ft
Depth to Water (btoc): 42.97 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 38.89 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 6.27 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) = — 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) = 46.00 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 879* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2636 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.9 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	10:32	42.98	yellow cloudy	none	6.87	2.610	123	0.91	308.7	21.23
800	10:34	"	"	"	6.83	2.703	125	0.53	179.8	20.17
1600	10:37	"	"	"	6.82	2.735	127	0.56	109.3	19.82
2400	10:39	"	"	"	6.81	2.752	128	0.71	90.26	19.61
3200	10:41	"	"	"	6.80	2.752	129	0.82	50.67	19.64
4000	10:43	"	"	"	6.80	2.753	130	0.88	28.33	19.63
4800	10:46	"	"	"	6.80	2.751	130	0.95	17.03	19.62
5600	10:48	"	"	"	6.79	2.750	131	0.99	10.45	19.60
6400	10:50	"	"	"	6.79	2.743	132	1.03	7.141	19.63

Start Time: 10:32 Elapsed Time (min): 18 Water Quality Meter ID & SN: TROLL 9500 – R23799

Stop Time: 10:50 Average Purge Rate (mL/min): 400 Date Calibrated: 7/11/14

SAMPLING DATA

Sample Date: 7/11/14 Sample Time: 10:55 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: LC

COMMENTS:

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

Total Purge Volume: 6400 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: L Cheadle B Koca C Williams

DATE: 7/11/14 WEATHER: sunny

MONITORING WELL ID: P-54 SAMPLE ID: P54-ROX-071114

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 63.00 ft
Depth to Water (btoc): 41.71 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 38.00 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 21.29 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) = — 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) = 52.35 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 : 912* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2737 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.2 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	09:11	41.71	clear	none	6.78	2.373	128	5.71	20.43	19.93
800	09:13	"	"	"	6.83	2.485	124	5.38	16.92	19.22
1600	09:16	"	"	"	6.85	2.526	122	5.20	12.36	19.02
2400	09:18	"	"	"	6.85	2.545	120	4.93	9.945	18.97
3200	09:20	"	"	"	6.85	2.559	119	4.50	7.911	18.94
4000	09:22	"	"	"	6.84	2,564	118	4.07	6,121	18.98
4800	09:25	"	"	"	6.83	2.575	117	3.79	4.936	18.97
5600	09:27	"	"	"	6.83	2.579	117	3.50	4.399	18.97
6400	09:29	"	"	"	6.82	2.581	116	3.28	3.138	19.00
7200	09:32	"	"	"	6.82	2.580	116	3.12	2.943	19.02
8000	09:34	"	"	"	6.82	2.575	116	2.95	2.285	19.07
8800	09:36	"	"	"	6.81	2.573	116	2.77	2.065	19.12
9600	09:38	"	"	"	6.81	2.574	116	2.66	1.685	19.13
10400	09:41	"	"	"	6.81	2.576	117	2.57	1.430	19.12
11200	09:43	"	"	"	6.81	2.574	117	2.50	1.036	19.11

Start Time: 09:11 Elapsed Time (min): 32 Water Quality Meter ID & SN: TROLL 9500 – R23799

Stop Time: 09:43 Average Purge Rate (mL/min): 400 Date Calibrated: 7/11/14

SAMPLING DATA

Sample Date: 7/11/14 Sample Time: 09:50 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: LC

COMMENTS:

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

Total Purge Volume: 11200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: C. Williams, B. Koca

DATE: 7-8-14 WEATHER: Sunny 73°

MONITORING WELL ID: P-55 SAMPLE ID: PSS-ROX-070814

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 50.68 ft
Depth to Water (btoc): 44.54 ft
Depth to LNAPL/DNAPL (btoc): 44.48 ft
Depth to Top of Screen (btoc): 40.43 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 6.14 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at: —
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ____ ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at: —
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 884* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2653 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 330 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

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

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

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

SAMPLING DATA

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

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

VOA Vials, No Headspace ☐ Initials: —

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500 well not sampled due to LNAPL

Total Purge Volume: — mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: C. Williams, B. Kolca

DATE: 7-8-14 WEATHER: Sunny 73°

MONITORING WELL ID: P-56 SAMPLE ID: P56-ROX-070814

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 65.82 ft
Depth to Water (btoc): 45.97 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 40.82 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 19.85 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = 55.92 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

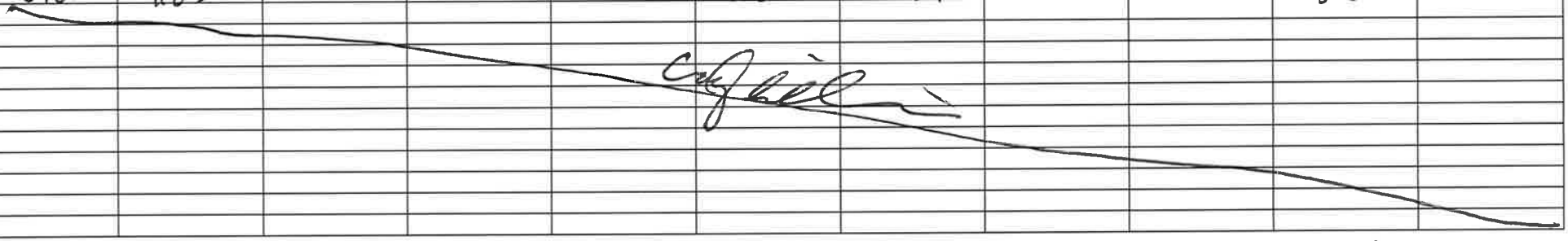
Volume of Flow Through Cell : 968* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2904 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.3 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1053	45.97	clear	slight	6.67	1.139	-103	0.42	17.67	25.97
800	1056	45.97	"	"	6.66	1.193	-105	0.16	15.61	25.92
1600	1058	45.97	"	"	6.67	1.232	-107	0.07	40.26	25.75
3200	1101	"	"	"	6.66	1.226	-107	0.03	8.360	25.60
6400	1103	"	"	"	6.66	1.264	-107	0.04	8.343	25.62



Start Time: 1053 Elapsed Time (min): 11 min. Water Quality Meter ID & SN: TROLL 9500 -- R23799

Stop Time: 1104 Average Purge Rate (mL/min): 400 Date Calibrated: 7-8-14

SAMPLING DATA

Sample Date: 7-8-14 Sample Time: 1110 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☑ Initials: CW

COMMENTS:

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

Total Purge Volume: 6400 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: C. Williams, B. Koca

DATE: 7-8-14 WEATHER: Sunny 78°

MONITORING WELL ID: P-57 SAMPLE ID: P-57-ROX-070814

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 65.46 ft
Depth to Water (btoc): 45.95 ft
Depth to LNAPL/DNAPL (btoc): N/C ft
Depth to Top of Screen (btoc): 40.46 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 19.51 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at: —
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 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) = 55.71 ft btoc —
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ft btoc

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

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1553	45.95	clear	Moderate	6.62	1.752	-104	0.16	23.06	25.03
880	1555	"	"	"	6.63	1815	-105	0.02	12.91	24.41
~~2000 1600 YR~~	1558	"	"	Slight	6.63	1.862	-106	-0.02	40.53	23.98
~~3200 3200 YR~~	1600	"	"	Slight	6.63	1891	-107	-0.03	12.75	23.79
3600 ~~4800 YR~~	1602	"	"	"	6.63	1930	-107	-0.01	12.25	23.49
4400 ~~6400 YR~~	1604	"	"	"	6.63	1954	-108	-0.01	12.38	23.34
5200 ~~8000 YR~~	1607	"	"	"	6.63	1.966	-108	-0.01	11.18	23.30
6400 ~~9600 YR~~	1609	"	"	"	6.63	1.983	-108	-0.00	16.36	23.27
7600 ~~11200 YR~~	1612	"	"	"	6.63	1.992	-108	-0.01	9.689	23.20

Start Time: 1553 Elapsed Time (min): 20 min Water Quality Meter ID & SN: TROLL 9500 – R23799

Stop Time: 1613 Average Purge Rate (mL/min): 400 Date Calibrated: 7-8-14

SAMPLING DATA

Sample Date: 07/08/14 Sample Time: 1615 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: CW

COMMENTS:

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

Total Purge Volume: ~~5415~~ 7600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: David Haxel / Craig Williams

DATE: 18 July 2014 WEATHER: 80° Sunny

MONITORING WELL ID: P-58 SAMPLE ID: PSS-ROX-071814

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 65.21 ft
Depth to Water (btoc): 43.80 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): 21.41 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = 54.50 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 935* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2804 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.3 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	11:28	44.00	clear	NONE	6.60	3.392	-82	0.16	11.60	23.03
800	1130	"	slight		6.60	3.438	-84	0.09	9.708	22.96
1600	1133	44.02			6.60	3.487	-85	0.05	8.747	22.84
2400	1135	"			6.60	3.500	-86	0.03	8.568	22.81
3200	1137	44.03			6.60	3.515	-86	0.02	7.877	22.73

Start Time: 11:28 Elapsed Time (min): 9 Water Quality Meter ID & SN: TROLL 9500 -- B23799

Stop Time: 1137 Average Purge Rate (mL/min): 400 Date Calibrated: 7-18-14

SAMPLING DATA

Sample Date: 7-18-14 Sample Time: 1145 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☑ Initials: CW

COMMENTS:

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

Total Purge Volume: 3200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: C. Williams, B. Roca

DATE: 7-8-14 WEATHER: Sunny

MONITORING WELL ID: P-59 SAMPLE ID: P-59-ROX-070814

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 72.91 ft
Depth to Water (btoc): 47.69 ft
Depth to LNAPL/DNAPL (btoc): N/G ft
Depth to Top of Screen (btoc): 47.91 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 25.22 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 60.41 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 990* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2971 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 390.3 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1450	47.69	Clear	Moderate	6.62	1894	-102	0.35	7.156	23.78
800	1452	47.69	"	"	6.62	1950	-103	0.12	6.662	23.34
2000 ~~1600~~	1455	47.70	"	"	6.62	1967	-104	0.07	8.661	23.34
2800 ~~3200~~	1457	47.69			6.61	1986	-105	0.06	17.20	23.32
4000 ~~6400~~	1500	47.69			6.61	1993	-105	0.00	6.098	23.29

Start Time: 1450 Elapsed Time (min): 11 min. Water Quality Meter ID & SN: TROLL 9500 – R23799

Stop Time: 1501 Average Purge Rate (mL/min): 400 Date Calibrated: 7-8-14

SAMPLING DATA

Sample Date: 7-8-14 Sample Time: 1505 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: 1 EB

VOA Vials, No Headspace ☒ Initials: CW

COMMENTS:

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

Total Purge Volume: ~~6400~~ 4000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: C. Williams

DATE: 7/1/14 WEATHER: —

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

INITIAL DATA

Well Diameter): 0.75 in
Total Well Depth (btoc): 23.84 ft
Depth to Water (btoc): 18.00 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 13.84 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 5.84 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at: —
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : — mL
Minimum Purge Volume = (3 x Flow Cell Volume): — mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 1.6 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)
—										

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

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

SAMPLING DATA

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

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

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

COMMENTS:

23.84 ft − 18.00 ft = 5.84 ft
5.84 ft × 0.041 gal/ft = 0.24 gal H_2O Based on historically slow recharge rates, not enough water in well to sample per SOP Total Purge Volume: — mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW **PROJECT NUMBER:** 21562973.03003 **FIELD PERSONNEL:** C. Williams

DATE: 7/1/14 **WEATHER:** —

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

INITIAL DATA

Well Diameter): 0.75 in
Total Well Depth (btoc): 20.00 ft
Depth to Water (btoc): 17.16 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): ER 2.84 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at: —
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

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

PURGE DATA

Pump Type: —

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

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

Start Time: —
Stop Time: —
Elapsed Time (min): —
Average Purge Rate (mL/min): —
Water Quality Meter ID & SN: TROLL 9500 -- —
Date Calibrated: —

SAMPLING DATA

Sample Date: —
Sample Time: —
Lab Analysis: VOC, SVOC
Sample Method: Peristaltic Pump / Low Flow
Sample Flow Rate (mL/min): —
QA/QCSamples: —
VOA Vials, No Headspace ☐ ~~Initials:~~ —

COMMENTS:

20.00 ft - 17.16 ft = 2.84 ft
2.84 ft × 0.041 gal/ft = 0.12 gal H_2O Based on historically slow recharge rates, not enough water in well to sample per SOP.

Total Purge Volume: — mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: C. Williams, L. Rathmann, B. Kaa

DATE: 7-7-14 WEATHER: Sunny

MONITORING WELL ID: P-66 SAMPLE ID: P-66-ROX-070714

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 59.72 ft
Depth to Water (btoc): 35.60 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 34.72 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 24.12 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ~~47.62~~ CW 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) = 47.60 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ____ ft btoc

Volume of Flow Through Cell : 896* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2687 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	~~1108~~ 1108	35.60	clear	~~Moderate~~	6.58	1.058	-82	0.31	37.19	23.16
2400 ~~800~~ SR	1115	35.60	clear	Moderate	6.58	1.068	-85	0.20	47.68	22.76
3200 ~~1600~~ SR	1117	35.60	clear	slight	6.58	1.064	-87	0.08	8.485	22.67
4000 ~~3200~~ SR	1119	35.60	clear	slight	6.58	1.065	-89	0.07	7.239	22.67

Start Time: 1108 Elapsed Time (min): 13 min Water Quality Meter ID & SN: TROLL 9500 -- R23798

Stop Time: 1121 Average Purge Rate (mL/min): 400 Date Calibrated: 7-7-14

SAMPLING DATA

Sample Date: 7-7-14 Sample Time: 1125 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: CW

COMMENTS:

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

Total Purge Volume: ~~3200~~ 4000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: C. Williams, B. Koca

DATE: 7/2/14 WEATHER: —

MONITORING WELL ID: P-68 SAMPLE ID: —

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 70.26 ft
Depth to Water (btoc): 45.32 ft
Depth to LNAPL/DNAPL (btoc): 45.27 ft
Depth to Top of Screen (btoc): 45.26 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 24.94 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at: —
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ____ ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at: —
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ____ ft btoc

Volume of Flow Through Cell : — mL
Minimum Purge Volume = (3 x Flow Cell Volume): — mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 215.5 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

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

Start Time: —
Stop Time: —
Elapsed Time (min): —
Average Purge Rate (mL/min): —
Water Quality Meter ID & SN: TROLL 9500 -- —
Date Calibrated: —

SAMPLING DATA

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

COMMENTS:

No sample collected due to presence of LNAPL

Total Purge Volume: — mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW | PROJECT NUMBER: 21562973.03003 | FIELD PERSONNEL: C. Williams, B. Koca

DATE: 7-8-14 | WEATHER: Sunny

MONITORING WELL ID: P-74 | SAMPLE ID: P-74-ROX-070814

INITIAL DATA

Well Diameter): 4 in
Total Well Depth (btoc): 69.43 ft
Depth to Water (btoc): 43.02 ft
Depth to LNAPL/DNAPL (btoc): N/E ft
Depth to Top of Screen (btoc): 44.43 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 26.41 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) = 57.93 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 968* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2904 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.5 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	0935	43.25	clear	slight	6.63	0.258-5	-101	0.39	27.65	20.17
1200 ~~800~~	0938	43.25	"	"	6.76	0.258-6	-115	0.24	17.17	20.01
2000 ~~1600~~	0940	43.23	"	"	6.80	0.259 0	-122	0.13	13.86	20.05
3200 ~~3200~~	0943	43.23	"	"	6.83	0.259-4	-127	0.11	16.66	20.09
4000 ~~4800~~	0945	43.23	"	"	6.83	0.260-3	-130	0.08	10.21	20.06
5200 ~~5600~~	0948	43.23	"	"	6.84	0.260-4	-133	0.06	9.496	20.10

Start Time: 0935 | Elapsed Time (min): 13 min | Water Quality Meter ID & SN: TROLL 9500 - R23799

Stop Time: 0949 | Average Purge Rate (mL/min): 400 | Date Calibrated: 7-8-14

SAMPLING DATA

Sample Date: 7-8-14 | Sample Time: 0950 | Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: CW

COMMENTS:

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

Total Purge Volume: ~~5600~~ 5200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: C. Williams / David Haxel

DATE: 7-18-14 WEATHER: Sunny

MONITORING WELL ID: P-93A SAMPLE ID: P-93A-ROX-071814

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 63.17 ft
Depth to Water (btoc): 45.70 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): 17.47 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 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: 1.5 ppm

PURGE DATA

Pump Type: Dedicated Well Wizard

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1001	45.70	clear	slight	6.87	3.677	-51	3.99	17.44	21.58
800	1003				6.88	3.729	-50	4.24	16.07	21.50
1600	1005				6.78	3.774	-50	4.31	16.55	21.47
2400	1008				6.88	3.813	-50	4.33	15.46	21.47
3200	1010				6.88	3.846	-50	4.31	14.78	21.50
4000	1013				6.88	3.883	-50	4.33	15.17	21.47
4800	1015				6.88	3.917	-50	4.31	13.81	21.44
5600	1017				6.88	3.938	-50	4.29	13.02	21.47
6400	1020				6.88	3.968	-50	4.30	12.32	21.45
7200	1022				6.88	3.992	-50	4.28	12.17	21.40
8000	1024				6.87	4.011	-50	4.27	11.47	21.39
8800	1027				6.87	4.032	-50	4.28	11.43	21.36
9600	1029				6.87	4.057	-50	4.29	11.01	21.33
10400	1031				6.87	4.076	-50	4.32	10.65	21.31
11200	1034				6.87	4.087	-50	4.31	10.12	21.33
12000	1036				6.87	4.103	-50	4.31	10.96	21.30

Start Time: 10:01 Elapsed Time (min): 35 Water Quality Meter ID & SN: TROLL 9500 -- A23799

Stop Time: 1036 Average Purge Rate (mL/min): 400 Date Calibrated: 18 July 2014

SAMPLING DATA

Sample Date: 7-18-14 Sample Time: 0940 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: CW

COMMENTS:

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

Total Purge Volume: 12000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: C. Williams, D. Haxel

DATE: 7-17-14 WEATHER: Partly Cloudy 74°

MONITORING WELL ID: P-93B SAMPLE ID: P-93B-ROX-07172014

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 76.60 ft
Depth to Water (btoc): 45.75 ft
Depth to LNAPL/DNAPL (btoc): ft
Depth to Top of Screen (btoc): 74.60 ft
Screen Length): 2 ft

Water Column Height (do not include LNAPL or DNAPL): 30.85 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 60.6 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 3635* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 10904 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.4 ppm

PURGE DATA

Pump Type: Dedicated Well Wizard

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1510	45.75	clear	none	6.90	4.007	-110	1.00	2.135	20.20
P.P. ~~400~~ 800	1512				6.89	4.037	-110	0.95	0.9219	20.19
1600	1515				6.90	4.050	-110	0.99	7.264	20.29
2400	1517				6.89	4.058	-110	1.02	2.531	20.39
3200	1519				6.89	4.073	-109	0.99	2.526	20.49
4000	1522				6.88	4.094	-109	0.88	12.30	20.47
4800	1524				6.88	4.101	-109	0.94	5.573	20.36
5600	1527				6.88	4.135	-109	0.95	3.321	20.28
6400	1529				6.88	4.145	-109	0.95	7.346	20.20
7200	1532				6.88	4.174	-109	0.98	6.213	20.15
8000	1534				6.88	4.187	-108	1.00	0.7635	20.14
8800	1536				6.88	4.180	-108	0.92	27.67	20.12
9600	1539				6.88	4.199	-108	0.95	7.072	20.14
10400	1541				6.88	4.227	-108	1.03	2.349	20.11
11200	1544				6.88	4.227	-108	0.99	21.19	20.05
12000	1546				6.88	4.238	-108	0.98	9.673	20.02

Start Time: 1510 Elapsed Time (min): 36 min. Water Quality Meter ID & SN: TROLL 9500 – R23798

Stop Time: 1546 Average Purge Rate (mL/min): 400 Date Calibrated: 7-17-14

SAMPLING DATA

Sample Date: 7-17-14 Sample Time: 1550 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☑ Initials: CW

COMMENTS:

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

Total Purge Volume: 12000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: C. Williams, D. Havel

DATE: 7-17-14 WEATHER: Partly Cloudy

MONITORING WELL ID: P-93C SAMPLE ID: P-93C - ROX - 071714

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 96.26 ft
Depth to Water (btoc): 45.61 ft
Depth to LNAPL/DNAPL (btoc): —— ft
Depth to Top of Screen (btoc): 94.26 ft
Screen Length): 2 ft

Water Column Height (do not include LNAPL or DNAPL): 50.65 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: 0.2 ppm

PURGE DATA

Pump Type: Dedicated Well Wizard

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1354	45.61	Clear	None	6.93	3.397	-77	2.10	107.7	20.50
~~800~~ 1000	1358	45.61			6.93	3.432	-77	2.22	19.75	20.32
~~1600~~ 3200	1408	45.61			6.92	3.474	-76	2.10	0.076	20.11
~~2400~~ 4400	1403	45.63			6.92	3.503	-76	2.16	0.0965	20.01
~~3200~~ 5600	1406				6.93	3.496	-76	2.20	464.2	20.08
~~4000~~ 6400	1409				6.91	3.502	-76	2.16	56.13	20.24
~~4800~~ 7600	1411				6.91	3.522	-75	2.08	0.5465	20.20
~~5600~~ 8800	1415				6.92	3.548	-76	2.17	0.7657	20.03
~~6400~~ 9600	1417				6.92	3.546	-75	2.03	0.5912	20.12
~~7200~~ 10400	1420				6.92	3.573	-75	2.07	68.09	20.00
~~8000~~ 12000	1423				6.92	3.602	-75	2.01	0.8103	19.90
~~8800~~ 13200	1426				6.92	3.612	-74	2.03	2.583	19.88

Start Time: 1354 Elapsed Time (min): 34 min Water Quality Meter ID & SN: TROLL 9500 – R23799

Stop Time: 1428 Average Purge Rate (mL/min): 400 Date Calibrated: 7-17-14

SAMPLING DATA

Sample Date: 7-17-2014 Sample Time: 1435 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: DPH

COMMENTS:

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

Total Purge Volume: ~~8800~~ 13200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: C. Williams, D. Haxel

DATE: 7-17-14 WEATHER: Sunny

MONITORING WELL ID: P-93D SAMPLE ID: P93-D-ROX-071714

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 128.00 ft
Depth to Water (btoc): 45.78 ft
Depth to LNAPL/DNAPL (btoc): N/E ft
Depth to Top of Screen (btoc): 125.75 ft
Screen Length): 2 ft

Water Column Height (do not include LNAPL or DNAPL): 82.22 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 127 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc —
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ft btoc

Volume of Flow Through Cell : 1353* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 4058 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 1.2 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1125	45.82	Clear	Slight	7.03	2.792	-121	0.10	5.352	20.53
1200 ~~800~~ ~~850~~	1128	45.83	"	"	7.07	2.859	-124	0.05	4.146	20.62
~~1600~~ ~~2400~~	1132	"	"	"	7.02	2.921	-125	0.04	1.984	20.54
3600 ~~2400~~	1135	45.85	"	"	7.02	2.987	-126	0.03	1.850	20.39
4800 ~~3200~~	1138	"	"	"	7.02	3.019	-126	0.01	1.992	20.46
~~6000~~ ~~4000~~ 5400	1142	"	"	"	7.01	3.053	-127	0.00	4.897	20.51
~~6800~~ ~~4800~~ 6600	1145	"	"	"	7.01	3.090	-127	0.00	5.338	20.51

Start Time: 1125 Elapsed Time (min): Water Quality Meter ID & SN: TROLL 9500 -- R23799

Stop Time: 1146 Average Purge Rate (mL/min): 400 mL/min Date Calibrated: 7-17-14

SAMPLING DATA

Sample Date: 7-17-14 Sample Time: 1155 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: CW

COMMENTS:

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

Total Purge Volume: 6600 ~~4800~~ mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW | PROJECT NUMBER: 21562973.03003 | FIELD PERSONNEL: C. Williams, D. Haxel

DATE: 7-18-14 | WEATHER: Sunny 84

MONITORING WELL ID: P-114 | SAMPLE ID: P-114-ROX-071814

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 52.67 ft
Depth to Water (btoc): 30.19 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): 22.48 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at: 42.67 ft btoc
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 : 1596* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 4789 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 20.4 ppm

PURGE DATA

Pump Type: Dedicated Well Wizard

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1517	30.30	clear	slight	10.03	1.952	-156	4.14	507.5	21.66
800	1519				9.47	2.158	-123	3.90	50.80	21.76
1600	1521				9.08	2.303	-109	3.76	48.62	21.87
2400	1524				8.84	2.363	-100	3.89	823.6	21.89
3200	1526				8.66	2.481	-94	3.75	37.14	21.84
4000	1528				8.54	2.543	-91	3.92	33.04	21.88
4800	1530				8.47	2.605	-90	3.88	36.37	21.86
5600	1532				8.36	2.666	-90	3.45	25.08	21.82
6400	1535				8.28	2.732	-93	3.64	27.62	21.68
7200	1537				8.18	2.800	-101	3.95	37.15	21.53
8000	1539				8.14	2.838	-109	4.16	14.50	21.69
8800	1541				8.12	2.844	-107	4.25	12.55	22.00
9600	1543				8.03	2.887	-115	3.96	1297.00	21.99
10400	1545				8.00	2.936	-116	3.70	12.26	21.95
11200	1548				7.99	2.919	-113	3.69	10.33	22.41
12000	1550				7.98	2.916	-110	3.54	8.457	22.64

Start Time: 1517 | Elapsed Time (min): ~~55~~ 33 | Water Quality Meter ID & SN: TROLL 9500 – R23799

Stop Time: 1550 | Average Purge Rate (mL/min): 400 | Date Calibrated: 7-18-14

SAMPLING DATA

Sample Date: 7-18-14 | Sample Time: 1555 | Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☑ Initials: CW

COMMENTS:

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

Total Purge Volume: 12000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: L Cheadle C Williams

DATE: 7/14/14 WEATHER: cloudy

MONITORING WELL ID: ROST-3-MW SAMPLE ID: ~~R03~~ (LC) ROST3MW-ROX-071414

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 48.06 ft
Depth to Water (btoc): 41.88 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 37.81 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 6.18 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = 44.97 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 879* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2636 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 1.2 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	09:03	42.00	clear	none	6.74	2.729	-111	0.38	153.1	19.47
800	09:05	"	"	"	6.80	2.863	-118	0.10	142.7	19.14
1600	09:08	"	"	"	6.83	2.928	-121	0.02	113.0	19.00
2400	09:10	"	"	"	6.85	2.965	-123	-0.01	92.97	18.99
3200	09:12	"	"	"	6.86	2.986	-125	0.01	55.26	19.10
4000	09:14	"	"	"	6.86	2.994	-126	-0.02	42.32	19.29
4800	09:17	"	"	"	6.87	3.035	-126	-0.03	28.45	19.11
5600	09:19	"	"	"	6.87	3.054	-127	0.02	18.54	19.11
6400	09:21	"	"	"	6.87	3.072	-127	-0.03	15.30	19.16
7200	09:23	"	"	"	6.87	3.088	-127	0.03	10.30	19.19
8000	09:25	"	"	"	6.88	3.103	-128	-0.03	9.539	19.20

Start Time: 09:03 Elapsed Time (min): 22 Water Quality Meter ID & SN: TROLL 9500 - R23799

Stop Time: 09:25 Average Purge Rate (mL/min): 400 Date Calibrated: 7/14/14

SAMPLING DATA

Sample Date: 7/14/14 Sample Time: 09:30 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: LC

COMMENTS:

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

Total Purge Volume: 9000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: L Cheadle B Koca C Williams

DATE: 7/11/14 WEATHER: sunny + windy

MONITORING WELL ID: ROST-4-PZ(C) SAMPLE ID: ROST-4-PZ(C)-ROX-071114

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 45.20 ft
Depth to Water (btoc): 42.22 ft (LC)
Depth to LNAPL/DNAPL (btoc): ~~2.98~~ ft NE
Depth to Top of Screen (btoc): 34.95 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 2.98 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) = 43.72 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth -2 ft = — ft btoc

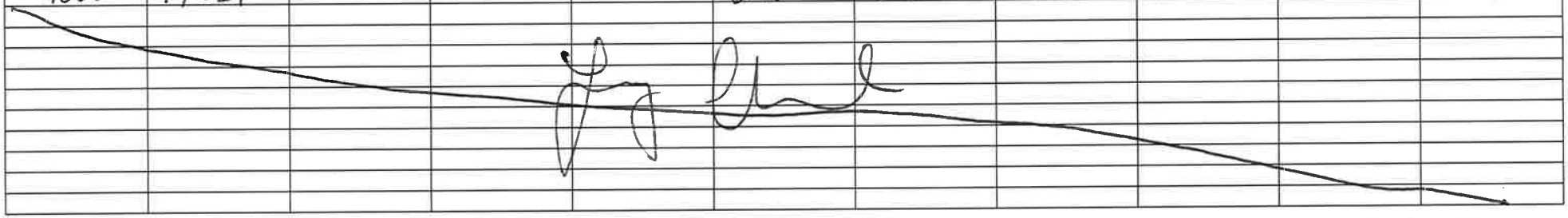
Volume of Flow Through Cell : 851* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2553 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.3 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	14:13 (LC)	~~42.05~~ 42.60	clear	none	6.79	2.914	-81	0.56	20.85	22.15
800	14:15 (LC)	~~42.34~~ "	"	"	6.79	2.942	-91	0.20	15.73	20.79
1600	14:18	42.60	"	"	6.78	2.910	-97	0.08	9.254	20.24
2400	14:20	"	"	"	6.78	2.882	-100	0.04	6.772	19.93
3200	14:22	"	"	"	6.78	2.861	-102	0.04	5.266	19.89
4000	14:24	"	"	"	6.78	2.850	-104	0.01	5.004	19.88



Start Time: 14:13 Elapsed Time (min): 11 Water Quality Meter ID & SN: TROLL 9500 – R23799

Stop Time: 14:24 Average Purge Rate (mL/min): 400 Date Calibrated: 7/11/14

SAMPLING DATA

Sample Date: 7/11/14 Sample Time: 14:30 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: LC

COMMENTS:

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

Total Purge Volume: 4000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: J Cheadle B Koca C Williams

DATE: 7/11/14 WEATHER: Sunny

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

INITIAL DATA

Well Diameter): 1 in
Total Well Depth (btoc): 23.20 ft
Depth to Water (btoc): 22.95 ft
Depth to LNAPL/DNAPL (btoc): ~~NE~~ ft
Depth to Top of Screen (btoc): 13.20 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): ~~0.3~~ 0.25 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : — mL
Minimum Purge Volume = (3 x Flow Cell Volume): — mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 377.0 ppm

PURGE DATA

Pump Type: —

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

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

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

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

SAMPLING DATA

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

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

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

COMMENTS: dry, no water

Total Purge Volume: — mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: L Cheadle B Koca C Williams

DATE: 7/11/14 WEATHER: sunny

MONITORING WELL ID: ROST-7-PZ SAMPLE ID:

INITIAL DATA

Well Diameter): 1 in
Total Well Depth (btoc): 30.00 ft
Depth to Water (btoc): 22.69 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 20.00 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 7.31 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ft btoc

Volume of Flow Through Cell : mL
Minimum Purge Volume = (3 x Flow Cell Volume): mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.8 ppm

PURGE DATA

Pump Type:

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

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

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

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

SAMPLING DATA

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

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

VOA Vials, No Headspace ☐ Initials:

COMMENTS:

30.00ft - 22.69ft = 7.31ft
7.31ft × 0.041 gal/ft = 0.30 gal H_2O Based on historically slow recharge rates, not enough water in well to sample per SOP.

Total Purge Volume: mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: L Cheadle B Koch C Williams

DATE: 7/11/14 WEATHER: sunny

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): 19.83 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 10.00 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 0.17 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) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : — mL
Minimum Purge Volume = (3 x Flow Cell Volume): — mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 1.8 ppm

PURGE DATA

Pump Type: —

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

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

Start Time: —
Stop Time: —
Elapsed Time (min): —
Average Purge Rate (mL/min): —
Water Quality Meter ID & SN: TROLL 9500 --
Date Calibrated: —

SAMPLING DATA

Sample Date: —
Sample Time: —
Lab Analysis: VOC, SVOC
Sample Method: Peristaltic Pump / Low Flow
Sample Flow Rate (mL/min): —
QA/QCSamples: —
VOA Vials, No Headspace ☐ ~~Initials:~~ —

COMMENTS:

dry, no water

Total Purge Volume: — mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: L Cheadle B Koca C Williams

DATE: 7/11/14 WEATHER: sunny

MONITORING WELL ID: ROST-21-PZ SAMPLE ID: —

INITIAL DATA

Well Diameter): 1 in
Total Well Depth (btoc): 20.00 ft
Depth to Water (btoc): 19.06 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): 0.84 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : — mL
Minimum Purge Volume = (3 x Flow Cell Volume): — mL
Ambient PID/FID Reading: 0.8 ppm
Wellbore PID/FID Reading: 0.6 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)

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

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

SAMPLING DATA

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

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

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

COMMENTS:

20.00 ft - 19.06 ft = 0.84 ft

0.84 ft × 0.041 gal/ft = 0.03 gal H_2O Based on historically slow recharge rates, not enough water in well to sample per SOP.

Total Purge Volume: — mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 3Q14 GW PROJECT NUMBER: 21562973.03003 FIELD PERSONNEL: C. Williams, B. Koca

DATE: 7-08-14 WEATHER: Sunny

MONITORING WELL ID: T-12 SAMPLE ID: T-12-ROX-070814

INITIAL DATA

Well Diameter): 6 in
Total Well Depth (btoc): 72.46 ft
Depth to Water (btoc): 45.13 ft
Depth to LNAPL/DNAPL (btoc): N/E ft
Depth to Top of Screen (btoc): 46.46 ft
Screen Length): 26 ft

Water Column Height (do not include LNAPL or DNAPL): 27.33 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ~~45.79~~ 59.46 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = N/A ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = _____ ft btoc

Volume of Flow Through Cell : 990* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2971 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 2.7 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft),	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1346	45.18	Clear	Slight	6.86	1589	-125	0.33	4.901	22.42
~~800~~ 1200	1349	45.18	"	"	6.86	1666	-127	0.09	14.89	21.50
~~1600~~ 2400	1352	45.18	"	"	6.86	1703	-128	0.04	22.06	21.19
~~3200~~ 3200	1354	45.18	"	"	6.85	1687	-127	0.02	1.536	21.07
~~6400~~ 4000	1356	45.18			6.85	1703	-128	0.01	3.447	21.13

Start Time: 1346 Elapsed Time (min): 12 min Water Quality Meter ID & SN: TROLL 9500 – R23749

Stop Time: 1358 Average Purge Rate (mL/min): 400 Date Calibrated: 7-8-14

SAMPLING DATA

Sample Date: 07-08-14 Sample Time: 1400 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: CW

COMMENTS:

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

Total Purge Volume: ~~6400~~ 4000 mL

Roxana Groundwater Quarterly – 3rd Quarter 2014 Data Review

Laboratory SDG: MC31918

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 7/24/2014

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

Sample Identification	Sample Identification
MW12-ROX-070714	P66-ROX-070714-EB
P66-ROX-070714	MW13-ROX-070714
TB-070714-HCL	TB-070714-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 PAHs were detected in the equipment blank. VOC and SVOC LCS recoveries were outside evaluation criteria. VOC and SVOC MS/MSD recoveries and MS/MSD RPDs were outside evaluation criteria in sample P66-ROX-070714. These issues are addressed further in the appropriate sections below. Additionally, initial calibration verification for acetone exceeded 40 percent difference (%D), and continuing calibration verification for dichlorodifluoromethane exceeded 30 percent difference (%D) 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
P66-ROX-070714-EB	PAHs	1-Methylnaphthalene	0.056 µg/L
P66-ROX-070714-EB	PAHs	Phenanthrene	0.10 µg/L

Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not require qualification. Please see Section 12.0 of this review for additional qualifications regarding samples associated with the equipment blank.

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV1220-BS	VOCs	Acetone	**56**	70-130
MSV1220-BS	VOCs	Bromomethane	**149**	70-130
MSV1220-BS	VOCs	Chloroethane	**154**	70-130
MSV1220-BS	VOCs	Chloromethane	**146**	70-130
MSV1220-BS	VOCs	Trichlorofluoromethane	**142**	70-130
MSV1220-BS	VOCs	Vinyl chloride	**142**	70-130
OP38904-BS	SVOCs	Hexachlorocyclopentadiene	**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. P66-ROX-070714-EB is a quality control sample and is not qualified.

Sample ID	Parameter	Analyte	Qualification
MW14-ROX-070714	VOCs	Acetone	**UJ**
P66-ROX-070714	VOCs	Acetone	**UJ**
MW13-ROX-070714	VOCs	Acetone	**UJ**
MW14-ROX-070714	SVOCs	Hexachlorocyclopentadiene	**UJ**
P66-ROX-070714	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW13-ROX-070714	SVOCs	Hexachlorocyclopentadiene	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

Yes, sample P66-ROX-070714 was spiked and analyzed for VOCs, SVOCs, and PAHs.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
P66-ROX-070714	VOCs	Acetone	**133/132**	1	70-130/30
P66-ROX-070714	VOCs	Benzene	**324/166**	**48**	70-130/30
P66-ROX-070714	VOCs	n-Butylbenzene	**131**/126	4	70-130/30
P66-ROX-070714	VOCs	Chloroethane	**132**/126	4	70-130/30
P66-ROX-070714	VOCs	2-Chloroethyl vinyl ether	**8/0**	**200**	70-130/30
P66-ROX-070714	VOCs	1,2-Dichloropropane	**132/131**	1	70-130/30

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
P66-ROX-070714	VOCs	1,4-Dioxane	**131/134**	2	70-130/30
P66-ROX-070714	VOCs	Isopropylbenzene	**58/40**	5	70-130/30
P66-ROX-070714	VOCs	Methyl tert butyl ether	**193/194**	1	70-130/30
P66-ROX-070714	VOCs	Naphthalene	**156/144**	8	70-130/30
P66-ROX-070714	VOCs	n-Propylbenzene	74/**62**	4	70-130/30
P66-ROX-070714	VOCs	1,2,4-Trichlorobenzene	130/**132**	1	70-130/30
P66-ROX-070714	VOCs	Vinyl acetate	**160/156**	2	70-130/30
P66-ROX-070714	SVOCs	3,3'-Dichlorobenzidine	**14/13**	8	40-140/20
P66-ROX-070714	SVOCs	Hexachlorocyclopentadiene	**38/33**	16	40-140/20

LCS/LCSD recoveries were within evaluation criteria with the exception of analytes listed and qualified as appropriate in Section 5.0 of this data review. No further qualification of data was required.

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

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

Not applicable; samples analyzed did not require dilution.

12.0 Additional Qualifications

Were additional qualifications applied?

Yes, professional judgment was also used to qualify as estimated, however not reject, data that was associated with equipment blank P66-ROX-070714-EB, due to comparable historical detections.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
MW14-ROX-070714	PAHs	Phenanthrene	-	**J**
P66-ROX-070714	PAHs	Phenanthrene	-	**J**

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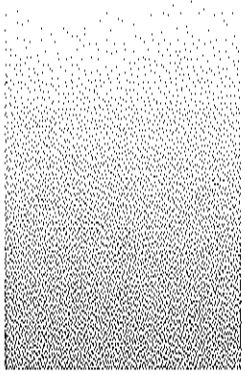
07/24/14





Technical Report for

Shell Oil

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana,

Accutest Job Number: MC31918

Sampling Date: 07/07/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Reviewed on 7/24/14

Total number of pages in report: **81**

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

Reza Tand
Lab Director

Client Service contact: Matthew Morrell 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

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Sample Summary

Shell Oil

Job No: MC31918

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time By	Received	Matrix Code	Matrix Type	Client Sample ID
MC31918-1	07/07/14	10:10	07/08/14	AQ	Ground Water	MW14-ROX-070714
MC31918-2	07/07/14	10:35	07/08/14	AQ	Equipment Blank	P66-ROX-070714-EB
MC31918-3	07/07/14	11:25	07/08/14	AQ	Ground Water	P66-ROX-070714
MC31918-3D	07/07/14	11:25	07/08/14	AQ	Ground Water	P66-ROX-070714
MC31918-3S	07/07/14	11:25	07/08/14	AQ	Ground Water	P66-ROX-070714
MC31918-4	07/07/14	14:10	07/08/14	AQ	Ground Water	MW13-ROX-070714
MC31918-5	07/07/14	00:00	07/08/14	AQ	Trip Blank Water	TB-070714-HCL
MC31918-6	07/07/14	00:00	07/08/14	AQ	Trip Blank Water	TB-070714-ST

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	Job No	MC31918
Site:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Centra	Report Date	7/22/2014 5:48:04 PM

4 Sample(s), 2 Trip Blank(s) were collected on 07/07/2014 and were received at Accutest on 07/08/2014 properly preserved, at 2.9 Deg. C and intact. These Samples received an Accutest job number of MC31918. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Sample 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: MSV1220

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC31918-3MS, MC31918-3MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MC31918-3MS Recovery(s) for 1,2-Dichloropropane, 1,4-Dioxane, 2-Chloroethyl vinyl ether, Acetone, Benzene, Chloroethane, Methyl Tert Butyl Ether, n-Butylbenzene, Naphthalene, Vinyl Acetate are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Blank Spike Recovery(s) for Acetone, Bromomethane, Chloroethane, Chloromethane, Trichlorofluoromethane are outside control limits. Blank Spike meets program technical requirements.
- MC31918-3MS Recovery(s) for Isopropylbenzene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- MC31918-3MSD Recovery(s) for 1,2,4-Trichlorobenzene, 1,2-Dichloropropane, 1,4-Dioxane, Acetone, Benzene, Methyl Tert Butyl Ether, Naphthalene, Vinyl Acetate, 2-Chloroethyl vinyl ether are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2-Chloroethyl vinyl ether, Benzene are outside control limits for sample MC31918-3MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- MC31918-3MSD Recovery(s) for Isopropylbenzene, n-Propylbenzene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- MSV1220-BS for Vinyl chloride: Outside control limits. Associated samples are non-detect for this compound.
- Continuing calibration check standard MSV1220-CC1177 for acetone exceed 40% difference (response bias high). Associated samples are non-detect for this compound.
- Initial calibration verification MSV1177-ICV1177 for dichlorodifluoromethane exceed 30% Difference (response bias high). Associated samples are non-detect for this compound.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ Batch ID: OP38904

- 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) MC31918-3MS, MC31918-3MSD were used as the QC samples indicated.
- OP38904-BS/MS/MSD Recovery(s) for Hexachlorocyclopentadiene are outside control limits. Blank Spike meets program technical requirements.
- OP38904-MS/MSD Recovery(s) for 3,3'-Dichlorobenzidine 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: OP38905

- 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) MC31918-3MS, MC31918-3MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8011

Matrix: AQ	Batch ID: OP38952

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC31918-3MS, MC31918-3MSD 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(MC31918).

Summary of Hits

Job Number: MC31918
Account: Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Collected: 07/07/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC31918-1	MW14-ROX-070714					
sec-Butylbenzene		0.42 J	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene		0.47 J	5.0	0.39	ug/l	SW846 8260C
Isopropylbenzene		0.73 J	5.0	0.35	ug/l	SW846 8260C
Di-n-butyl phthalate		0.31 J	5.4	0.19	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.48 J	2.2	0.36	ug/l	SW846 8270D
Acenaphthene		0.33	0.11	0.075	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.063 J	0.11	0.054	ug/l	SW846 8270D BY SIM
Fluorene		0.24	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		1.4	0.22	0.054	ug/l	SW846 8270D BY SIM
Phenanthrene		0.24 J	0.054	0.014	ug/l	SW846 8270D BY SIM
MC31918-2	P66-ROX-070714-EB					
1-Methylnaphthalene		0.056 J	0.22	0.054	ug/l	SW846 8270D BY SIM
Phenanthrene		0.10	0.054	0.014	ug/l	SW846 8270D BY SIM
MC31918-3	P66-ROX-070714					
Benzene		42.9	0.50	0.32	ug/l	SW846 8260C
n-Butylbenzene		11.2	5.0	1.1	ug/l	SW846 8260C
sec-Butylbenzene		14.7	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene		2.3 J	5.0	0.39	ug/l	SW846 8260C
Ethylbenzene		1.6	1.0	0.38	ug/l	SW846 8260C
Isopropylbenzene		144	5.0	0.35	ug/l	SW846 8260C
n-Propylbenzene		102	5.0	0.49	ug/l	SW846 8260C
Toluene		2.2	1.0	0.33	ug/l	SW846 8260C
m,p-Xylene		1.0	1.0	0.93	ug/l	SW846 8260C
o-Xylene		0.99 J	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		2.0	1.0	0.36	ug/l	SW846 8260C
Di-n-butyl phthalate		0.30 J	5.6	0.19	ug/l	SW846 8270D
Acenaphthene		0.33	0.11	0.077	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.16	0.11	0.055	ug/l	SW846 8270D BY SIM
Fluorene		0.78	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		44.5	0.22	0.055	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		6.0	0.22	0.082	ug/l	SW846 8270D BY SIM
Phenanthrene		0.41 J	0.056	0.014	ug/l	SW846 8270D BY SIM
MC31918-4	MW13-ROX-070714					
Methyl Tert Butyl Ether		9.1	1.0	0.51	ug/l	SW846 8260C
Acenaphthylene		0.061 J	0.11	0.054	ug/l	SW846 8270D BY SIM

Summary of Hits

Job Number: MC31918
Account: Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Collected: 07/07/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC31918-5	TB-070714-HCL					
No hits reported in this sample.						
MC31918-6	TB-070714-ST					
No hits reported in this sample.						

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4

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW14-ROX-070714		
Lab Sample ID:	MC31918-1	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V32981.D	1	07/18/14	AMY	n/a	n/a	MSV1220
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	UJ
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	0.42	5.0	0.42	ug/l	J
98-06-6	tert-Butylbenzene	0.47	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-070714		
Lab Sample ID:	MC31918-1	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	0.73	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	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-070714		
Lab Sample ID:	MC31918-1	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%		70-130%
2037-26-5	Toluene-D8	91%		70-130%
460-00-4	4-Bromofluorobenzene	100%		70-130%

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

ND = Not detected MDL = Method Detection Limit
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Report of Analysis

Client Sample ID:	MW14-ROX-070714		
Lab Sample ID:	MC31918-1	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X03492.D	1	07/16/14	WK	07/10/14	OP38904	MSX121
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.90	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.61	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	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	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.51	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.58	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.61	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.38	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.36	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.27	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.29	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.28	ug/l	
84-74-2	Di-n-butyl phthalate	0.31	5.4	0.19	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.4	0.31	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW14-ROX-070714		
Lab Sample ID:	MC31918-1	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.1

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	0.48	2.2	0.36	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	us
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	43%		15-110%
4165-62-2	Phenol-d5	30%		15-110%
118-79-6	2,4,6-Tribromophenol	83%		15-110%
4165-60-0	Nitrobenzene-d5	82%		30-130%
321-60-8	2-Fluorobiphenyl	77%		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
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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW14-ROX-070714		
Lab Sample ID:	MC31918-1	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90645.D	1	07/14/14	MR	07/10/14	OP38905	MSI3375
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.33	0.11	0.075	ug/l	
208-96-8	Acenaphthylene	0.063	0.11	0.054	ug/l	J
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	0.24	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	1.4	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.081	ug/l	
85-01-8	Phenanthrene	0.24	0.054	0.014	ug/l	J
129-00-0	Pyrene	ND	0.11	0.042	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	91%		30-130%
321-60-8	2-Fluorobiphenyl	67%		30-130%
1718-51-0	Terphenyl-d14	77%		30-130%

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW14-ROX-070714		
Lab Sample ID:	MC31918-1	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8011 SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39532.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
Run #2							

	Initial Volume	Final Volume
Run #1	35.9 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0060	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	118%		36-173%
460-00-4	Bromofluorobenzene (S)	120%		36-173%

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

Report of Analysis

Client Sample ID:	P66-ROX-070714-EB		
Lab Sample ID:	MC31918-2	Date Sampled:	07/07/14
Matrix:	AQ - Equipment Blank	Date Received:	07/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V32977.D	1	07/18/14	AMY	n/a	n/a	MSV1220
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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Report of Analysis

Client Sample ID:	P66-ROX-070714-EB		
Lab Sample ID:	MC31918-2	Date Sampled:	07/07/14
Matrix:	AQ - Equipment Blank	Date Received:	07/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	P66-ROX-070714-EB		
Lab Sample ID:	MC31918-2	Date Sampled:	07/07/14
Matrix:	AQ - Equipment Blank	Date Received:	07/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		70-130%
2037-26-5	Toluene-D8	78%		70-130%
460-00-4	4-Bromofluorobenzene	100%		70-130%

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

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

Report of Analysis

Client Sample ID:	P66-ROX-070714-EB		
Lab Sample ID:	MC31918-2	Date Sampled:	07/07/14
Matrix:	AQ - Equipment Blank	Date Received:	07/08/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X03493.D	1	07/16/14	WK	07/10/14	OP38904	MSX121
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.90	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.61	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	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	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	ND	5.4	0.19	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.31	ug/l	

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

Report of Analysis

Client Sample ID:	P66-ROX-070714-EB		
Lab Sample ID:	MC31918-2	Date Sampled:	07/07/14
Matrix:	AQ - Equipment Blank	Date Received:	07/08/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.37	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.36	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.33	ug/l	
78-59-1	Isophorone	ND	5.4	0.49	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.43	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.44	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	26%		15-110%
4165-62-2	Phenol-d5	18%		15-110%
118-79-6	2,4,6-Tribromophenol	55%		15-110%
4165-60-0	Nitrobenzene-d5	51%		30-130%
321-60-8	2-Fluorobiphenyl	48%		30-130%
1718-51-0	Terphenyl-d14	89%		30-130%

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

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Report of Analysis

Client Sample ID:	P66-ROX-070714-EB		
Lab Sample ID:	MC31918-2	Date Sampled:	07/07/14
Matrix:	AQ - Equipment Blank	Date Received:	07/08/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90646.D	1	07/14/14	MR	07/10/14	OP38905	MSI3375
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.075	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	0.056	0.22	0.054	ug/l	J
91-57-6	2-Methylnaphthalene	ND	0.22	0.081	ug/l	
85-01-8	Phenanthrene	0.10	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	54%		30-130%
321-60-8	2-Fluorobiphenyl	41%		30-130%
1718-51-0	Terphenyl-d14	75%		30-130%

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Report of Analysis

Client Sample ID:	P66-ROX-070714-EB		
Lab Sample ID:	MC31918-2	Date Sampled:	07/07/14
Matrix:	AQ - Equipment Blank	Date Received:	07/08/14
Method:	SW846 8011 SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39533.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
Run #2							

	Initial Volume	Final Volume
Run #1	36.1 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	97%		36-173%
460-00-4	Bromofluorobenzene (S)	99%		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

Report of Analysis

Client Sample ID:	P66-ROX-070714		
Lab Sample ID:	MC31918-3	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V32980.D	1	07/18/14	AMY	n/a	n/a	MSV1220
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	UJ
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	42.9	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	2.5	ug/l	
104-51-8	n-Butylbenzene	11.2	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	14.7	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	2.3	5.0	0.39	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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Report of Analysis

Client Sample ID:	P66-ROX-070714		
Lab Sample ID:	MC31918-3	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	1.6	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	144	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	102	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	2.2	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	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	1.0	1.0	0.93	ug/l	
95-47-6	o-Xylene	0.99	1.0	0.36	ug/l	J
1330-20-7	Xylene (total)	2.0	1.0	0.36	ug/l	

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RL = Reporting Limit
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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P66-ROX-070714		
Lab Sample ID:	MC31918-3	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	101%		70-130%

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

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

Report of Analysis

Client Sample ID:	P66-ROX-070714		
Lab Sample ID:	MC31918-3	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X03491.D	1	07/16/14	WK	07/10/14	OP38904	MSX121
Run #2							

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

ABN Special List

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

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

Report of Analysis

Client Sample ID:	P66-ROX-070714		
Lab Sample ID:	MC31918-3	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	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	
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	36%		15-110%
4165-62-2	Phenol-d5	25%		15-110%
118-79-6	2,4,6-Tribromophenol	90%		15-110%
4165-60-0	Nitrobenzene-d5	71%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	89%		30-130%

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

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-070714		
Lab Sample ID:	MC31918-3	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90644.D	1	07/14/14	MR	07/10/14	OP38905	MSI3375
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.33	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	0.16	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	0.78	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	44.5	0.22	0.055	ug/l	
91-57-6	2-Methylnaphthalene	6.0	0.22	0.082	ug/l	
85-01-8	Phenanthrene	0.41	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	78%		30-130%
321-60-8	2-Fluorobiphenyl	59%		30-130%
1718-51-0	Terphenyl-d14	78%		30-130%

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

Report of Analysis

Client Sample ID:	P66-ROX-070714		
Lab Sample ID:	MC31918-3	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8011 SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39534.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
Run #2							

	Initial Volume	Final Volume
Run #1	35.5 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0060	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	115%		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

Report of Analysis

Client Sample ID:	MW13-ROX-070714		
Lab Sample ID:	MC31918-4	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V32982.D	1	07/18/14	AMY	n/a	n/a	MSV1220
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	UJ
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	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
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Report of Analysis

Client Sample ID:	MW13-ROX-070714		
Lab Sample ID:	MC31918-4	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	9.1	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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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-070714		
Lab Sample ID:	MC31918-4	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		70-130%
2037-26-5	Toluene-D8	88%		70-130%
460-00-4	4-Bromofluorobenzene	103%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW13-ROX-070714		
Lab Sample ID:	MC31918-4	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X03494.D	1	07/16/14	WK	07/10/14	OP38904	MSX121
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.5	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.91	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.5	0.33	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.70	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.5	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.5	0.58	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.5	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.61	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.5	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.5	0.38	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.5	0.36	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.5	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.5	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.5	0.29	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.28	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.5	0.19	ug/l	
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:	MW13-ROX-070714		
Lab Sample ID:	MC31918-4	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.4

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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	uJ
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	42%		15-110%
4165-62-2	Phenol-d5	29%		15-110%
118-79-6	2,4,6-Tribromophenol	85%		15-110%
4165-60-0	Nitrobenzene-d5	80%		30-130%
321-60-8	2-Fluorobiphenyl	77%		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:	MW13-ROX-070714		
Lab Sample ID:	MC31918-4	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90647.D	1	07/14/14	MR	07/10/14	OP38905	MSI3375
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.076	ug/l	
208-96-8	Acenaphthylene	0.061	0.11	0.054	ug/l	J
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.055	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	87%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	76%		30-130%

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

Report of Analysis

Client Sample ID:	MW13-ROX-070714		
Lab Sample ID:	MC31918-4	Date Sampled:	07/07/14
Matrix:	AQ - Ground Water	Date Received:	07/08/14
Method:	SW846 8011 SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39535.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
Run #2							

	Initial Volume	Final Volume
Run #1	35.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0060	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	122%		36-173%
460-00-4	Bromofluorobenzene (S)	96%		36-173%

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

Report of Analysis

Client Sample ID:	TB-070714-HCL		
Lab Sample ID:	MC31918-5	Date Sampled:	07/07/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V32974.D	1	07/18/14	AMY	n/a	n/a	MSV1220
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

Report of Analysis

Client Sample ID:	TB-070714-HCL		
Lab Sample ID:	MC31918-5	Date Sampled:	07/07/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	TB-070714-HCL		
Lab Sample ID:	MC31918-5	Date Sampled:	07/07/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.5

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	97%		70-130%

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

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-070714-ST		
Lab Sample ID:	MC31918-6	Date Sampled:	07/07/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/08/14
Method:	SW846 8011 SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39537.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
Run #2							

	Initial Volume	Final Volume
Run #1	35.3 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	132%		36-173%
460-00-4	Bromofluorobenzene (S)	133%		36-173%

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

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

New England ACCUTEST LABORATORIES

Custody Documents and Other Forms

Includes the following where applicable:

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

LAB (LOCATION)

☐ XNCO (.....)
☐ CASCADE (Accutest Labs; 495 Technology Ctr W Marlborough, MA 01752 (508-481-6200))
☑ OTHER ☐ Lab Vendor # (.....)
☐ SL (.....)

Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

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

Print Bill To Contact Name: Bob Bilman

PO #

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

SAP #: 3 4 0 0 6 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 7-7-14

PAGE 1 of 1

URS CORPORATION

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

Elizabeth Kunkel, Wendy Pennington, Bob Bilman, Lindsay Rathnow

314-429-0100 | 314-429-0487

800 South Central Ave; ROXANA

Roxana Quarterly GW / 21562973.03003

L. Rathnow, B. Koca, C. Williams

LAB USE ONLY: MC31918

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

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☐ LEVEL 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Reports.
* Please provide sample receipt upon login.

☑ SHIP, CONTRACT DATE APPLIES
☐ STATE REPORT RESULT DATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEAD DISK

REQUESTED ANALYSIS

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	MW14-ROX-070714	7/7/14	1010	Water	2			2	2	6	X	X	X	X	0	
-2	P66-ROX-070714-EB	7/7/14	1035	↓	↓			↓	↓	↓	X	X	X	X	↓	
	P66-ROX-070714	7/7/14	1125								X	X	X	X		
-3	P66-ROX-070714-MS	7/7/14	1125								X	X	X	X		
MSD	P66-ROX-070714-MSD	7/7/14	1125								X	X	X	X		19A,
-4	MW13-ROX-070714	7/7/14	1410					↓	↓	↓	X	X	X	X		3L2
-5	TB-070714-HCL	7/7/14	00:00		↓					2	X					
-6	TB-070714-ST	7/7/14	00:00	↓					2	2		X			↓	
													Cal			

Relinquished by (Signature)	Received by (Signature)	Date	Time
Cris Williams	FED EX	07/07/14	1700
Fx	[signature]	7-7-14	930

2.9°C
3.7°C

5.1

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MC31918: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC31918 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 7/8/2014 **Delivery Method:** **Client Service Action Required at Login:** No

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

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

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

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

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

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

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

Comments

5.1

MC31918: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC31918

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC31918-1 Collected: 07-JUL-14 10:10 By: MW14-ROX-070714			Received: 08-JUL-14 By: NT			
MC31918-1	SW846 8270D BY SIM	14-JUL-14 10:47	MR	10-JUL-14	FC	B8270SIMSL
MC31918-1	SW846 8011	15-JUL-14 18:37	NK	14-JUL-14	AW	V8011SL
MC31918-1	SW846 8270D	16-JUL-14 11:54	WK	10-JUL-14	FC	AB8270SL+
MC31918-1	SW846 8260C	18-JUL-14 14:45	AMY			V8260SL+
MC31918-2 Collected: 07-JUL-14 10:35 By: P66-ROX-070714-EB			Received: 08-JUL-14 By: NT			
MC31918-2	SW846 8270D BY SIM	14-JUL-14 11:10	MR	10-JUL-14	FC	B8270SIMSL
MC31918-2	SW846 8011	15-JUL-14 18:57	NK	14-JUL-14	AW	V8011SL
MC31918-2	SW846 8270D	16-JUL-14 12:15	WK	10-JUL-14	FC	AB8270SL+
MC31918-2	SW846 8260C	18-JUL-14 13:02	AMY			V8260SL+
MC31918-3 Collected: 07-JUL-14 11:25 By: P66-ROX-070714			Received: 08-JUL-14 By: NT			
MC31918-3	SW846 8270D BY SIM	14-JUL-14 10:23	MR	10-JUL-14	FC	B8270SIMSL
MC31918-3	SW846 8011	15-JUL-14 19:17	NK	14-JUL-14	AW	V8011SL
MC31918-3	SW846 8270D	16-JUL-14 11:34	WK	10-JUL-14	FC	AB8270SL+
MC31918-3	SW846 8260C	18-JUL-14 14:20	AMY			V8260SL+
MC31918-4 Collected: 07-JUL-14 14:10 By: MW13-ROX-070714			Received: 08-JUL-14 By: NT			
MC31918-4	SW846 8270D BY SIM	14-JUL-14 11:33	MR	10-JUL-14	FC	B8270SIMSL
MC31918-4	SW846 8011	15-JUL-14 19:37	NK	14-JUL-14	AW	V8011SL
MC31918-4	SW846 8270D	16-JUL-14 12:35	WK	10-JUL-14	FC	AB8270SL+
MC31918-4	SW846 8260C	18-JUL-14 15:12	AMY			V8260SL+
MC31918-5 Collected: 07-JUL-14 00:00 By: TB-070714-HCL			Received: 08-JUL-14 By: NT			
MC31918-5	SW846 8260C	18-JUL-14 11:43	AMY			V8260SL+
MC31918-6 Collected: 07-JUL-14 00:00 By: TB-070714-ST			Received: 08-JUL-14 By: NT			

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC31918

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC31918-6	SW846 8011	15-JUL-14 20:16	NK	14-JUL-14	AW	V8011SL

Accutest Internal Chain of Custody

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Received: 07/08/14

Sample,Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC31918-1.1	VOC Ref #3	Amy Min Yang	07/18/14 10:26	Retrieve from Storage
MC31918-1.1	Amy Min Yang	GCMSV	07/18/14 10:26	Load on Instrument
MC31918-1.1	GCMSV	Amy Min Yang	07/21/14 11:41	Unload from Instrument
MC31918-1.1	Amy Min Yang	VOC Ref #3	07/21/14 11:41	Return to Storage
MC31918-1.4	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage
MC31918-1.5	Walk In Ref #22	Michael DiBuono	07/10/14 16:14	Retrieve from Storage
MC31918-2.1	VOC Ref #3	Amy Min Yang	07/18/14 10:26	Retrieve from Storage
MC31918-2.1	Amy Min Yang	GCMSV	07/18/14 10:26	Load on Instrument
MC31918-2.1	GCMSV	Amy Min Yang	07/21/14 11:41	Unload from Instrument
MC31918-2.1	Amy Min Yang	VOC Ref #3	07/21/14 11:41	Return to Storage
MC31918-2.2	VOC Ref #3	Amy Min Yang	07/20/14 11:15	Retrieve from Storage
MC31918-2.2	Amy Min Yang	GCMSH	07/20/14 11:15	Load on Instrument
MC31918-2.2	GCMSH	Amy Min Yang	07/22/14 09:51	Unload from Instrument
MC31918-2.2	Amy Min Yang	VOC Ref #3	07/22/14 09:51	Return to Storage
MC31918-2.3	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage
MC31918-2.6	Walk In Ref #22	Michael DiBuono	07/10/14 16:14	Retrieve from Storage
MC31918-3.1	VOC Ref #3	Amy Min Yang	07/18/14 10:26	Retrieve from Storage
MC31918-3.1	Amy Min Yang	GCMSV	07/18/14 10:26	Load on Instrument
MC31918-3.1	GCMSV	Amy Min Yang	07/21/14 11:41	Unload from Instrument
MC31918-3.1	Amy Min Yang	VOC Ref #3	07/21/14 11:41	Return to Storage
MC31918-3.6	Walk In Ref #22	Michael DiBuono	07/10/14 16:14	Retrieve from Storage
MC31918-3.7	VOC Ref #3	Amy Min Yang	07/18/14 10:26	Retrieve from Storage
MC31918-3.7	Amy Min Yang	GCMSV	07/18/14 10:26	Load on Instrument
MC31918-3.7	GCMSV	Amy Min Yang	07/21/14 11:41	Unload from Instrument
MC31918-3.7	Amy Min Yang	VOC Ref #3	07/21/14 11:41	Return to Storage
MC31918-3.8	VOC Ref #3	Amy Min Yang	07/18/14 10:26	Retrieve from Storage
MC31918-3.8	Amy Min Yang	GCMSV	07/18/14 10:26	Load on Instrument
MC31918-3.8	GCMSV	Amy Min Yang	07/21/14 11:41	Unload from Instrument
MC31918-3.8	Amy Min Yang	VOC Ref #3	07/21/14 11:41	Return to Storage
MC31918-3.9	VOC Ref #3	Amy Min Yang	07/18/14 10:26	Retrieve from Storage
MC31918-3.9	Amy Min Yang	GCMSV	07/18/14 10:26	Load on Instrument
MC31918-3.9	GCMSV	Amy Min Yang	07/21/14 11:41	Unload from Instrument
MC31918-3.9	Amy Min Yang	VOC Ref #3	07/21/14 11:41	Return to Storage

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Accutest Internal Chain of Custody

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Received: 07/08/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC31918-3.11	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage
MC31918-3.13	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage
MC31918-3.14	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage
MC31918-3.16	Walk In Ref #22	Michael DiBuono	07/10/14 16:14	Retrieve from Storage
MC31918-3.17	Walk In Ref #22	Michael DiBuono	07/10/14 16:14	Retrieve from Storage
MC31918-4.1	VOC Ref #3	Amy Min Yang	07/18/14 10:26	Retrieve from Storage
MC31918-4.1	Amy Min Yang	GCMSV	07/18/14 10:26	Load on Instrument
MC31918-4.1	GCMSV	Amy Min Yang	07/21/14 11:41	Unload from Instrument
MC31918-4.1	Amy Min Yang	VOC Ref #3	07/21/14 11:41	Return to Storage
MC31918-4.4	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage
MC31918-4.5	Walk In Ref #22	Michael DiBuono	07/10/14 16:14	Retrieve from Storage
MC31918-5.1	VOC Ref #3	Amy Min Yang	07/18/14 10:26	Retrieve from Storage
MC31918-5.1	Amy Min Yang	GCMSV	07/18/14 10:26	Load on Instrument
MC31918-5.1	GCMSV	Amy Min Yang	07/21/14 11:41	Unload from Instrument
MC31918-5.1	Amy Min Yang	VOC Ref #3	07/21/14 11:41	Return to Storage
MC31918-6.1	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage

New England ACCUTEST LABORATORIES

GC/MS Volatiles

6

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1220-MB	V32973.D	1	07/18/14	AMY	n/a	n/a	MSV1220

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

MC31918-1, MC31918-2, MC31918-3, MC31918-4, MC31918-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	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: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1220-MB	V32973.D	1	07/18/14	AMY	n/a	n/a	MSV1220

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

MC31918-1, MC31918-2, MC31918-3, MC31918-4, MC31918-5

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

6.1.1

Method Blank Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1220-MB	V32973.D	1	07/18/14	AMY	n/a	n/a	MSV1220

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

MC31918-1, MC31918-2, MC31918-3, MC31918-4, MC31918-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	112%	70-130%
2037-26-5	Toluene-D8	91%	70-130%
460-00-4	4-Bromofluorobenzene	99%	70-130%

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

Blank Spike Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1220-BS	V32969.D	1	07/18/14	AMY	n/a	n/a	MSV1220

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

MC31918-1, MC31918-2, MC31918-3, MC31918-4, MC31918-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	28.1	56* a	70-130
107-02-8	Acrolein	250	259	104	70-130
107-13-1	Acrylonitrile	50	51.3	103	70-130
71-43-2	Benzene	50	51.5	103	70-130
108-86-1	Bromobenzene	50	50.9	102	70-130
74-97-5	Bromochloromethane	50	50.1	100	70-130
75-27-4	Bromodichloromethane	50	56.5	113	70-130
75-25-2	Bromoform	50	55.1	110	70-130
74-83-9	Bromomethane	50	74.7	149* a	70-130
78-93-3	2-Butanone (MEK)	50	38.4	77	70-130
104-51-8	n-Butylbenzene	50	53.6	107	70-130
135-98-8	sec-Butylbenzene	50	55.5	111	70-130
98-06-6	tert-Butylbenzene	50	54.5	109	70-130
75-15-0	Carbon disulfide	50	43.8	88	70-130
56-23-5	Carbon tetrachloride	50	60.6	121	70-130
108-90-7	Chlorobenzene	50	50.8	102	70-130
75-00-3	Chloroethane	50	77.1	154* a	70-130
110-75-8	2-Chloroethyl vinyl ether	50	42.4	85	70-130
67-66-3	Chloroform	50	53.8	108	70-130
74-87-3	Chloromethane	50	73.1	146* a	70-130
95-49-8	o-Chlorotoluene	50	53.3	107	70-130
106-43-4	p-Chlorotoluene	50	54.2	108	70-130
124-48-1	Dibromochloromethane	50	52.1	104	70-130
95-50-1	1,2-Dichlorobenzene	50	51.7	103	70-130
541-73-1	1,3-Dichlorobenzene	50	51.8	104	70-130
106-46-7	1,4-Dichlorobenzene	50	51.3	103	70-130
75-71-8	Dichlorodifluoromethane	50	49.7	99	70-130
75-34-3	1,1-Dichloroethane	50	57.8	116	70-130
107-06-2	1,2-Dichloroethane	50	56.4	113	70-130
75-35-4	1,1-Dichloroethene	50	53.7	107	70-130
156-59-2	cis-1,2-Dichloroethene	50	51.9	104	70-130
156-60-5	trans-1,2-Dichloroethene	50	57.1	114	70-130
78-87-5	1,2-Dichloropropane	50	48.4	97	70-130
142-28-9	1,3-Dichloropropane	50	49.4	99	70-130
594-20-7	2,2-Dichloropropane	50	60.6	121	70-130
563-58-6	1,1-Dichloropropene	50	54.8	110	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1220-BS	V32969.D	1	07/18/14	AMY	n/a	n/a	MSV1220

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

MC31918-1, MC31918-2, MC31918-3, MC31918-4, MC31918-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	52.6	105	70-130
10061-02-6	trans-1,3-Dichloropropene	50	58.2	116	70-130
123-91-1	1,4-Dioxane	250	246	98	70-130
97-63-2	Ethyl methacrylate	50	38.7	77	77-137
100-41-4	Ethylbenzene	50	53.8	108	70-130
87-68-3	Hexachlorobutadiene	50	46.7	93	70-130
591-78-6	2-Hexanone	50	35.5	71	70-130
98-82-8	Isopropylbenzene	50	57.1	114	70-130
99-87-6	p-Isopropyltoluene	50	55.2	110	70-130
1634-04-4	Methyl Tert Butyl Ether	50	54.6	109	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	43.6	87	70-130
74-95-3	Methylene bromide	50	49.7	99	70-130
75-09-2	Methylene chloride	50	54.7	109	70-130
91-20-3	Naphthalene	50	39.5	79	70-130
103-65-1	n-Propylbenzene	50	53.2	106	70-130
100-42-5	Styrene	50	50.5	101	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	56.9	114	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	50.5	101	70-130
127-18-4	Tetrachloroethene	50	50.9	102	70-130
108-88-3	Toluene	50	47.2	94	70-130
87-61-6	1,2,3-Trichlorobenzene	50	42.9	86	70-130
120-82-1	1,2,4-Trichlorobenzene	50	44.9	90	70-130
71-55-6	1,1,1-Trichloroethane	50	54.9	110	70-130
79-00-5	1,1,2-Trichloroethane	50	43.9	88	70-130
79-01-6	Trichloroethene	50	48.7	97	70-130
75-69-4	Trichlorofluoromethane	50	71.0	142* [a]	70-130
96-18-4	1,2,3-Trichloropropane	50	53.2	106	70-130
95-63-6	1,2,4-Trimethylbenzene	50	53.8	108	70-130
108-67-8	1,3,5-Trimethylbenzene	50	54.0	108	70-130
108-05-4	Vinyl Acetate	50	52.5	105	70-130
75-01-4	Vinyl chloride	50	70.9	142* [b]	70-130
	m,p-Xylene	100	106	106	70-130
95-47-6	o-Xylene	50	53.7	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: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1220-BS	V32969.D	1	07/18/14	AMY	n/a	n/a	MSV1220

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

MC31918-1, MC31918-2, MC31918-3, MC31918-4, MC31918-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	70-130%
2037-26-5	Toluene-D8	90%	70-130%
460-00-4	4-Bromofluorobenzene	94%	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.

6.2.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC31918-3MS	V32992.D	1	07/18/14	AMY	n/a	n/a	MSV1220
MC31918-3MSD	V32993.D	1	07/18/14	AMY	n/a	n/a	MSV1220
MC31918-3	V32980.D	1	07/18/14	AMY	n/a	n/a	MSV1220

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

MC31918-1, MC31918-2, MC31918-3, MC31918-4, MC31918-5

CAS No.	Compound	MC31918-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	66.5	133* a	50	66.1	132* a	1	70-130/30
107-02-8	Acrolein	ND		250	245	98	250	246	98	0	70-130/30
107-13-1	Acrylonitrile	ND		50	46.6	93	50	47.5	95	2	70-130/30
71-43-2	Benzene	42.9		50	205	324* a	50	126	166* a	48* b	70-130/30
108-86-1	Bromobenzene	ND		50	53.5	107	50	51.3	103	4	70-130/30
74-97-5	Bromochloromethane	ND		50	51.8	104	50	50.9	102	2	70-130/30
75-27-4	Bromodichloromethane	ND		50	57.7	115	50	57.9	116	0	70-130/30
75-25-2	Bromoform	ND		50	53.0	106	50	54.6	109	3	70-130/30
74-83-9	Bromomethane	ND		50	65.0	130	50	62.2	124	4	70-130/30
78-93-3	2-Butanone (MEK)	ND		50	45.4	91	50	46.4	93	2	70-130/30
104-51-8	n-Butylbenzene	11.2		50	76.7	131* a	50	74.0	126	4	70-130/30
135-98-8	sec-Butylbenzene	14.7		50	79.1	129	50	75.5	122	5	70-130/30
98-06-6	tert-Butylbenzene	2.3	J	50	61.5	118	50	58.2	112	6	70-130/30
75-15-0	Carbon disulfide	ND		50	51.8	104	50	50.4	101	3	70-130/30
56-23-5	Carbon tetrachloride	ND		50	50.3	101	50	50.4	101	0	70-130/30
108-90-7	Chlorobenzene	ND		50	54.2	108	50	52.9	106	2	70-130/30
75-00-3	Chloroethane	ND		50	65.8	132* a	50	63.1	126	4	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		50	4.2	8* a	50	ND	0* a	200* b	70-130/30
67-66-3	Chloroform	ND		50	52.6	105	50	51.3	103	3	70-130/30
74-87-3	Chloromethane	ND		50	64.1	128	50	61.0	122	5	70-130/30
95-49-8	o-Chlorotoluene	ND		50	58.9	118	50	56.2	112	5	70-130/30
106-43-4	p-Chlorotoluene	ND		50	58.2	116	50	55.8	112	4	70-130/30
124-48-1	Dibromochloromethane	ND		50	49.4	99	50	49.9	100	1	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		50	61.2	122	50	60.3	121	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		50	56.3	113	50	55.1	110	2	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		50	56.2	112	50	54.7	109	3	70-130/30
75-71-8	Dichlorodifluoromethane	ND		50	41.4	83	50	39.6	79	4	70-130/30
75-34-3	1,1-Dichloroethane	ND		50	62.7	125	50	61.0	122	3	70-130/30
107-06-2	1,2-Dichloroethane	ND		50	46.7	93	50	46.2	92	1	70-130/30
75-35-4	1,1-Dichloroethene	ND		50	63.7	127	50	61.4	123	4	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50	60.0	120	50	57.8	116	4	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50	65.1	130	50	63.1	126	3	70-130/30
78-87-5	1,2-Dichloropropane	ND		50	66.0	132* a	50	65.4	131* a	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	55.1	110	50	54.1	108	2	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	65.0	130	50	63.1	126	3	70-130/30
563-58-6	1,1-Dichloropropene	ND		50	54.3	109	50	53.7	107	1	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC31918-3MS	V32992.D	1	07/18/14	AMY	n/a	n/a	MSV1220
MC31918-3MSD	V32993.D	1	07/18/14	AMY	n/a	n/a	MSV1220
MC31918-3	V32980.D	1	07/18/14	AMY	n/a	n/a	MSV1220

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

MC31918-1, MC31918-2, MC31918-3, MC31918-4, MC31918-5

CAS No.	Compound	MC31918-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		50	60.4	121	50	60.7	121	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		50	64.2	128	50	64.9	130	1	70-130/30
123-91-1	1,4-Dioxane	ND		250	327	131* a	250	334	134* a	2	70-130/30
97-63-2	Ethyl methacrylate	ND		50	62.5	125	50	63.2	126	1	72-139/30
100-41-4	Ethylbenzene	1.6		50	62.7	122	50	59.9	117	5	70-130/30
87-68-3	Hexachlorobutadiene	ND		50	65.2	130	50	63.1	126	3	70-130/30
591-78-6	2-Hexanone	ND		50	48.8	98	50	49.7	99	2	70-130/30
98-82-8	Isopropylbenzene	144		50	173	58* c	50	164	40* c	5	70-130/30
99-87-6	p-Isopropyltoluene	ND		50	64.4	129	50	61.8	124	4	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		50	96.4	193* a	50	97.1	194* a	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	55.7	111	50	57.2	114	3	70-130/30
74-95-3	Methylene bromide	ND		50	53.5	107	50	53.7	107	0	70-130/30
75-09-2	Methylene chloride	ND		50	63.0	126	50	61.1	122	3	70-130/30
91-20-3	Naphthalene	ND		50	77.9	156* a	50	72.0	144* a	8	70-130/30
103-65-1	n-Propylbenzene	102		50	139	74	50	133	62* c	4	70-130/30
100-42-5	Styrene	ND		50	56.3	113	50	55.3	111	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	56.0	112	50	55.6	111	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	57.3	115	50	56.5	113	1	70-130/30
127-18-4	Tetrachloroethene	ND		50	56.7	113	50	54.3	109	4	70-130/30
108-88-3	Toluene	2.2		50	59.9	115	50	58.7	113	2	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	60.6	121	50	63.6	127	5	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	65.2	130	50	65.8	132* a	1	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		50	54.7	109	50	54.2	108	1	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50	53.4	107	50	54.2	108	1	70-130/30
79-01-6	Trichloroethene	ND		50	51.3	103	50	49.8	100	3	70-130/30
75-69-4	Trichlorofluoromethane	ND		50	56.4	113	50	54.2	108	4	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		50	56.0	112	50	55.7	111	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		50	62.1	124	50	58.5	117	6	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		50	62.0	124	50	58.5	117	6	70-130/30
108-05-4	Vinyl Acetate	ND		50	79.8	160* a	50	78.2	156* a	2	70-130/30
75-01-4	Vinyl chloride	ND		50	64.7	129	50	61.8	124	5	70-130/30
	m,p-Xylene	1.0		100	123	122	100	118	117	4	70-130/30
95-47-6	o-Xylene	0.99	J	50	63.6	125	50	61.4	121	4	70-130/30
1330-20-7	Xylene (total)	2.0		150	187	123	150	180	119	4	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC31918-3MS	V32992.D	1	07/18/14	AMY	n/a	n/a	MSV1220
MC31918-3MSD	V32993.D	1	07/18/14	AMY	n/a	n/a	MSV1220
MC31918-3	V32980.D	1	07/18/14	AMY	n/a	n/a	MSV1220

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

MC31918-1, MC31918-2, MC31918-3, MC31918-4, MC31918-5

CAS No.	Surrogate Recoveries	MS	MSD	MC31918-3	Limits
1868-53-7	Dibromofluoromethane	86%	87%	92%	70-130%
2037-26-5	Toluene-D8	98%	99%	102%	70-130%
460-00-4	4-Bromofluorobenzene	90%	89%	101%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample non-homogeneity.
(c) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

6.3.1

Volatile Internal Standard Area Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSV1220-CC1177	Injection Date:	07/18/14
Lab File ID:	V32968.D	Injection Time:	09:06
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	517777	6.54	634373	7.73	220822	11.07	307127	13.28	91119	3.50
Upper Limit [a]	1035554	7.04	1268746	8.23	441644	11.57	614254	13.78	182238	4.00
Lower Limit [b]	258889	6.04	317187	7.23	110411	10.57	153564	12.78	45560	3.00
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1220-BS	480540	6.55	607660	7.73	209306	11.07	283291	13.28	80302	3.50
MSV1220-MB	341148	6.54	459492	7.73	177546	11.07	194914	13.28	66364	3.50
MC31918-5	313394	6.54	419580	7.73	166513	11.07	188656	13.28	66870	3.49
ZZZZZZ	328352	6.55	447829	7.73	175129	11.07	194073	13.28	65194	3.50
ZZZZZZ	307064	6.55	420438	7.73	166070	11.07	180053	13.28	60290	3.49
MC31918-2	498860	6.54	614602	7.73	180378	11.07	179224	13.28	173495	3.51
ZZZZZZ	328636	6.54	442659	7.73	172066	11.07	198871	13.28	83109	3.49
ZZZZZZ	297291	6.54	399750	7.73	157970	11.07	186378	13.28	67531	3.49
MC31918-3	452614	6.54	602828	7.73	226166	11.07	264564	13.28	115198	3.49
MC31918-1	489519	6.54	557457	7.73	203848	11.07	231181	13.28	107261	3.50
MC31918-4	434429	6.54	570271	7.73	205314	11.07	241064	13.28	93373	3.49
ZZZZZZ	517670	6.55	592051	7.73	210352	11.07	229122	13.28	94650	3.50
ZZZZZZ	408704	6.54	528454	7.73	194127	11.07	216187	13.28	91645	3.50
ZZZZZZ	385392	6.54	578415	7.73	190544	11.07	213838	13.28	89136	3.49
ZZZZZZ	561731	6.54	742229	7.73	252432	11.07	310148	13.28	136656	3.50
ZZZZZZ	1059510[c]	6.54	1349063[c]	7.73	417553	11.07	794902[c]	13.28	469621[c]	3.51
ZZZZZZ	730708	6.55	1266234	7.73	370126	11.07	600478	13.28	442776[d]	3.52
ZZZZZZ	954446	6.55	1753793[c]	7.73	513416[c]	11.07	760111[c]	13.28	389417[c]	3.52
ZZZZZZ	1211802[c]	6.67	1794648[c]	7.77	402127	11.07	644086[c]	13.28	448170[c]	3.55
ZZZZZZ	1106689[c]	6.65	1721039[c]	7.77	385607	11.07	601058	13.28	467721[c]	3.54
MC31918-3MS	620644	6.54	898986	7.73	314658	11.07	444228	13.28	139883	3.50
MC31918-3MSD	651086	6.54	923749	7.73	328793	11.07	477190	13.28	154193	3.50
ZZZZZZ	463882	6.54	596151	7.72	207598	11.07	234547	13.28	113031	3.49
ZZZZZZ	458633	6.54	580766	7.73	206498	11.07	240798	13.28	105162	3.49

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

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Outside control limits due to possible matrix interference. Confirmed by reanalysis.
(d) Outside control limits. Target analytes not associated with this internal standard.

6.4.1

Volatile Surrogate Recovery Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC31918-1	V32981.D	85	91	100
MC31918-2	V32977.D	106	78	100
MC31918-3	V32980.D	92	102	101
MC31918-4	V32982.D	101	88	103
MC31918-5	V32974.D	113	93	97
MC31918-3MS	V32992.D	86	98	90
MC31918-3MSD	V32993.D	87	99	89
MSV1220-BS	V32969.D	98	90	94
MSV1220-MB	V32973.D	112	91	99

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

New England ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38904-MB	X03487.D	1	07/16/14	WK	07/10/14	OP38904	MSX121

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

MC31918-1, MC31918-2, MC31918-3, MC31918-4

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

7.1.1

Method Blank Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38904-MB	X03487.D	1	07/16/14	WK	07/10/14	OP38904	MSX121

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

MC31918-1, MC31918-2, MC31918-3, MC31918-4

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	44%	15-110%
4165-62-2	Phenol-d5	32%	15-110%
118-79-6	2,4,6-Tribromophenol	74%	15-110%
4165-60-0	Nitrobenzene-d5	82%	30-130%
321-60-8	2-Fluorobiphenyl	78%	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

Method Blank Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38905-MB	I90649.D	1	07/14/14	MR	07/10/14	OP38905	MSI3375

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

MC31918-1, MC31918-2, MC31918-3, MC31918-4

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	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	91%	30-130%
321-60-8	2-Fluorobiphenyl	68%	30-130%
1718-51-0	Terphenyl-d14	75%	30-130%

Blank Spike Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38904-BS	X03488.D	1	07/16/14	WK	07/10/14	OP38904	MSX121

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

MC31918-1, MC31918-2, MC31918-3, MC31918-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	19.5	39	30-130
95-57-8	2-Chlorophenol	50	40.0	80	30-130
59-50-7	4-Chloro-3-methyl phenol	50	42.3	85	30-130
120-83-2	2,4-Dichlorophenol	50	42.8	86	30-130
105-67-9	2,4-Dimethylphenol	50	22.5	45	30-130
51-28-5	2,4-Dinitrophenol	50	25.5	51	30-130
534-52-1	4,6-Dinitro-o-cresol	50	33.7	67	30-130
95-48-7	2-Methylphenol	50	34.4	69	30-130
	3&4-Methylphenol	100	62.1	62	30-130
88-75-5	2-Nitrophenol	50	43.2	86	30-130
100-02-7	4-Nitrophenol	50	17.5	35	30-130
87-86-5	Pentachlorophenol	50	37.4	75	30-130
108-95-2	Phenol	50	17.4	35	30-130
95-95-4	2,4,5-Trichlorophenol	50	45.6	91	30-130
88-06-2	2,4,6-Trichlorophenol	50	45.2	90	30-130
62-53-3	Aniline	50	29.6	59	40-140
101-55-3	4-Bromophenyl phenyl ether	50	48.9	98	40-140
85-68-7	Butyl benzyl phthalate	50	48.9	98	40-140
100-51-6	Benzyl Alcohol	50	28.6	57	40-140
91-58-7	2-Chloronaphthalene	50	42.3	85	40-140
106-47-8	4-Chloroaniline	50	40.2	80	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	43.0	86	40-140
111-44-4	bis(2-Chloroethyl)ether	50	43.4	87	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	46.8	94	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	43.5	87	40-140
122-66-7	1,2-Diphenylhydrazine	50	43.3	87	40-140
121-14-2	2,4-Dinitrotoluene	50	47.8	96	40-140
606-20-2	2,6-Dinitrotoluene	50	46.3	93	40-140
91-94-1	3,3'-Dichlorobenzidine	50	42.9	86	40-140
132-64-9	Dibenzofuran	50	39.4	79	40-140
84-74-2	Di-n-butyl phthalate	50	45.0	90	40-140
117-84-0	Di-n-octyl phthalate	50	59.0	118	40-140
84-66-2	Diethyl phthalate	50	46.9	94	40-140
131-11-3	Dimethyl phthalate	50	46.9	94	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	53.5	107	40-140
118-74-1	Hexachlorobenzene	50	46.7	93	40-140

* = Outside of Control Limits.

7.2.1

Blank Spike Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38904-BS	X03488.D	1	07/16/14	WK	07/10/14	OP38904	MSX121

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

MC31918-1, MC31918-2, MC31918-3, MC31918-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	19.0	38* a	40-140
67-72-1	Hexachloroethane	50	30.6	61	40-140
78-59-1	Isophorone	50	40.5	81	40-140
88-74-4	2-Nitroaniline	50	47.7	95	40-140
99-09-2	3-Nitroaniline	50	43.8	88	40-140
100-01-6	4-Nitroaniline	50	42.7	85	40-140
98-95-3	Nitrobenzene	50	43.5	87	40-140
62-75-9	n-Nitrosodimethylamine	50	24.2	48	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	43.8	88	40-140
86-30-6	N-Nitrosodiphenylamine	50	42.1	84	40-140
110-86-1	Pyridine	50	21.6	43	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	47%	15-110%
4165-62-2	Phenol-d5	33%	15-110%
118-79-6	2,4,6-Tribromophenol	85%	15-110%
4165-60-0	Nitrobenzene-d5	87%	30-130%
321-60-8	2-Fluorobiphenyl	82%	30-130%
1718-51-0	Terphenyl-d14	91%	30-130%

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

* = Outside of Control Limits.

7.2.1

Blank Spike Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38905-BS	I90641.D	1	07/14/14	MR	07/10/14	OP38905	MSI3375

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

MC31918-1, MC31918-2, MC31918-3, MC31918-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	33.6	67	40-140
208-96-8	Acenaphthylene	50	28.2	56	40-140
120-12-7	Anthracene	50	34.1	68	40-140
56-55-3	Benzo(a)anthracene	50	42.9	86	40-140
50-32-8	Benzo(a)pyrene	50	36.2	72	40-140
205-99-2	Benzo(b)fluoranthene	50	39.4	79	40-140
191-24-2	Benzo(g,h,i)perylene	50	38.3	77	40-140
207-08-9	Benzo(k)fluoranthene	50	36.8	74	40-140
218-01-9	Chrysene	50	40.0	80	40-140
53-70-3	Dibenzo(a,h)anthracene	50	38.8	78	40-140
206-44-0	Fluoranthene	50	33.9	68	40-140
86-73-7	Fluorene	50	43.8	88	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	31.3	63	40-140
90-12-0	1-Methylnaphthalene	50	33.4	67	40-140
91-57-6	2-Methylnaphthalene	50	34.8	70	40-140
85-01-8	Phenanthrene	50	35.8	72	40-140
129-00-0	Pyrene	50	35.4	71	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	96%	30-130%
321-60-8	2-Fluorobiphenyl	71%	30-130%
1718-51-0	Terphenyl-d14	76%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38904-MS	X03489.D	1	07/16/14	WK	07/10/14	OP38904	MSX121
OP38904-MSD	X03490.D	1	07/16/14	WK	07/10/14	OP38904	MSX121
MC31918-3	X03491.D	1	07/16/14	WK	07/10/14	OP38904	MSX121

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

MC31918-1, MC31918-2, MC31918-3, MC31918-4

CAS No.	Compound	MC31918-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		54.9	30.1	55	54.9	29.5	54	2	30-130/20
95-57-8	2-Chlorophenol	ND		54.9	39.6	72	54.9	34.8	63	13	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		54.9	42.8	78	54.9	40.4	74	6	30-130/20
120-83-2	2,4-Dichlorophenol	ND		54.9	43.7	80	54.9	38.5	70	13	30-130/20
105-67-9	2,4-Dimethylphenol	ND		54.9	43.5	79	54.9	39.2	71	10	30-130/20
51-28-5	2,4-Dinitrophenol	ND		54.9	29.4	54	54.9	29.2	53	1	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		54.9	36.7	67	54.9	35.9	65	2	30-130/20
95-48-7	2-Methylphenol	ND		54.9	38.0	69	54.9	33.5	61	13	30-130/20
	3&4-Methylphenol	ND		110	62.8	57	110	56.3	51	11	30-130/20
88-75-5	2-Nitrophenol	ND		54.9	44.5	81	54.9	37.9	69	16	30-130/20
100-02-7	4-Nitrophenol	ND		54.9	24.9	45	54.9	23.7	43	5	30-130/20
87-86-5	Pentachlorophenol	ND		54.9	43.0	78	54.9	39.6	72	8	30-130/20
108-95-2	Phenol	ND		54.9	19.5	35	54.9	18.0	33	8	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		54.9	47.1	86	54.9	41.2	75	13	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		54.9	44.3	81	54.9	39.2	71	12	30-130/20
62-53-3	Aniline	ND		54.9	25.4	46	54.9	27.3	50	7	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		54.9	48.1	88	54.9	42.7	78	12	40-140/20
85-68-7	Butyl benzyl phthalate	ND		54.9	48.7	89	54.9	45.0	82	8	40-140/20
100-51-6	Benzyl Alcohol	ND		54.9	27.1	49	54.9	26.3	48	3	40-140/20
91-58-7	2-Chloronaphthalene	ND		54.9	43.8	80	54.9	37.5	68	15	40-140/20
106-47-8	4-Chloroaniline	ND		54.9	36.5	66	54.9	39.5	72	8	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		54.9	42.2	77	54.9	35.3	64	18	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		54.9	43.0	78	54.9	36.4	66	17	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		54.9	46.2	84	54.9	39.6	72	15	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		54.9	43.7	80	54.9	38.3	70	13	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		54.9	45.7	83	54.9	40.6	74	12	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		54.9	45.7	83	54.9	41.7	76	9	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		54.9	46.6	85	54.9	41.3	75	12	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		54.9	7.7	14* [a]	54.9	7.1	13* [a]	8	40-140/20
132-64-9	Dibenzofuran	ND		54.9	39.6	72	54.9	34.6	63	13	40-140/20
84-74-2	Di-n-butyl phthalate	0.30	J	54.9	44.1	80	54.9	40.4	73	9	40-140/20
117-84-0	Di-n-octyl phthalate	ND		54.9	60.6	110	54.9	55.7	101	8	40-140/20
84-66-2	Diethyl phthalate	ND		54.9	45.8	83	54.9	41.9	76	9	40-140/20
131-11-3	Dimethyl phthalate	ND		54.9	44.9	82	54.9	40.7	74	10	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		54.9	53.4	97	54.9	49.5	90	8	40-140/20
118-74-1	Hexachlorobenzene	ND		54.9	45.4	83	54.9	41.7	76	8	40-140/20

* = Outside of Control Limits.

7.3.1

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Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38904-MS	X03489.D	1	07/16/14	WK	07/10/14	OP38904	MSX121
OP38904-MSD	X03490.D	1	07/16/14	WK	07/10/14	OP38904	MSX121
MC31918-3	X03491.D	1	07/16/14	WK	07/10/14	OP38904	MSX121

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

MC31918-1, MC31918-2, MC31918-3, MC31918-4

7.3.1

7

CAS No.	Compound	MC31918-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		54.9	21.1	38* b	54.9	17.9	33* b	16	40-140/20
67-72-1	Hexachloroethane	ND		54.9	35.9	65	54.9	30.5	56	16	40-140/20
78-59-1	Isophorone	ND		54.9	40.3	73	54.9	34.9	64	14	40-140/20
88-74-4	2-Nitroaniline	ND		54.9	46.2	84	54.9	41.8	76	10	40-140/20
99-09-2	3-Nitroaniline	ND		54.9	38.9	71	54.9	40.2	73	3	40-140/20
100-01-6	4-Nitroaniline	ND		54.9	35.7	65	54.9	34.0	62	5	40-140/20
98-95-3	Nitrobenzene	ND		54.9	47.6	87	54.9	40.3	73	17	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		54.9	24.9	45	54.9	23.6	43	5	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		54.9	42.9	78	54.9	36.6	67	16	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		54.9	42.7	78	54.9	38.7	70	10	40-140/20
110-86-1	Pyridine	ND		54.9	23.6	43	54.9	23.6	43	0	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC31918-3	Limits
367-12-4	2-Fluorophenol	40%	36%	36%	15-110%
4165-62-2	Phenol-d5	28%	26%	25%	15-110%
118-79-6	2,4,6-Tribromophenol	79%	73%	90%	15-110%
4165-60-0	Nitrobenzene-d5	80%	66%	71%	30-130%
321-60-8	2-Fluorobiphenyl	73%	62%	68%	30-130%
1718-51-0	Terphenyl-d14	81%	75%	89%	30-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38905-MS	I90642.D	1	07/14/14	MR	07/10/14	OP38905	MSI3375
OP38905-MSD	I90643.D	1	07/14/14	MR	07/10/14	OP38905	MSI3375
MC31918-3	I90644.D	1	07/14/14	MR	07/10/14	OP38905	MSI3375

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

MC31918-1, MC31918-2, MC31918-3, MC31918-4

CAS No.	Compound	MC31918-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	0.33		54.9	34.0	61	54.9	30.3	55	12	40-140/20
208-96-8	Acenaphthylene	0.16		54.9	28.3	51	54.9	24.9	45	13	40-140/20
120-12-7	Anthracene	ND		54.9	33.6	61	54.9	30.8	56	9	40-140/20
56-55-3	Benzo(a)anthracene	ND		54.9	43.8	80	54.9	39.5	72	10	40-140/20
50-32-8	Benzo(a)pyrene	ND		54.9	35.5	65	54.9	32.1	58	10	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		54.9	40.4	74	54.9	35.0	64	14	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		54.9	37.5	68	54.9	33.9	62	10	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		54.9	34.1	62	54.9	33.0	60	3	40-140/20
218-01-9	Chrysene	ND		54.9	39.4	72	54.9	35.7	65	10	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		54.9	37.8	69	54.9	34.1	62	10	40-140/20
206-44-0	Fluoranthene	ND		54.9	34.7	63	54.9	31.4	57	10	40-140/20
86-73-7	Fluorene	0.78		54.9	42.4	76	54.9	38.2	68	10	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		54.9	30.3	55	54.9	27.7	50	9	40-140/20
90-12-0	1-Methylnaphthalene	44.5		54.9	82.5	69	54.9	72.3	51	13	40-140/20
91-57-6	2-Methylnaphthalene	6.0		54.9	43.3	68	54.9	36.9	56	16	40-140/20
85-01-8	Phenanthrene	0.41		54.9	35.3	63	54.9	31.8	57	10	40-140/20
129-00-0	Pyrene	ND		54.9	36.2	66	54.9	32.8	60	10	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC31918-3	Limits
4165-60-0	Nitrobenzene-d5	87%	73%	78%	30-130%
321-60-8	2-Fluorobiphenyl	64%	55%	59%	30-130%
1718-51-0	Terphenyl-d14	70%	64%	78%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSI3375-CC3320	Injection Date:	07/14/14
Lab File ID:	I90639.D	Injection Time:	08:27
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	462556	3.39	954441	4.41	569474	5.91	974997	7.23	637182	9.99	1748256	11.39
Upper Limit [a]	925112	3.89	1908882	4.91	1138948	6.41	1949994	7.73	1274364	10.49	3496512	11.89
Lower Limit [b]	231278	2.89	477221	3.91	284737	5.41	487499	6.73	318591	9.49	874128	10.89
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP38905-BS	526245	3.39	1095332	4.42	632313	5.92	1061342	7.23	718261	9.99	1880536	11.40
OP38905-MS	508238	3.39	1041213	4.42	602306	5.92	1000057	7.23	648293	10.00	1755578	11.40
OP38905-MSD	500503	3.37	1034532	4.41	603760	5.92	1003527	7.23	649074	10.00	1750521	11.40
MC31918-3	483582	3.39	996089	4.42	589657	5.92	977205	7.23	620975	9.99	1714098	11.39
MC31918-1	530101	3.39	1100334	4.41	641902	5.91	1074490	7.23	685385	9.99	1901638	11.39
MC31918-2	445157	3.39	925912	4.41	547444	5.91	919716	7.23	606598	9.98	1673547	11.39
MC31918-4	525430	3.39	1071920	4.41	614737	5.92	1036598	7.23	636921	9.99	1717712	11.40
ZZZZZZ	458487	3.39	952635	4.41	562640	5.91	950761	7.23	630211	9.99	1733165	11.39
OP38905-MB	500580	3.39	1043934	4.41	613985	5.91	1037318	7.23	676217	9.99	1846758	11.39
ZZZZZZ	497402	3.39	1022897	4.42	595283	5.91	992866	7.23	639343	9.99	1769986	11.39
ZZZZZZ	508768	3.39	1034747	4.42	582401	5.92	960844	7.23	592855	9.99	1635553	11.39
ZZZZZZ	492938	3.39	1019299	4.41	595164	5.91	1009168	7.23	649999	9.99	1765263	11.39
ZZZZZZ	480952	3.39	1011798	4.41	596512	5.91	1010071	7.23	660804	9.98	1806827	11.39

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: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSX121-CC106	Injection Date:	07/16/14
Lab File ID:	X03482.D	Injection Time:	08:30
Instrument ID:	GCMSX	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	328847	3.99	1246051	5.04	662656	6.57	1030023	7.86	804495	10.42	599036	12.10
Upper Limit [a]	657694	4.49	2492102	5.54	1325312	7.07	2060046	8.36	1608990	10.92	1198072	12.60
Lower Limit [b]	164424	3.49	623026	4.54	331328	6.07	515012	7.36	402248	9.92	299518	11.60

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP38948-MB	296163	3.98	1095841	5.03	568725	6.57	812580	7.86	545899	10.41	405923	12.09
OP38948-BS	260776	3.98	918600	5.04	491876	6.57	723367	7.85	531423	10.41	441379	12.09
ZZZZZZ	226294	3.98	799031	5.04	398059	6.57	535605	7.86	377722[c]	10.45	259680[c]	12.14
ZZZZZZ	224975	3.98	828986	5.03	424914	6.56	613477	7.85	426536	10.40	345296	12.09
OP38904-MB	341026	3.98	1239217	5.04	649510	6.57	954996	7.86	714197	10.41	562323	12.09
OP38904-BS	344883	3.98	1242584	5.04	648886	6.57	993817	7.86	776080	10.41	621017	12.10
OP38904-MS	322426	3.98	1135051	5.04	602891	6.57	896381	7.86	696546	10.41	530117	12.10
OP38904-MSD	315128	3.98	1116556	5.04	607032	6.57	911053	7.86	713550	10.41	546041	12.10
MC31918-3	304500	3.98	1090059	5.04	578629	6.57	851332	7.86	647424	10.41	523014	12.10
MC31918-1	365863	3.98	1324915	5.04	701814	6.57	1029789	7.85	791409	10.41	629700	12.10
MC31918-2	295300	3.98	1058396	5.03	552873	6.57	811127	7.85	594802	10.41	468733	12.09
MC31918-4	326854	3.98	1182764	5.04	616133	6.57	899538	7.85	686895	10.41	526011	12.10
ZZZZZZ	297225	3.98	1083396	5.04	576413	6.57	855450	7.85	633488	10.41	508342	12.09
ZZZZZZ	312486	3.98	1136406	5.04	593444	6.57	884052	7.85	653593	10.41	533083	12.09
ZZZZZZ	301396	3.98	1122929	5.04	586294	6.57	855191	7.85	633412	10.41	518967	12.09
ZZZZZZ	291350	3.98	1053255	5.03	553933	6.57	815178	7.85	588737	10.41	450795	12.09
ZZZZZZ	308394	3.99	1097465	5.04	594326	6.57	890471	7.86	683205	10.41	529536	12.10
ZZZZZZ	283436	3.98	1035604	5.04	549331	6.57	805277	7.85	588290	10.41	485501	12.09
ZZZZZZ	312529	3.98	1125298	5.04	591670	6.57	861764	7.85	635481	10.41	531910	12.09
OP38931-MB	322546	3.98	1163915	5.04	597939	6.57	846511	7.86	601970	10.42	484287	12.11
OP38931-BS	258166	3.98	929660	5.04	494898	6.57	740175	7.86	572938	10.41	474314	12.10
ZZZZZZ	259314	3.98	919618	5.03	485310	6.57	704763	7.85	507789	10.40	389468	12.09
OP38966-MB	299946	3.98	1092618	5.03	567510	6.57	825596	7.85	600143	10.40	458125	12.09
OP38966-BS	280307	3.98	1005521	5.04	538132	6.57	811110	7.86	632229	10.41	514221	12.09
OP38966-MS	264921	3.98	943767	5.04	495987	6.57	724759	7.85	556330	10.41	465282	12.09
OP38966-MSD	264180	3.98	937027	5.04	495692	6.57	741487	7.85	564682	10.41	461048	12.09
MC32000-10	274922	3.98	998834	5.03	514627	6.57	752861	7.85	548502	10.40	415829	12.09

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

7.4.2

Semivolatile Internal Standard Area Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSX121-CC106	Injection Date:	07/16/14
Lab File ID:	X03482.D	Injection Time:	08:30
Instrument ID:	GCMSX	Method:	SW846 8270D

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

7.4.2

Semivolatile Surrogate Recovery Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC31918-1	X03492.D	43	30	83	82	77	87
MC31918-2	X03493.D	26	18	55	51	48	89
MC31918-3	X03491.D	36	25	90	71	68	89
MC31918-4	X03494.D	42	29	85	80	77	87
OP38904-BS	X03488.D	47	33	85	87	82	91
OP38904-MB	X03487.D	44	32	74	82	78	88
OP38904-MS	X03489.D	40	28	79	80	73	81
OP38904-MSD	X03490.D	36	26	73	66	62	75

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

Semivolatile Surrogate Recovery Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC31918-1	I90645.D	91	67	77
MC31918-2	I90646.D	54	41	75
MC31918-3	I90644.D	78	59	78
MC31918-4	I90647.D	87	68	76
OP38905-BS	I90641.D	96	71	76
OP38905-MB	I90649.D	91	68	75
OP38905-MS	I90642.D	87	64	70
OP38905-MSD	I90643.D	73	55	64

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

7.5.2

New England ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

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: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38952-MB	BK39526.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283

The QC reported here applies to the following samples: Method: SW846 8011

MC31918-1, MC31918-2, MC31918-3, MC31918-4, MC31918-6

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	118%	36-173%
460-00-4	Bromofluorobenzene (S)	112%	36-173%

8011
8

Blank Spike Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38952-BS	BK39527.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283

The QC reported here applies to the following samples: Method: SW846 8011

MC31918-1, MC31918-2, MC31918-3, MC31918-4, MC31918-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.142	0.10	71	60-140
106-93-4	1,2-Dibromoethane	0.142	0.11	78	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	114%	36-173%
460-00-4	Bromofluorobenzene (S)	103%	36-173%

8.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38952-MS	BK39528.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
OP38952-MSD	BK39529.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
MC31918-3	BK39534.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283

The QC reported here applies to the following samples: Method: SW846 8011

MC31918-1, MC31918-2, MC31918-3, MC31918-4, MC31918-6

CAS No.	Compound	MC31918-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.139	0.10	72	0.138	0.092	67	8	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.139	0.11	79	0.138	0.095	69	15	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC31918-3	Limits
460-00-4	Bromofluorobenzene (S)	112%	112%	115%	36-173%
460-00-4	Bromofluorobenzene (S)	108%	117%	115%	36-173%

8.3.1

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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]
MC31918-1	BK39532.D	118	120
MC31918-2	BK39533.D	97	99
MC31918-3	BK39534.D	115	115
MC31918-4	BK39535.D	122	96
MC31918-6	BK39537.D	132	133
OP38952-BS	BK39527.D	114	103
OP38952-MB	BK39526.D	118	112
OP38952-MS	BK39528.D	112	108
OP38952-MSD	BK39529.D	112	117

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	CBK1283-ICC1283	Injection Date:	07/15/14
Lab File ID:	BK39522.D	Injection Time:	15:19
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.38	4.40

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP38952-MB	BK39526.D	07/15/14	16:39	4.38	4.40
OP38952-BS	BK39527.D	07/15/14	16:58	4.38	4.40
OP38952-MS	BK39528.D	07/15/14	17:18	4.38	4.40
OP38952-MSD	BK39529.D	07/15/14	17:38	4.38	4.40
OP38952-MS1	BK39530.D	07/15/14	17:57	4.38	4.40
OP38952-MSD1	BK39531.D	07/15/14	18:17	4.38	4.40
MC31918-1	BK39532.D	07/15/14	18:37	4.38	4.40
MC31918-2	BK39533.D	07/15/14	18:57	4.38	4.40
MC31918-3	BK39534.D	07/15/14	19:17	4.38	4.40
MC31918-4	BK39535.D	07/15/14	19:37	4.38	4.40

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: MC31918
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	GBK1283-CC1283	Injection Date:	07/15/14
Lab File ID:	BK39536.D	Injection Time:	19:57
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.38	4.40

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC31918-6	BK39537.D	07/15/14	20:16	4.38	4.40
ZZZZZZ	BK39538.D	07/15/14	20:36	4.38	4.40
ZZZZZZ	BK39539.D	07/15/14	20:56	4.38	4.40
ZZZZZZ	BK39540.D	07/15/14	21:15	4.38	4.40
ZZZZZZ	BK39541.D	07/15/14	21:34	4.38	4.40
ZZZZZZ	BK39542.D	07/15/14	21:54	4.38	4.40
ZZZZZZ	BK39543.D	07/15/14	22:13	4.38	4.40
ZZZZZZ	BK39544.D	07/15/14	22:32	4.38	4.40
ZZZZZZ	BK39545.D	07/15/14	22:52	4.39	4.41
MC31999-1	BK39546.D	07/15/14	23:11	4.39	4.41

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 – 3rd Quarter 2014 Data Review

Laboratory SDG: MC31956

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 7/24/2014

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

Sample Identification	Sample Identification
P74-ROX-070814	P56-ROX-070814
T12-ROX-070814	P59-ROX-070814-EB
P59-ROX-070814	P57-ROX-070814
P57-ROX-070814-Dup	TB-070814-HCL
TB-070814-ST	

1.0 Data Package Completeness

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

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

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

Yes, the laboratory case narrative indicated VOC and SVOC LCS recoveries were outside evaluation criteria. The VOC surrogate recovery for dibromofluoromethane was outside evaluation criteria in field duplicate pair P57-ROX-070814-Run#1/P57-ROX-070814-Dup-Run#1. VOC internal standard area recoveries were outside criteria in several samples. Several samples were diluted due to high levels of VOC target analytes. These issues are addressed further in the appropriate sections below. Additionally, initial calibration verification for dichlorodifluoromethane exceeded 30 percent difference (%D).

The cooler receipt form indicated that two of two coolers were received by the laboratory at temperatures of 0.7ºC and 1.2ºC, which are outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV1220-BS	VOCs	Acetone	**56**	70-130
MSV1220-BS	VOCs	Bromomethane	**149**	70-130
MSV1220-BS	VOCs	Chloroethane	**154**	70-130
MSV1220-BS	VOCs	Chloromethane	**146**	70-130
MSV1220-BS	VOCs	Trichlorofluoromethane	**142**	70-130
MSV1220-BS	VOCs	Vinyl chloride	**142**	70-130
OP38904-BS	SVOCs	Hexachlorocyclopentadiene	**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. P59-ROX-070814-EB and the trip blank are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
P74-ROX-070814	VOCs	Acetone	**UJ**
P56-ROX-070814	VOCs	Acetone	**J**
T12-ROX-070814	VOCs	Acetone	**J**
P59-ROX-070814	VOCs	Acetone	**J**
P57-ROX-070814	VOCs	Acetone	**J**
P57-ROX-070814-Dup	VOCs	Acetone	**J**
P74-ROX-070814	SVOCs	Hexachlorocyclopentadiene	**UJ**
P56-ROX-070814	SVOCs	Hexachlorocyclopentadiene	**UJ**
T12-ROX-070814	SVOCs	Hexachlorocyclopentadiene	**UJ**
P59-ROX-070814	SVOCs	Hexachlorocyclopentadiene	**UJ**
P57-ROX-070814	SVOCs	Hexachlorocyclopentadiene	**UJ**
P57-ROX-070814-Dup	SVOCs	Hexachlorocyclopentadiene	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
P57-ROX-070814-Run#1	VOCs	Dibromofluoromethane	**69**	70-130
P57-ROX-070814-Dup-Run#1	VOCs	Dibromofluoromethane	**68**	70-130

Analytical data that required qualification based on surrogate data are included in the table below.

Sample ID	Parameter	Analyte	Qualification
P57-ROX-070814	VOCs	All non-detects	**UJ**
P57-ROX-070814	VOCs	Acetone	**J**
P57-ROX-070814	VOCs	n-Butylbenzene	**J**
P57-ROX-070814	VOCs	sec-Butylbenzene	**J**

Sample ID	Parameter	Analyte	Qualification
P57-ROX-070814	VOCs	tert-Butylbenzene	**J**
P57-ROX-070814	VOCs	Isopropylbenzene	**J**
P57-ROX-070814	VOCs	p-Isopropyltoluene	**J**
P57-ROX-070814	VOCs	Naphthalene	**J**
P57-ROX-070814	VOCs	n-Propylbenzene	**J**
P57-ROX-070814	VOCs	Toluene	**J**
P57-ROX-070814	VOCs	1,2,4-Trimethylbenzene	**J**
P57-ROX-070814	VOCs	1,3,5-Trimethylbenzene	**J**
P57-ROX-070814-Dup	VOCs	All non-detects	**UJ**
P57-ROX-070814-Dup	VOCs	Acetone	**J**
P57-ROX-070814-Dup	VOCs	2-Butanone (MEK)	**J**
P57-ROX-070814-Dup	VOCs	n-Butylbenzene	**J**
P57-ROX-070814-Dup	VOCs	sec-Butylbenzene	**J**
P57-ROX-070814-Dup	VOCs	tert-Butylbenzene	**J**
P57-ROX-070814-Dup	VOCs	Isopropylbenzene	**J**
P57-ROX-070814-Dup	VOCs	p-Isopropyltoluene	**J**
P57-ROX-070814-Dup	VOCs	Naphthalene	**J**
P57-ROX-070814-Dup	VOCs	n-Propylbenzene	**J**
P57-ROX-070814-Dup	VOCs	Toluene	**J**
P57-ROX-070814-Dup	VOCs	1,2,4-Trimethylbenzene	**J**
P57-ROX-070814-Dup	VOCs	1,3,5-Trimethylbenzene	**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
P56-ROX-070814	VOCs	Pentafluorobenzene	**1059510**	258889-1035554
P56-ROX-070814	VOCs	1,4-Difluorobenzene	**1349063**	317187-1268746
P56-ROX-070814	VOCs	1,4-Dichlorobenzene-d_4	**794902**	153564-614254
P56-ROX-070814	VOCs	Tert butyl alcohol-d_9	**469621**	45560-182238
T12-ROX-070814	VOCs	Tert butyl alcohol-d_9	**442776**	45560-182238
P59-ROX-070814	VOCs	1,4-Difluorobenzene	**1753793**	317187-1268746
P59-ROX-070814	VOCs	Chlorobenzene-d_5	**513416**	110411-441644
P59-ROX-070814	VOCs	1,4-Dichlorobenzene-d_4	**760111**	153564-614254
P59-ROX-070814	VOCs	Tert butyl alcohol-d_9	**389417**	45560-182238
P57-ROX-070814	VOCs	Pentafluorobenzene	**1211802**	258889-1035554
P57-ROX-070814	VOCs	1,4-Difluorobenzene	**1794648**	317187-1268746
P57-ROX-070814	VOCs	1,4-Dichlorobenzene-d_4	**644086**	153564-614254
P57-ROX-070814	VOCs	Tert butyl alcohol-d_9	**448170**	45560-182238
P57-ROX-070814-Dup	VOCs	Pentafluorobenzene	**1106689**	258889-1035554

Sample ID	Parameter	Analyte	IS Area Recovery	IS Criteria
P57-ROX-070814-Dup	VOCs	1,4-Difluorobenzene	**1721039**	317187-1268746
P57-ROX-070814-Dup	VOCs	Tert butyl alcohol-d_9	**467721**	45560-182238

Analytical data that required qualification based on internal standard data are included in the table below. Analytical data reported as non-detect and associated with IS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Field duplicate pair P57-ROX-070814/P57-ROX-070814 was previously qualified in Section 6.0 of this Review due to surrogate recoveries outside evaluation criteria; no further qualification of field duplicate pair P57-ROX-070814/P57-ROX-070814 was required. There were no target analytes associated with tert butyl alcohol-d_9; therefore, no qualification of data was required based on tert butyl alcohol-d_9.

Field ID	Parameter	Analyte	Qualification
P56-ROX-070814	VOCs	All detects	**J**
P59-ROX-070814	VOCs	Acetone	**J**
P59-ROX-070814	VOCs	2-Butanone (MEK)	**J**
P59-ROX-070814	VOCs	n-Butylbenzene	**J**
P59-ROX-070814	VOCs	sec-Butylbenzene	**J**
P59-ROX-070814	VOCs	Isopropylbenzene	**J**
P59-ROX-070814	VOCs	p-Isopropyltoluene	**J**
P59-ROX-070814	VOCs	Naphthalene	**J**
P59-ROX-070814	VOCs	n-Propylbenzene	**J**
P59-ROX-070814	VOCs	1,3,5-Trimethylbenzene	**J**

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
P57-ROX-070814	P57-ROX-070814-Dup

Were field duplicates within evaluation criteria?

Yes

11.0 Sample Dilutions

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

Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

No

1.0 VALIDATION OF EDB/DBCP DATA – SDG MC31956

This section describes the validation for seven investigative groundwater samples which were prepared and analyzed for 1,2-dibromoethane (EDB) and 1,2-dibromo-3-chloropropane (DBCP) by USEPA SW-846 Method 8011. The samples were analyzed by Accutest Laboratories of Marlborough, Massachusetts and submitted as part of the sample delivery group (SDG) MC31956. The samples included as part of this validation are listed below.

Sample Identification	Sample Identification
P74-ROX-070814	P56-ROX-070814
T12-ROX-070814	P59-ROX-070814-EB
P59-ROX-0708214	P57-ROX-070814
P57-ROX-070814-Dup	

Evaluation of the analytical data followed procedures outlined in the USEPA Contract Laboratory National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2013).

Criteria evaluated included the following method performance criteria:

- Data package completeness
- Laboratory case narrative/cooler receipt form
- Holding times and sample preservation
- GC/MS instrument performance
- Initial calibration
- Calibration verification
- Blank samples
- Surrogate spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) samples
- Internal standards
- Laboratory control spike (LCS) samples
- Target compound identification and quantification
- Overall data assessment

1.1 Data Package Completeness

The data package was reviewed to make certain that it contained the data contractually required in the deliverable. This included checking the data package for the results of each analyte requested for each field sample submitted in the analytical batch, along with requested QC documentation for the respective methods.

1.2 Laboratory Case Narrative/Cooler Receipt Form

No problems were indicated in the laboratory case narrative.

The cooler receipt form indicated two of two coolers were received by the laboratory at temperatures of 0.7ºC and 1.2ºC, which are outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

1.3 Holding Times and Sample Preservation

Review of the sample collection and analysis dates involved comparing the sample chain-of-custody, the summary forms, the raw data forms, and the chromatograms for accuracy, consistency, and holding time compliance. The samples were received in good condition at temperatures of 0.7ºC and 1.2ºC, and maintained at approximately $4^{o}C \pm 2^{o}C$. In addition, the samples were analyzed within 14 days of collection. No qualifications to the data were required based on holding times and sample preservation.

1.4 Initial Calibration

An initial calibration (ICAL) was established to assess whether the instrument was capable of producing acceptable qualitative and quantitative data for EDB/DBCP analyses. Validated samples included in SDG MC31956 were analyzed using instrument GCBK. The ICAL for instrument GCBK was established on 7/14/2014. At least five standard concentrations were used to establish the ICAL curve as required by Method 8011.

Review of the initial calibration summary forms indicated percent relative standard deviations (%RSDs) were ≤ 15% for target analytes or were determined using least square linear regression and correlation coefficients (r) were greater than 0.990. A recalculation of the %RSDs was performed from the raw data and no errors in calculation were noted; therefore, no qualification of data was required.

Review of the sample chromatograms indicated that a second source calibration was performed following the initial calibration. Review of ICV summary forms indicated percent difference (%D) ≤ 15% for target analytes. Recalculation of the percent recoveries was completed and no errors in calculation were noted.

1.5 Calibration Verification

Review of the sample chromatograms indicated that all calibration verifications (CVs) were performed before the start of sample analysis. Percent differences (%Ds) met the evaluation criteria of ≤ 20% for target analytes. Recalculations of the %Ds for target compounds were completed for each CV, and no errors in calculation were noted; therefore, no qualifications of data were required.

1.6 Blank Samples

The purpose of the method blank samples is to evaluate the existence and magnitude of contamination problems emanating from laboratory activities. Method blank samples were analyzed with each analytical batch as required by USEPA SW-846 Method 8011. Also, trip blanks were analyzed to evaluate the existence and magnitude of contamination problems emanating during sample shipment to the laboratory. Equipment blank samples are used to evaluate the efficiency of the decontamination of sampling equipment. Target compounds were reported as non-detect. No qualification of data was required.

1.7 Surrogate Spike Recoveries

Surrogate compounds were used to evaluate the overall laboratory sample preparation efficiency on a per sample basis. Surrogate recoveries were within the method acceptance criteria for the validated samples.

Approximately 10% of the recoveries were recalculated and no calculation or transcription errors were noted.

1.8 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

MS/MSD samples are analyzed to assess potential matrix effects. Although not analyzed as part of SDG MC31956, sample P66-ROX-070714 (SDG MC31918) was spiked and analyzed for 1,2-dibromo-3-chloropropane and 1,2-dibromomethane. MS/MSD data were within evaluation criteria.

Approximately 10% of the MS/MSD spiking recoveries were verified using the MS/MSD summary forms, and no errors were noted.

1.9 Laboratory Control Spike (LCS) Samples

Laboratory control samples were analyzed with each analytical batch to assess the accuracy of the analytical process. LCS data were within evaluation criteria. Approximately 10% of spiking compound recoveries for the LCS were recalculated and verified using the LCS summary forms, and no calculation or transcription errors were noted.

1.10 Target Compound Identification and Quantification

For validation of the compound identification, chromatograms were reviewed to verify the major peaks were identified, and the relative retention time was no greater than 0.06 different from the associated CV retention times. Approximately 10% of the detected target analytes were verified. No anomalies were noted with the identification of the target compounds in the samples.

For the validation of compound quantitation, the matrix spike results were recalculated from the raw data since all target analytes were non-detect, and no calculation errors were noted. Additionally, the reporting limits were verified to determine if reporting limits (RLs) were adjusted for dilutions. No qualification of the data was required and review of the data indicated the correct RLs were reported.

1.11 Overall Data Assessment

Based on the criteria outlined, it is recommended that the results reported for these analyses are accepted for their intended use. Acceptable levels of accuracy and precision, based on LCS and surrogate data were achieved for this SDG.

1.0 VALIDATION OF VOC DATA – SDG MC31956

This section describes the validation for six groundwater samples and one equipment blank which were prepared by USEPA SW-846 Method 5030B and analyzed for volatile organic compounds (VOCs) by USEPA SW-846 Method 8260C. The samples were analyzed by Accutest Laboratories of Marlborough, Massachusetts and submitted as part of the sample delivery group (SDG) MC31956. The samples included as part of this validation are listed below.

Sample Identification	Sample Identification
P74-ROX-070814	P56-ROX-070814
T12-ROX-070814	P59-ROX-070814-EB
P59-ROX-070814	P57-ROX-070814
P57-ROX-070814-Dup	

Evaluation of the analytical data followed procedures outlined in the USEPA Contract Laboratory National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2013).

Criteria evaluated included the following method performance criteria:

- Data package completeness
- Laboratory case narrative/cooler receipt form
- Holding times and sample preservation
- GC/MS instrument performance
- Initial calibration
- Calibration verification
- Blank samples
- Surrogate spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) samples
- Internal standards
- Laboratory control spike (LCS) samples
- Target compound identification and quantification
- Overall data assessment

1.1 Data Package Completeness

The data package was reviewed to make certain that it contained the data contractually required in the deliverable. This included checking the data package for the results of each analyte requested for each field sample submitted in the analytical batch, along with requested QC documentation for the respective methods.

1.2 Laboratory Case Narrative/Cooler Receipt Form

The laboratory case narrative indicated VOC LCS recoveries were outside evaluation criteria. The VOC surrogate recovery for dibromofluoromethane was outside evaluation criteria in field duplicate pair P57-ROX-070814-Run#1/P57-ROX-070814-Dup-Run#1. Internal standard area recoveries were outside criteria in several samples. Several samples were diluted due to high levels of VOC target analytes. Additionally, initial calibration verification for dichlorodifluoromethane exceeded 30 percent difference (%D). These issues are addressed further in the appropriate sections below.

The cooler receipt form indicated two of two coolers were received by the laboratory at temperatures of 0.7ºC and 1.2ºC, which are outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

1.3 Holding Times and Sample Preservation

Review of the sample collection and analysis dates involved comparing the sample chain-of-custody, the summary forms, the raw data forms, and the chromatograms for accuracy, consistency, and holding time compliance. The samples were received in good condition at temperatures of 0.7ºC and 1.2ºC, and maintained at approximately $4^{o}C \pm 2^{o}$ C. In addition, the samples were analyzed within 14 days of collection at a pH < 2. No qualifications to the data were required based on holding times and sample preservation.

1.4 GC/MS Instrument Performance

GC/MS instrument performance checks were performed to ensure mass resolution, identification, and instrument sensitivity. Criteria for evaluation of instrument performance included possible transcription/calculation errors, adherence to instrument tuning frequency requirements, mass assignments, and ion abundance criteria. Instrument performance check samples were evaluated against criteria established in USEPA SW-846 Method 8260.

Based on the summary forms, the ion abundance criteria were within evaluation criteria for all masses. No qualifications to the data were required based on instrument performance criteria.

1.5 Initial Calibration

An initial calibration (ICAL) was established to assess whether the instrument was capable of producing acceptable qualitative and quantitative data for volatiles analyses. Validated samples included in SDG MC31956 were analyzed using instruments MSH and MSV. The ICAL for instrument MSH was established on 7/16/2014; only certain compounds (e.g. BTEX, 1,2,4-trimethylbenzene) run at dilutions for samples T12-ROX-070814, P59-ROX-070814, and P57-ROX-070814/Dup were analyzed using instrument MSH. The ICAL for instrument MSV was established on 6/5/2014. At least five standard concentrations were used to establish the ICAL curves as required by Method 8260C.

The ICAL response factors (RFs) were reviewed and were greater than 0.01 for chloromethane, 0.30 for 1,1-dichloroethane, 0.10 for bromoform, 0.40 for chlorobenzene, 0.20 for 1,1,2,2-tetrachloroethane, and greater than National Functional Guideline (NFG) specified minimum RRFs for all other target analytes. Data associated with low response factors for acrolein (0.041) and 1,4-dioxane (0.001) were qualified as estimated; however, not rejected. NFG (2008) indicated an advisory RF ≥ 0.0050 for 1,4-dioxane as a VOC. Additionally, NFG (2008) indicated that target analytes, unless discussed individually as poor performers, have minimum RRFs ≥ 0.05. NFG (2013) does not list acrolein in any initial calibration tables, and only lists 1,4-dioxane under SVOCs.

Qualifications of data due to ICAL RRF are summarized in the following table.

Sample ID	Analyte	Qualification
P74-ROX-070814	Acrolein	**UJ**
P74-ROX-070814	1,4-Dioxane	**UJ**
P56-ROX-070814	Acrolein	**UJ**
P56-ROX-070814	1,4-Dioxane	**UJ**
T12-ROX-070814	Acrolein	**UJ**
T12-ROX-070814	1,4-Dioxane	**UJ**
P59-ROX-070814	Acrolein	**UJ**
P59-ROX-070814	1,4-Dioxane	**UJ**
P57-ROX-070814	Acrolein	**UJ**
P57-ROX-070814	1,4-Dioxane	**UJ**
P57-ROX-070814-Dup	Acrolein	**UJ**
P57-ROX-070814-Dup	1,4-Dioxane	**UJ**

Review of the initial calibration summary forms indicated %RSDs were $\leq$ 30% for calibration check compounds (CCCs) [1,1-dichloroethene, toluene, chloroform, ethylbenzene, 1,2-dichloropropane, and vinyl chloride], and $\leq$ 15% for non-CCCs with some exceptions. The initial calibration for compounds with %RSD values outside evaluation criteria was determined using least square linear regression: correlation coefficients (r) were greater than 0.990.

Initial calibration verification (ICV) was analyzed following the initial calibration. Percent difference (%D) values from comparing ICV RF to the average ICAL RFs were less than those specified in NFG (2013) with the exception of isopropylbenzene (-27.6%).

Qualifications of data due to ICV %D are summarized in the following table.

Sample ID	Analyte	Qualification
P74-ROX-070814	Isopropylbenzene	**J**
P56-ROX-070814	Isopropylbenzene	**J**
T12-ROX-070814	Isopropylbenzene	**J**
P59-ROX-070814	Isopropylbenzene	**J**
P57-ROX-070814	Isopropylbenzene	**J**
P57-ROX-070814-Dup	Isopropylbenzene	**J**

A recalculation of the %RSDs and RFs for a compound associated with each internal standard was performed from the raw data and no errors in calculation were noted; therefore, no qualification of data was required.

1.6 Calibration Verification

Review of the sample chromatograms indicated that all calibration verifications (CVs) were performed before the start of sample analysis. Review of CV summary forms indicated RFs met the evaluation criteria of greater than 0.01 for chloromethane, 0.30 for 1,1-dichloroethane, 0.10 for bromoform, 0.40 for chlorobenzene, 0.20 for 1,1,2,2-tetrachloroethane, and greater than NFG specified minimum RRFs for all other target analytes with the exceptions of 1,4-dioxane (0.001) and acrolein (0.042) for which

associated results were previously qualified from the initial calibration. Therefore, no further qualification of data was required. In addition, percent differences (%Ds) for target compounds met the evaluation criteria as specified in NFG (2013), with exceptions summarized in the following table.

CV (Date/Time)	Analyte	%D
7/18/2014 9:06	Carbon tetrachloride	**-36.6**
7/18/2014 9:06	1,2-dichloroethane	**-25.4**
7/18/2014 9:06	2-Chloroethyl vinyl ether	**24.7**

Results for the compounds, carbon tetrachloride and 1,2-dichloroethane, in the validated samples associated with marginal increases in %D, indicating potential high bias, were non-detect; therefore, professional judgment was used to not qualify the data.

Analytical data that required qualification based on continuing calibration verification data are included in the table below.

Sample ID	Analyte	Qualifications
P74-ROX-070814	2-Chloroethyl vinyl ether	**UJ**
P56-ROX-070814	2-Chloroethyl vinyl ether	**UJ**
T12-ROX-070814	2-Chloroethyl vinyl ether	**UJ**
P59-ROX-070814	2-Chloroethyl vinyl ether	**UJ**
P57-ROX-070814	2-Chloroethyl vinyl ether	**UJ**
P57-ROX-070814-Dup	2-Chloroethyl vinyl ether	**UJ**

Recalculations of the RFs and %Ds for two target compounds were completed for each CV, and no errors in calculation were noted; therefore, no qualifications of data were required.

1.7 Blank Samples

The purpose of the method blank samples is to evaluate the existence and magnitude of contamination problems emanating from laboratory activities. Method blank samples were analyzed with each analytical batch as required by USEPA SW-846 Method 8260C. Also, trip blanks were analyzed to evaluate the existence and magnitude of contamination problems emanating during sample shipment to the laboratory. Equipment blank samples are used to evaluate the efficiency of the decontamination of sampling equipment. Target compounds were reported as non-detect. No qualification of data was required.

1.8 Surrogate Spike Recoveries

Surrogate compounds were used to evaluate the overall laboratory sample preparation efficiency on a per sample basis. All surrogate recoveries were within the method acceptance criteria for the validated samples with exceptions summarized in the following table.

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
P57-ROX-070814-Run#1	VOCs	Dibromofluoromethane	**69**	70-130
P57-ROX-070814-Dup-Run#1	VOCs	Dibromofluoromethane	**68**	70-130

Analytical data that required qualification based on surrogate data are included in the table below.

Sample ID	Parameter	Analyte	Qualification
P57-ROX-070814	VOCs	All non-detects	**UJ**
P57-ROX-070814	VOCs	Acetone	**J**
P57-ROX-070814	VOCs	n-Butylbenzene	**J**
P57-ROX-070814	VOCs	sec-Butylbenzene	**J**
P57-ROX-070814	VOCs	tert-Butylbenzene	**J**
P57-ROX-070814	VOCs	Isopropylbenzene	**J**
P57-ROX-070814	VOCs	p-Isopropyltoluene	**J**
P57-ROX-070814	VOCs	Naphthalene	**J**
P57-ROX-070814	VOCs	n-Propylbenzene	**J**
P57-ROX-070814	VOCs	Toluene	**J**
P57-ROX-070814	VOCs	1,2,4-Trimethylbenzene	**J**
P57-ROX-070814	VOCs	1,3,5-Trimethylbenzene	**J**
P57-ROX-070814-Dup	VOCs	All non-detects	**UJ**
P57-ROX-070814-Dup	VOCs	Acetone	**J**
P57-ROX-070814-Dup	VOCs	2-Butanone (MEK)	**J**
P57-ROX-070814-Dup	VOCs	n-Butylbenzene	**J**
P57-ROX-070814-Dup	VOCs	sec-Butylbenzene	**J**
P57-ROX-070814-Dup	VOCs	tert-Butylbenzene	**J**
P57-ROX-070814-Dup	VOCs	Isopropylbenzene	**J**
P57-ROX-070814-Dup	VOCs	p-Isopropyltoluene	**J**
P57-ROX-070814-Dup	VOCs	Naphthalene	**J**
P57-ROX-070814-Dup	VOCs	n-Propylbenzene	**J**
P57-ROX-070814-Dup	VOCs	Toluene	**J**
P57-ROX-070814-Dup	VOCs	1,2,4-Trimethylbenzene	**J**
P57-ROX-070814-Dup	VOCs	1,3,5-Trimethylbenzene	**J**

Approximately 10% of the recoveries were recalculated and no calculation or transcription errors were noted.

1.9 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

MS/MSD samples are analyzed to assess potential matrix effects. Although not analyzed as part of SDG MC31956, sample P66-ROX-070714 (SDG MC31918) was spiked and analyzed for 8260 VOCs. MS/MSD data were within evaluation criteria, with the exception of those summarized in the following table.

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
P66-ROX-070714	VOCs	Acetone	**133/132**	1	70-130/30
P66-ROX-070714	VOCs	Benzene	**324/166**	**48**	70-130/30
P66-ROX-070714	VOCs	n-Butylbenzene	**131**/126	4	70-130/30
P66-ROX-070714	VOCs	Chloroethane	**132**/126	4	70-130/30
P66-ROX-070714	VOCs	2-Chloroethyl vinyl ether	**8/0**	**200**	70-130/30
P66-ROX-070714	VOCs	1,2-Dichloropropane	**132/131**	1	70-130/30

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
P66-ROX-070714	VOCs	1,4-Dioxane	**131/134**	2	70-130/30
P66-ROX-070714	VOCs	Isopropylbenzene	**58/40**	5	70-130/30
P66-ROX-070714	VOCs	Methyl tert butyl ether	**193/194**	1	70-130/30
P66-ROX-070714	VOCs	Naphthalene	**156/144**	8	70-130/30
P66-ROX-070714	VOCs	n-Propylbenzene	74/**62**	4	70-130/30
P66-ROX-070714	VOCs	1,2,4-Trichlorobenzene	130/**132**	1	70-130/30
P66-ROX-070714	VOCs	Vinyl acetate	**160/156**	2	70-130/30

LCS/LCSD recoveries were within evaluation criteria with the exception of analytes listed and qualified as appropriate in Section 5.0 of this data review. No further qualification of data was required.

Approximately 10% of the MS/MSD spiking recoveries were recalculated and verified using the MS/MSD summary forms, and no errors were noted.

1.10 Internal Standards

Internal standard (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during each analytical run. IS areas must be within -50% to +100%, and the IS retention times must be within 30 seconds of the IS continuing calibration retention time. IS areas and retention times for the validated samples in this SDG were within evaluation criteria, with the exception of those listed in the table below. The summary forms versus the raw data were verified and no transcription errors were noted.

Sample ID	Parameter	Analyte	IS Area Recovery	IS Criteria
P56-ROX-070814	VOCs	Pentafluorobenzene	**1059510**	258889-1035554
P56-ROX-070814	VOCs	1,4-Difluorobenzene	**1349063**	317187-1268746
P56-ROX-070814	VOCs	1,4-Dichlorobenzene-d_4	**794902**	153564-614254
P56-ROX-070814	VOCs	Tert butyl alcohol-d_9	**469621**	45560-182238
T12-ROX-070814	VOCs	Tert butyl alcohol-d_9	**442776**	45560-182238
P59-ROX-070814	VOCs	1,4-Difluorobenzene	**1753793**	317187-1268746
P59-ROX-070814	VOCs	Chlorobenzene-d_5	**513416**	110411-441644
P59-ROX-070814	VOCs	1,4-Dichlorobenzene-d_4	**760111**	153564-614254
P59-ROX-070814	VOCs	Tert butyl alcohol-d_9	**389417**	45560-182238
P57-ROX-070814	VOCs	Pentafluorobenzene	**1211802**	258889-1035554
P57-ROX-070814	VOCs	1,4-Difluorobenzene	**1794648**	317187-1268746
P57-ROX-070814	VOCs	1,4-Dichlorobenzene-d_4	**644086**	153564-614254
P57-ROX-070814	VOCs	Tert butyl alcohol-d_9	**448170**	45560-182238
P57-ROX-070814-Dup	VOCs	Pentafluorobenzene	**1106689**	258889-1035554
P57-ROX-070814-Dup	VOCs	1,4-Difluorobenzene	**1721039**	317187-1268746
P57-ROX-070814-Dup	VOCs	Tert butyl alcohol-d_9	**467721**	45560-182238

Analytical data that required qualification based on internal standard data are included in the table below. Analytical data reported as non-detect and associated with IS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Field duplicate pair P57-ROX-070814/P57-ROX-070814 was previously qualified in Section 1.8 of this validation report due to surrogate recoveries outside evaluation criteria; no further

qualification of field duplicate pair P57-ROX-070814/P57-ROX-070814 was required.

Field ID	Parameter	Analyte	Qualification
P56-ROX-070814	VOCs	All detects	**J**
P59-ROX-070814	VOCs	Acetone	**J**
P59-ROX-070814	VOCs	2-Butanone (MEK)	**J**
P59-ROX-070814	VOCs	n-Butylbenzene	**J**
P59-ROX-070814	VOCs	sec-Butylbenzene	**J**
P59-ROX-070814	VOCs	Isopropylbenzene	**J**
P59-ROX-070814	VOCs	p-Isopropyltoluene	**J**
P59-ROX-070814	VOCs	Naphthalene	**J**
P59-ROX-070814	VOCs	n-Propylbenzene	**J**
P59-ROX-070814	VOCs	1,3,5-Trimethylbenzene	**J**

1.11 Laboratory Control Spike (LCS) Samples

Laboratory control samples were analyzed with each analytical batch to assess the accuracy of the analytical process. LCS data were within evaluation criteria, with the exception of those summarized in the following table:

LCS/ LCSD ID	Parameter	Analyte	LCS Recovery	LCS RPD Criteria
MSV1220-BS	VOCs	Acetone	**56**	70-130
MSV1220-BS	VOCs	Bromomethane	**149**	70-130
MSV1220-BS	VOCs	Chloroethane	**154**	70-130
MSV1220-BS	VOCs	Chloromethane	**146**	70-130
MSV1220-BS	VOCs	Trichlorofluoromethane	**142**	70-130
MSV1220-BS	VOCs	Vinyl chloride	**142**	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. P59-ROX-070814-EB is a quality control sample and was not qualified.

Sample ID	Parameter	Analyte	Qualification
P74-ROX-070814	VOCs	Acetone	**UJ**
P56-ROX-070814	VOCs	Acetone	**J**
T12-ROX-070814	VOCs	Acetone	**J**
P59-ROX-070814	VOCs	Acetone	**J**
P57-ROX-070814	VOCs	Acetone	**J**
P57-ROX-070814-Dup	VOCs	Acetone	**J**

Approximately 10% of spiking compound recoveries for the LCS were recalculated and verified using the LCS summary forms, and no calculation or transcription errors were noted.

1.12 Target Compound Identification and Quantification

For validation of the compound identification, chromatograms were reviewed to verify the major peaks were identified, and the relative retention time was no greater than 0.06

different from the associated CV retention times. Approximately 10% of the detected target analytes were recalculated and verified. No anomalies were noted with the identification of the target compounds in the samples.

For the validation of compound quantitation, approximately 10% of the detected target analytes were recalculated from the raw data, and no calculation errors were noted. Additionally, the reporting limits were verified to determine if reporting limits (RLs) were adjusted for dilutions. No qualification of the data was required and review of the data indicated the correct RLs were reported.

1.13 Overall Data Assessment

Based on the criteria outlined, it is recommended that the results for these analyses are accepted for their intended use. Acceptable levels of accuracy and precision, based on LCS and surrogate data were achieved for this SDG.

1.0 VALIDATION OF SVOC DATA – SDG MC31956

This section describes the validation for seven groundwater samples which were prepared by USEPA SW-846 Method 3520C and analyzed for semi-volatile organic compounds (SVOCs) by USEPA SW-846 Method 8270C and for polycyclic aromatic hydrocarbons (PAHs) by USEPA SW-846 Method 8270C SIM. Samples were analyzed by Accutest Laboratories of Marlborough, Massachusetts, and submitted as part of sample delivery group (SDG) MC31956. Samples included as part of this validation are listed below:

Sample Identification	Sample Identification
P74-ROX-070814	P56-ROX-070814
T12-ROX-070814	P59-ROX-070814-EB
P59-ROX-070814	P57-ROX-070814
P57-ROX-070814-Dup	

Evaluation of the analytical data followed procedures outlined in the USEPA Contract Laboratory National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2013).

Criteria evaluated included the following method performance criteria:

- Data package completeness
- Laboratory case narrative/cooler receipt form
- Holding times and sample preservation
- Instrument performance
- Initial calibration
- Calibration verification
- Blank samples
- Surrogate spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) samples
- Internal standard areas
- Laboratory control sample (LCS)
- Target compound identification and quantitation
- Overall data assessment

1.0 Data Package Completeness

The data package was reviewed to make certain that it contained the data contractually required in the deliverable. This included checking the data package for the results of each analyte requested for each field sample submitted in the analytical batch, along with requested QC documentation for the respective methods. The data package was complete.

1.2 Laboratory Case Narrative/Cooler Receipt Form

Yes, the laboratory case narrative indicated that SVOC LCS recoveries were outside evaluation criteria. Initial calibration verification and continuing calibration verification percent differences were outside evaluation criteria. These issues are addressed further in the appropriate sections

below.

The cooler receipt form indicated two of two coolers were received by the laboratory at temperatures of 0.7ºC and 1.2ºC, which are outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

1.3 Holding Times and Sample Preservation

Review of the sample collection and analysis dates involved comparing the chain-of-custody, the summary forms, the raw data forms, and the chromatograms for accuracy, consistency, and holding time compliance. The validated samples were received in good condition at temperatures of 0.7ºC and 1.2ºC and maintained at approximately $4^{o}C \pm 2^{o}C$, and were extracted within seven days of collection and analyzed within 40 days of extraction. No qualification of data was required due to sample preservation or holding time criteria.

1.4 GC/MS Instrument Performance

GC/MS instrument performance checks were performed to ensure mass resolution, identification, and instrument sensitivity. Criteria for evaluation of instrument performance included possible transcription/calculation errors, adherence to instrument tuning frequency requirements, mass assignments, and ion abundance criteria. Instrument performance check samples were evaluated against the laboratory tuning criteria established in Method 8270C.

Based on the raw data, the ion abundance criteria were within evaluation criteria for all masses, therefore; no qualification of the data was required. The raw data forms were checked against the summary forms and no calculation or transcription errors were noted.

1.5 Initial Calibration

An Initial calibration (ICAL) was established to assess whether the instrument was capable of producing acceptable qualitative and quantitative data for semi-volatile analysis. SVOC samples as part of SDG MC31956 were analyzed using instruments MSX and MSF, and PAH samples were analyzed using instrument MSI. The ICAL for instruments MSX and MSF were established on 7/25/2014 and 7/21/2014, respectively. The ICAL for instrument MSI was established on 6/25/2014. ICALs for instruments MSX, MSF, and MSI were established prior to sample analysis and using at least five concentration standards to establish the initial calibration curve as required by Method 8270C and 8270C SIM. An average response factor (RF) was determined for each target analyte, and the RFs were reviewed and verified as greater than 0.05 for all target analytes.

Review of the initial calibration summary forms for SVOCs and PAHs indicated calibration check compounds (CCCs) had percent relative standard deviations (%RSDs) $\leq$ 30%. All other target analytes had %RSDs less than 15% for CCCs with some exceptions. The initial calibration for compounds with %RSD values outside evaluation criteria was determined using least square linear regression and the correlation coefficients (r) were greater than 0.990.

Initial calibration verifications (ICVs) for SVOCs and PAHs were analyzed following the initial calibrations. Percent difference (%D) values comparing ICV RF to the average ICAL RFs were less than those specified in NFG (2013) for target, or closely analgous, compounds with the exceptions of aniline (29.3%) and 4-chloroaniline (29.5%).

Qualifications of data due to ICV %D are summarized in the following table.

Sample ID	Analyte	Qualifications
P74-ROX-070814	Aniline	**UJ**
P74-ROX-070814	4-Chloroaniline	**UJ**
P56-ROX-070814	Aniline	**UJ**
P56-ROX-070814	4-Chloroaniline	**UJ**
T12-ROX-070814	Aniline	**UJ**
T12-ROX-070814	4-Chloroaniline	**UJ**
P59-ROX-070814	Aniline	**UJ**
P59-ROX-070814	4-Chloroaniline	**UJ**
P57-ROX-070814	Aniline	**UJ**
P57-ROX-070814	4-Chloroaniline	**UJ**
P57-ROX-070814-Dup	Aniline	**UJ**
P57-ROX-070814-Dup	4-Chloroaniline	**UJ**

Recalculations of the RFs and %RSD for one compound per internal standard were performed, and no errors in calculation were noted.

1.6 Calibration Verification

Review of sample chromatograms indicated the calibration verifications (CVs) were performed prior to sample analysis. Review of continuing calibration summary forms for SVOCs and PAHs indicated all RFs met the evaluation criteria of greater than 0.05 for all target analytes. In addition, percent differences (%Ds) met the evaluation criteria of less than or equal to specified in NFG (2013) for target, or closely analgous, compounds, with the exception summarized in the table below.

CV (Date/Time)	Analyte	%D
7/18/2014 8:04	Fluoranthene	**25.8%**

Analytical data that required qualification based on continuing calibration %Ds are included in the table below. Analytical data reported as non-detect and associated with continuing calibration %Ds recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Sample ID	Analyte	Qualifications
P59-ROX-070814	Fluoranthene	**J**
P57-ROX-070814	Fluoranthene	**UJ**
P57-ROX-070814-Dup	Fluoranthene	**UJ**

Recalculations of the RFs and %RSD for one compound per internal standard were performed, and no errors in calculation were noted.

1.7 Blank Samples

The purpose of method blank samples is to evaluate the existence and magnitude of contamination problems emanating from laboratory activities. Method blank samples were analyzed with each analytical batch as required by USEPA SW-846 Method 8270C. Equipment

blank samples are used to evaluate the efficiency of the decontamination of sampling equipment. Target compounds in the blank samples were reported as non-detect. No qualifications of data were required.

1.8 Surrogate Spike Recoveries

Surrogate compounds were used to evaluate the overall laboratory sample preparation efficiency on a per-sample basis. Surrogate recoveries were within the method acceptance criteria for all validated samples.

Approximately 10% of the surrogate recoveries were recalculated, and the summary forms versus the raw data were verified. No calculation or transcription errors were noted.

1.9 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

MS/MSD samples are analyzed to assess potential matrix effects. Although not analyzed as part of SDG MC31956, sample P66-ROX-070714 (SDG MC31918) was spiked and analyzed for SVOCs.

MS/MSD recoveries were within the method acceptance criteria for the validated samples with the exception of those summarized in the table below.

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
P66-ROX-070714	SVOCs	3,3'-Dichlorobenzidine	**14/13**	8	40-140/20
P66-ROX-070714	SVOCs	Hexachlorocyclopentadiene	**38/33**	16	40-140/20

LCS/LCSD recoveries were within evaluation criteria with the exception of compounds listed and qualified as appropriate in the data review for SDG MC31918. No further qualification of data was required.

Approximately 10% of the MS/MSD spiking recoveries were recalculated and verified using MS/MSD summary forms, and no calculation or transcription errors were noted,

1.10 Internal Standards

Internal standard (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during each analytical run. Following Method 8270C, the IS areas for the samples and CVs must be within –50% to +100% and retention times must be within 30 seconds of the IS area and retention time of the midpoint of the ICAL.

The IS areas for the CVs and the validated samples in this SDG were within evaluation criteria.

1.11 Laboratory Control Spike (LCS) Samples

Laboratory control samples were analyzed with each analytical batch to assess the accuracy of the analytical process. LCS recoveries were within evaluation criteria with the exceptions summarized in the following table.

LCS	Parameter	Analyte	LCS Recovery	LCS Criteria
OP38904-BS	SVOCs	Hexachlorocyclopentadiene	**38**/NA	40-140

Analytical data that required qualification based on LCS data are included in the table below.

Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS OP33941-BS was associated with the equipment blank is not qualified.

Sample ID	Parameter	Analyte	Qualification
P74-ROX-070814	SVOCs	Hexachlorocyclopentadiene	**UJ**
P56-ROX-070814	SVOCs	Hexachlorocyclopentadiene	**UJ**
T12-ROX-070814	SVOCs	Hexachlorocyclopentadiene	**UJ**
P59-ROX-070814	SVOCs	Hexachlorocyclopentadiene	**UJ**
P57-ROX-070814	SVOCs	Hexachlorocyclopentadiene	**UJ**
P57-ROX-070814-Dup	SVOCs	Hexachlorocyclopentadiene	**UJ**

Approximately 10% of the spiking compound recoveries for the LCS were recalculated from the raw data and verified using the LCS summary forms, and no calculation or transcription errors were noted.

1.12 Target Compound Identification and Quantification

For validation of the compound identification, chromatograms were reviewed to verify the major peaks were identified, the spectra of the identified compounds were verified against the library spectra, and the relative retention time was no greater than 0.06 different from the associated CV retention times. A minimum of 10% of the detected target analytes and spiking compounds were verified. No anomalies were noted with the identification of the target compounds in the samples.

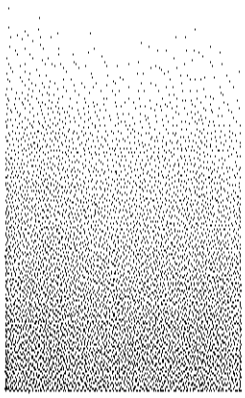
For the validation of compound quantitation, 10% of the target analytes were recalculated from the raw data, and no calculation errors were noted. Additionally, the reporting limits were verified to determine if reporting limits (RLs) were adjusted for dilutions. No qualification of the data was required and review of the data indicated the correct RLs were reported.

1.13 Overall Data Assessment

Based on the criteria outlined, it is recommended that the results reported for these analyses are accepted for their intended use. Acceptable levels of accuracy and precision, based on LCS and surrogate data were achieved for this SDG.

New England ACCUTEST LABORATORIES

07/24/14





Technical Report for

Shell Oil

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana,

Accutest Job Number: MC31956

Sampling Date: 07/08/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: **112**

Reviewed on 7/24/14 MM

Reza Tand
Lab Director

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

Client Service contact: Matthew Morrell 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (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: MC31956

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC31956-1	07/08/14	09:50	CWBK	07/09/14	AQ	Ground Water	P74-ROX-070814
MC31956-2	07/08/14	11:10	CWBK	07/09/14	AQ	Ground Water	P56-ROX-070814
MC31956-3	07/08/14	14:00	CWBK	07/09/14	AQ	Ground Water	T12-ROX-070814
MC31956-4	07/08/14	14:20	CWBK	07/09/14	AQ	Equipment Blank	P59-ROX-070814-EB
MC31956-5	07/08/14	15:06	CWBK	07/09/14	AQ	Ground Water	P59-ROX-070814
MC31956-6	07/08/14	16:15	CWBK	07/09/14	AQ	Ground Water	P57-ROX-070814
MC31956-7	07/08/14	16:15	CWBK	07/09/14	AQ	Ground Water	P57-ROX-070814-DUP
MC31956-8	07/08/14	00:00	CWBK	07/09/14	AQ	Trip Blank Water	TB-070814-HCL
MC31956-9	07/08/14	00:00	CWBK	07/09/14	AQ	Trip Blank Water	TB-070814-ST

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SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	Job No	MC31956
Site:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central	Report Date	7/23/2014 4:14:02 PM

7 Sample(s) and 2 Trip Blank(s) were collected on 07/08/2014 and were received at Accutest on 07/09/2014 properly preserved, at 0.7 Deg. C and intact. These Samples received an Accutest job number of MC31956. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Sample 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: MSH2247

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC32208-1MS, MC32208-1MSD were used as the QC samples indicated.

Matrix AQ	Batch ID: MSV1220

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC31918-3MS, MC31918-3MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MC31918-3MS Recovery(s) for 1,2-Dichloropropane, 1,4-Dioxane, 2-Chloroethyl vinyl ether, Acetone, Benzene, Chloroethane, Methyl Tert Butyl Ether, n-Butylbenzene, Naphthalene, Vinyl Acetate are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Blank Spike Recovery(s) for Acetone, Bromomethane, Chloroethane, Chloromethane, Trichlorofluoromethane are outside control limits. Blank Spike meets program technical requirements.
- MC31918-3MS Recovery(s) for Isopropylbenzene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- MC31918-3MSD Recovery(s) for 1,2,4-Trichlorobenzene, 1,2-Dichloropropane, 1,4-Dioxane, Acetone, Methyl Tert Butyl Ether, Naphthalene, Vinyl Acetate, 2-Chloroethyl vinyl ether are outside control limits. Outside control limits due to possible matrix interferenee. Refer to Blank Spike.
- RPD(s) for MSD for 2-Chloroethyl vinyl ether, Benzene are outside control limits for sample MC31918-3MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- MC31918-3MSD Recovery(s) for Isopropylbenzene, n-Propylbenzene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- MC31918-3 for Tert Butyl Alcohol-D9: Outside control limits. Target analytes not associated with this internal standard.
- MC31956-2,5,6,7 has internal standards outside control limits due to possible matrix interference. Confirmed by reanalysis.
- MSV1220-BS for Vinyl chloride: Outside control limits. Associated samples are non-detect for this compound.
- Initial calibration verification MSV1177-ICV1177 for dichlorodifluoromethane exceed 30% Difference (response bias high). Associated samples are non-detect for this compound.
- MC31956-6,7 for Dibromofluoromethane: Outside control limits due to possible matrix interference. Confirmed by reanalysis.

Extractables by GCMS By Method SW846 8270D

Matrix AQ	Batch ID: OP38904

- 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) MC31918-3MS, MC31918-3MSD were used as the QC samples indicated.
- OP38904-BS/MS/MSD Recovery(s) for Hexachlorocyclopentadiene are outside control limits. Blank Spike meets program technical requirements.
- OP38904-MS/MSD Recovery(s) for 3,3'-Dichlorobenzidine 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: OP38905

- 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) MC31918-3MS, MC31918-3MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8011

Matrix AQ	Batch ID: OP38952

- 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) MC31918-3MS, MC31918-3MSD were used as the QC samples indicated.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC31956).

Summary of Hits

Job Number: MC31956
Account: Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Collected: 07/08/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC31956-1	P74-ROX-070814					
Benzene		309	0.50	0.32	ug/l	SW846 8260C
n-Butylbenzene		13.8	5.0	1.1	ug/l	SW846 8260C
sec-Butylbenzene		1.4 J	5.0	0.42	ug/l	SW846 8260C
Ethylbenzene		37.4	1.0	0.38	ug/l	SW846 8260C
Isopropylbenzene		1.8 J	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene		1.8 J	5.0	0.37	ug/l	SW846 8260C
Naphthalene		12.8	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene		3.6 J	5.0	0.49	ug/l	SW846 8260C
Toluene		8.7	1.0	0.33	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		117	5.0	0.32	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		51.8	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene		121	1.0	0.93	ug/l	SW846 8260C
o-Xylene		12.2	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		133	1.0	0.36	ug/l	SW846 8260C
Di-n-butyl phthalate		0.39 J	5.7	0.20	ug/l	SW846 8270D
Fluorene		0.11	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		3.4	0.23	0.057	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		3.0	0.23	0.084	ug/l	SW846 8270D BY SIM
Phenanthrene		0.054 J	0.057	0.014	ug/l	SW846 8270D BY SIM
MC31956-2	P56-ROX-070814					
Acetone		62.6	10	2.5	ug/l	SW846 8260C
Benzene		127	0.50	0.32	ug/l	SW846 8260C
2-Butanone (MEK)		13.2	5.0	2.5	ug/l	SW846 8260C
n-Butylbenzene		15.9	5.0	1.1	ug/l	SW846 8260C
sec-Butylbenzene		7.3	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene		3.4 J	5.0	0.39	ug/l	SW846 8260C
1,1-Dichloroethane		1.8	1.0	0.36	ug/l	SW846 8260C
Ethylbenzene		1710	50	19	ug/l	SW846 8260C
Isopropylbenzene		106	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene		5.8	5.0	0.37	ug/l	SW846 8260C
Naphthalene		156	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene		133	5.0	0.49	ug/l	SW846 8260C
Toluene		288	1.0	0.33	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		487	250	16	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		166	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene		2040	50	47	ug/l	SW846 8260C
o-Xylene		122	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		2090	50	18	ug/l	SW846 8260C
3&4-Methylphenol		16.5	11	0.52	ug/l	SW846 8270D
Dibenzofuran		0.49 J	2.2	0.29	ug/l	SW846 8270D
Acenaphthene		0.35	0.11	0.077	ug/l	SW846 8270D BY SIM

Summary of Hits

Job Number: MC31956
Account: Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Collected: 07/08/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Acenaphthylene		0.081 J	0.11	0.055	ug/l	SW846 8270D BY SIM
Anthracene		0.10 J	0.11	0.10	ug/l	SW846 8270D BY SIM
Fluorene		0.36	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		18.1	0.22	0.055	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		24.3	0.22	0.082	ug/l	SW846 8270D BY SIM
Phenanthrene		1.0	0.056	0.014	ug/l	SW846 8270D BY SIM
MC31956-3	T12-ROX-070814					
Acetone		65.8	10	2.5	ug/l	SW846 8260C
Benzene		2140	5.0	3.2	ug/l	SW846 8260C
2-Butanone (MEK)		9.4	5.0	2.5	ug/l	SW846 8260C
n-Butylbenzene		9.6	5.0	1.1	ug/l	SW846 8260C
sec-Butylbenzene		3.9 J	5.0	0.42	ug/l	SW846 8260C
1,1-Dichloroethane		2.2	1.0	0.36	ug/l	SW846 8260C
Ethylbenzene		614	10	3.8	ug/l	SW846 8260C
Isopropylbenzene		57.7	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene		2.4 J	5.0	0.37	ug/l	SW846 8260C
Naphthalene		146	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene		91.2	5.0	0.49	ug/l	SW846 8260C
Toluene		686	10	3.3	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		425	50	3.2	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		58.9	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene		1250	10	9.3	ug/l	SW846 8260C
o-Xylene		90.9	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		1300	10	3.6	ug/l	SW846 8260C
2-Methylphenol		9.2 J	11	0.24	ug/l	SW846 8270D
3&4-Methylphenol		3.3 J	11	0.50	ug/l	SW846 8270D
Di-n-butyl phthalate		0.38 J	5.4	0.19	ug/l	SW846 8270D
Acenaphthene		0.24	0.11	0.074	ug/l	SW846 8270D BY SIM
Fluorene		0.22	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		15.0	0.22	0.054	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		24.5	0.22	0.080	ug/l	SW846 8270D BY SIM
Phenanthrene		0.51	0.054	0.014	ug/l	SW846 8270D BY SIM
MC31956-4	P59-ROX-070814-EB					
No hits reported in this sample.						
MC31956-5	P59-ROX-070814					
Acetone		57.0	10	2.5	ug/l	SW846 8260C
Benzene		12400	25	16	ug/l	SW846 8260C
2-Butanone (MEK)		16.9	5.0	2.5	ug/l	SW846 8260C
n-Butylbenzene		25.1	5.0	1.1	ug/l	SW846 8260C

Summary of Hits

Job Number: MC31956
Account: Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Collected: 07/08/14

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
sec-Butylbenzene	7.3	5.0	0.42	ug/l	SW846 8260C
Ethylbenzene	1920	50	19	ug/l	SW846 8260C
Isopropylbenzene	94.8	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene	4.6 J	5.0	0.37	ug/l	SW846 8260C
Naphthalene	228	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene	160	5.0	0.49	ug/l	SW846 8260C
Toluene	1550	50	17	ug/l	SW846 8260C
1,2,4-Trimethylbenzene	607	250	16	ug/l	SW846 8260C
1,3,5-Trimethylbenzene	285	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene	4480	50	47	ug/l	SW846 8260C
o-Xylene	929	50	18	ug/l	SW846 8260C
Xylene (total)	5410	50	18	ug/l	SW846 8260C
2,4-Dimethylphenol	170	57	3.2	ug/l	SW846 8270D
2-Methylphenol	79.3	11	0.26	ug/l	SW846 8270D
3&4-Methylphenol	18.4	11	0.54	ug/l	SW846 8270D
Di-n-butyl phthalate	0.45 J	5.7	0.20	ug/l	SW846 8270D
Acenaphthene	1.5	0.11	0.079	ug/l	SW846 8270D BY SIM
Acenaphthylene	0.091 J	0.11	0.057	ug/l	SW846 8270D BY SIM
Anthracene	0.12	0.11	0.11	ug/l	SW846 8270D BY SIM
Benzo(a)anthracene	0.029 J	0.057	0.022	ug/l	SW846 8270D BY SIM
Chrysene	0.027 J	0.11	0.027	ug/l	SW846 8270D BY SIM
Fluoranthene	0.053 J	0.11	0.047	ug/l	SW846 8270D BY SIM
Fluorene	0.46	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene	18.1	0.23	0.057	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene	29.1	0.23	0.085	ug/l	SW846 8270D BY SIM
Phenanthrene	0.88	0.057	0.014	ug/l	SW846 8270D BY SIM
Pyrene	0.10 J	0.11	0.044	ug/l	SW846 8270D BY SIM
MC31956-6 P57-ROX-070814					
Acetone	49.7	10	2.5	ug/l	SW846 8260C
Benzene	384000	2500	1600	ug/l	SW846 8260C
n-Butylbenzene	11.0	5.0	1.1	ug/l	SW846 8260C
sec-Butylbenzene	9.1	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene	6.6	5.0	0.39	ug/l	SW846 8260C
Ethylbenzene	1120	100	38	ug/l	SW846 8260C
Isopropylbenzene	65.6	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene	8.1	5.0	0.37	ug/l	SW846 8260C
Naphthalene	128	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene	60.5	5.0	0.49	ug/l	SW846 8260C
Toluene	154	1.0	0.33	ug/l	SW846 8260C
1,2,4-Trimethylbenzene	375	5.0	0.32	ug/l	SW846 8260C
1,3,5-Trimethylbenzene	91.3	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene	1460	100	93	ug/l	SW846 8260C
o-Xylene	237	100	36	ug/l	SW846 8260C

Summary of Hits

Job Number: MC31956
Account: Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Collected: 07/08/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Xylene (total)		1700	100	36	ug/l	SW846 8260C
3&4-Methylphenol		30.3	11	0.50	ug/l	SW846 8270D
Phenol		141	5.3	0.32	ug/l	SW846 8270D
Dibenzofuran		0.70 J	2.1	0.28	ug/l	SW846 8270D
Di-n-butyl phthalate		0.26 J	5.3	0.18	ug/l	SW846 8270D
Acenaphthene		0.29	0.11	0.073	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.069 J	0.11	0.053	ug/l	SW846 8270D BY SIM
Fluorene		0.55	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		22.0	0.21	0.053	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		30.6	0.21	0.079	ug/l	SW846 8270D BY SIM
Phenanthrene		0.47	0.053	0.013	ug/l	SW846 8270D BY SIM
Total TIC, Semi-Volatile		24 J			ug/l	
MC31956-7	P57-ROX-070814-DUP					
Acetone		44.1	10	2.5	ug/l	SW846 8260C
Benzene		377000	2500	1600	ug/l	SW846 8260C
2-Butanone (MEK)		8.6	5.0	2.5	ug/l	SW846 8260C
n-Butylbenzene		11.4	5.0	1.1	ug/l	SW846 8260C
sec-Butylbenzene		9.7	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene		7.0	5.0	0.39	ug/l	SW846 8260C
Ethylbenzene		1210	100	38	ug/l	SW846 8260C
Isopropylbenzene		68.9	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene		8.5	5.0	0.37	ug/l	SW846 8260C
Naphthalene		139	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene		63.3	5.0	0.49	ug/l	SW846 8260C
Toluene		160	1.0	0.33	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		392	5.0	0.32	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		95.4	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene		1560	100	93	ug/l	SW846 8260C
o-Xylene		234	100	36	ug/l	SW846 8260C
Xylene (total)		1790	100	36	ug/l	SW846 8260C
3&4-Methylphenol		29.9	11	0.51	ug/l	SW846 8270D
Phenol		136	5.4	0.33	ug/l	SW846 8270D
Dibenzofuran		0.71 J	2.2	0.28	ug/l	SW846 8270D
Di-n-butyl phthalate		0.27 J	5.4	0.19	ug/l	SW846 8270D
Acenaphthene		0.29	0.11	0.075	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.075 J	0.11	0.054	ug/l	SW846 8270D BY SIM
Fluorene		0.54	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		22.0	0.22	0.054	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		30.0	0.22	0.081	ug/l	SW846 8270D BY SIM
Phenanthrene		0.48	0.054	0.014	ug/l	SW846 8270D BY SIM
Total TIC, Semi-Volatile		23 J			ug/l	

Summary of Hits

Job Number: MC31956
Account: Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Collected: 07/08/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC31956-8	TB-070814-HCL					
No hits reported in this sample.						
MC31956-9	TB-070814-ST					
No hits reported in this sample.						

New England ACCUTEST LABORATORIES

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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P74-ROX-070814		
Lab Sample ID:	MC31956-1	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V32986.D	1	07/18/14	AMY	n/a	n/a	MSV1220
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	UJ
107-02-8	Acrolein	ND	25	6.0	ug/l	UJ
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	309	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	13.8	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	1.4	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	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
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-070814		
Lab Sample ID:	MC31956-1	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	UJ
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	37.4	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	1.8	5.0	0.35	ug/l	J J
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	12.8	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	3.6	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	8.7	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	117	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	51.8	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	121	1.0	0.93	ug/l	
95-47-6	o-Xylene	12.2	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	133	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-070814		
Lab Sample ID:	MC31956-1	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	88%		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
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-070814		
Lab Sample ID:	MC31956-1	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X03495.D	1	07/16/14	WK	07/10/14	OP38904	MSX121
Run #2							

	Initial Volume	Final Volume
Run #1	880 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.7	0.35	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.94	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.45	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.64	ug/l	
51-28-5	2,4-Dinitrophenol	ND	23	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.2	ug/l	
95-48-7	2-Methylphenol	ND	11	0.26	ug/l	
	3&4-Methylphenol	ND	11	0.53	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.3	ug/l	
100-02-7	4-Nitrophenol	ND	23	0.61	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.7	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.42	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.20	ug/l	
62-53-3	Aniline	ND	11	0.72	ug/l	U
101-55-3	4-Bromophenyl phenyl ether	ND	5.7	0.53	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.7	0.60	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.6	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.7	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.63	ug/l	U
111-91-1	bis(2-Chloroethoxy)methane	ND	5.7	0.33	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.7	0.40	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.7	0.38	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.7	0.29	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.7	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.52	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.34	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.7	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.3	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	0.39	5.7	0.20	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.7	0.32	ug/l	

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

Report of Analysis

Client Sample ID:	P74-ROX-070814		
Lab Sample ID:	MC31956-1	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.7	0.23	ug/l	
131-11-3	Dimethyl phthalate	ND	5.7	0.39	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.3	0.38	ug/l	
118-74-1	Hexachlorobenzene	ND	5.7	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.5	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.7	0.34	ug/l	
78-59-1	Isophorone	ND	5.7	0.51	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.45	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.5	ug/l	
98-95-3	Nitrobenzene	ND	5.7	0.44	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.7	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.7	0.46	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.7	0.22	ug/l	
110-86-1	Pyridine	ND	11	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	42%		15-110%
4165-62-2	Phenol-d5	30%		15-110%
118-79-6	2,4,6-Tribromophenol	84%		15-110%
4165-60-0	Nitrobenzene-d5	81%		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	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-070814		
Lab Sample ID:	MC31956-1	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90648.D	1	07/14/14	MR	07/10/14	OP38905	MSI3375
Run #2							

	Initial Volume	Final Volume
Run #1	880 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	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	0.11	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	3.4	0.23	0.057	ug/l	
91-57-6	2-Methylnaphthalene	3.0	0.23	0.084	ug/l	
85-01-8	Phenanthrene	0.054	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	91%		30-130%
321-60-8	2-Fluorobiphenyl	67%		30-130%
1718-51-0	Terphenyl-d14	80%		30-130%

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

Report of Analysis

Client Sample ID:	P74-ROX-070814		
Lab Sample ID:	MC31956-1	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8011 SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39538.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
Run #2							

	Initial Volume	Final Volume
Run #1	36.2 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	132%		36-173%
460-00-4	Bromofluorobenzene (S)	132%		36-173%

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

Report of Analysis

Client Sample ID:	P56-ROX-070814		
Lab Sample ID:	MC31956-2	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V32987.D	1	07/18/14	AMY	n/a	n/a	MSV1220
Run #2	V32995.D	50	07/18/14	AMY	n/a	n/a	MSV1220

	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	62.6	10	2.5	ug/l	J
107-02-8	Acrolein	ND	25	6.0	ug/l	UJ
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	127	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)	13.2	5.0	2.5	ug/l	J
104-51-8	n-Butylbenzene	15.9	5.0	1.1	ug/l	J
135-98-8	sec-Butylbenzene	7.3	5.0	0.42	ug/l	J
98-06-6	tert-Butylbenzene	3.4	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	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	1.8	1.0	0.36	ug/l	J
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

Report of Analysis

Client Sample ID:	P56-ROX-070814		
Lab Sample ID:	MC31956-2	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	UJ
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	1710 [a]	50	19	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	106	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	5.8	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	156	5.0	0.69	ug/l	J
103-65-1	n-Propylbenzene	133	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	288	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	487 [a]	250	16	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	166	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	2040 [a]	50	47	ug/l	J
95-47-6	o-Xylene	122	1.0	0.36	ug/l	J
1330-20-7	Xylene (total)	2090 [a]	50	18	ug/l	J

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:	P56-ROX-070814		
Lab Sample ID:	MC31956-2	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	74%	84%	70-130%
2037-26-5	Toluene-D8	86%	90%	70-130%
460-00-4	4-Bromofluorobenzene	95%	101%	70-130%

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

(a) Result is from Run# 2

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

Report of Analysis

Client Sample ID:	P56-ROX-070814		
Lab Sample ID:	MC31956-2	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X03496.D	1	07/16/14	WK	07/10/14	OP38904	MSX121
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	16.5	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	UJ
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	UJ
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	0.49	2.2	0.29	ug/l	J
84-74-2	Di-n-butyl phthalate	ND	5.6	0.19	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

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

Report of Analysis

Client Sample ID:	P56-ROX-070814		
Lab Sample ID:	MC31956-2	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	U5
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	33%		15-110%
4165-62-2	Phenol-d5	24%		15-110%
118-79-6	2,4,6-Tribromophenol	80%		15-110%
4165-60-0	Nitrobenzene-d5	66%		30-130%
321-60-8	2-Fluorobiphenyl	67%		30-130%
1718-51-0	Terphenyl-d14	89%		30-130%

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

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-070814		
Lab Sample ID:	MC31956-2	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	190650.D	1	07/14/14	MR	07/10/14	OP38905	MSI3375
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.35	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	0.081	0.11	0.055	ug/l	J
120-12-7	Anthracene	0.10	0.11	0.10	ug/l	J
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	0.36	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	18.1	0.22	0.055	ug/l	
91-57-6	2-Methylnaphthalene	24.3	0.22	0.082	ug/l	
85-01-8	Phenanthrene	1.0	0.056	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	73%		30-130%
321-60-8	2-Fluorobiphenyl	58%		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:	P56-ROX-070814		
Lab Sample ID:	MC31956-2	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8011 SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39539.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
Run #2							

	Initial Volume	Final Volume
Run #1	36.9 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	106%		36-173%
460-00-4	Bromofluorobenzene (S)	125%		36-173%

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

Report of Analysis

Client Sample ID:	T12-ROX-070814		
Lab Sample ID:	MC31956-3	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V32988.D	1	07/18/14	AMY	n/a	n/a	MSV1220
Run #2	H67600.D	10	07/20/14	AMY	n/a	n/a	MSH2247

	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	65.8	10	2.5	ug/l	J
107-02-8	Acrolein	ND	25	6.0	ug/l	UJ
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	2140 [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)	9.4	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	9.6	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	3.9	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	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	2.2	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-070814		
Lab Sample ID:	MC31956-3	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	614 [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	57.7	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	2.4	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	146	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	91.2	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	686 [a]	10	3.3	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	425 [a]	50	3.2	ug/l	
108-67-8	1,3,5-Trimethylbenzene	58.9	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	1250 [a]	10	9.3	ug/l	
95-47-6	o-Xylene	90.9	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	1300 [a]	10	3.6	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:	T12-ROX-070814		
Lab Sample ID:	MC31956-3	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	84%	109%	70-130%
2037-26-5	Toluene-D8	74%	107%	70-130%
460-00-4	4-Bromofluorobenzene	95%	108%	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

4.3

4

Client Sample ID:	T12-ROX-070814		
Lab Sample ID:	MC31956-3	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X03497.D	1	07/16/14	WK	07/10/14	OP38904	MSX121
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.33	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.89	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.60	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	9.2	11	0.24	ug/l	J
	3&4-Methylphenol	3.3	11	0.50	ug/l	J
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.57	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.4	0.32	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.40	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	UJ
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.51	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.57	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.4	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.60	ug/l	UJ
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.38	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.36	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.27	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.49	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.29	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.28	ug/l	
84-74-2	Di-n-butyl phthalate	0.38	5.4	0.19	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.4	0.30	ug/l	

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Report of Analysis

Client Sample ID:	T12-ROX-070814		
Lab Sample ID:	MC31956-3	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.37	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.36	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.4	0.32	ug/l	
78-59-1	Isophorone	ND	5.4	0.48	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.43	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.42	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.43	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.55	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	36%		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	71%		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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Report of Analysis

Client Sample ID:	T12-ROX-070814		
Lab Sample ID:	MC31956-3	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90651.D	1	07/14/14	MR	07/10/14	OP38905	MSI3375
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.24	0.11	0.074	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.053	ug/l	
120-12-7	Anthracene	ND	0.11	0.099	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.034	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	0.22	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	15.0	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	24.5	0.22	0.080	ug/l	
85-01-8	Phenanthrene	0.51	0.054	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.041	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	78%		30-130%
321-60-8	2-Fluorobiphenyl	60%		30-130%
1718-51-0	Terphenyl-d14	72%		30-130%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	T12-ROX-070814		
Lab Sample ID:	MC31956-3	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8011 SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39540.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
Run #2							

	Initial Volume	Final Volume
Run #1	36.3 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	116%		36-173%
460-00-4	Bromofluorobenzene (S)	119%		36-173%

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

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

Report of Analysis

Client Sample ID:	P59-ROX-070814-EB		
Lab Sample ID:	MC31956-4	Date Sampled:	07/08/14
Matrix:	AQ - Equipment Blank	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V32979.D	1	07/18/14	AMY	n/a	n/a	MSV1220
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P59-ROX-070814-EB		
Lab Sample ID:	MC31956-4	Date Sampled:	07/08/14
Matrix:	AQ - Equipment Blank	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P59-ROX-070814-EB		
Lab Sample ID:	MC31956-4	Date Sampled:	07/08/14
Matrix:	AQ - Equipment Blank	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.4

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	95%		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:	P59-ROX-070814-EB		
Lab Sample ID:	MC31956-4	Date Sampled:	07/08/14
Matrix:	AQ - Equipment Blank	Date Received:	07/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X03498.D	1	07/16/14	WK	07/10/14	OP38904	MSX121
Run #2							

	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	bis(2-Chloroethoxy)methane	ND	5.8	0.33	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.8	0.41	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.8	0.39	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.8	0.29	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.8	0.28	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	12	0.53	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	12	0.35	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.8	0.31	ug/l	
132-64-9	Dibenzofuran	ND	2.3	0.30	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.8	0.20	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.8	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:	P59-ROX-070814-EB		
Lab Sample ID:	MC31956-4	Date Sampled:	07/08/14
Matrix:	AQ - Equipment Blank	Date Received:	07/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.8	0.23	ug/l	
131-11-3	Dimethyl phthalate	ND	5.8	0.40	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.3	0.39	ug/l	
118-74-1	Hexachlorobenzene	ND	5.8	0.34	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	1.5	ug/l	
67-72-1	Hexachloroethane	ND	5.8	0.35	ug/l	
78-59-1	Isophorone	ND	5.8	0.52	ug/l	
88-74-4	2-Nitroaniline	ND	12	0.46	ug/l	
99-09-2	3-Nitroaniline	ND	12	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	12	2.5	ug/l	
98-95-3	Nitrobenzene	ND	5.8	0.45	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.8	1.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.8	0.47	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.8	0.22	ug/l	
110-86-1	Pyridine	ND	12	0.60	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	30%		15-110%
4165-62-2	Phenol-d5	22%		15-110%
118-79-6	2,4,6-Tribromophenol	69%		15-110%
4165-60-0	Nitrobenzene-d5	59%		30-130%
321-60-8	2-Fluorobiphenyl	57%		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:	P59-ROX-070814-EB		
Lab Sample ID:	MC31956-4	Date Sampled:	07/08/14
Matrix:	AQ - Equipment Blank	Date Received:	07/09/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90803.D	1	07/18/14	MR	07/10/14	OP38905	MSI3380
Run #2							

	Initial Volume	Final Volume
Run #1	860 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.12	0.080	ug/l	
208-96-8	Acenaphthylene	ND	0.12	0.058	ug/l	
120-12-7	Anthracene	ND	0.12	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.058	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.12	0.033	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.058	0.037	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.12	0.031	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.12	0.045	ug/l	
218-01-9	Chrysene	ND	0.12	0.028	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.12	0.037	ug/l	
206-44-0	Fluoranthene	ND	0.12	0.047	ug/l	
86-73-7	Fluorene	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	0.23	0.058	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.23	0.086	ug/l	
85-01-8	Phenanthrene	ND	0.058	0.015	ug/l	
129-00-0	Pyrene	ND	0.12	0.045	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	59%		30-130%
321-60-8	2-Fluorobiphenyl	50%		30-130%
1718-51-0	Terphenyl-d14	73%		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:	P59-ROX-070814-EB		
Lab Sample ID:	MC31956-4	Date Sampled:	07/08/14
Matrix:	AQ - Equipment Blank	Date Received:	07/09/14
Method:	SW846 8011 SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39541.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
Run #2							

	Initial Volume	Final Volume
Run #1	36.3 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	117%		36-173%
460-00-4	Bromofluorobenzene (S)	114%		36-173%

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

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

Report of Analysis

Client Sample ID:	P59-ROX-070814		
Lab Sample ID:	MC31956-5	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V32989.D	1	07/18/14	AMY	n/a	n/a	MSV1220
Run #2	H67601.D	50	07/20/14	AMY	n/a	n/a	MSH2247

	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	57.0	10	2.5	ug/l	J
107-02-8	Acrolein	ND	25	6.0	ug/l	UJ
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	12400 [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)	16.9	5.0	2.5	ug/l	J
104-51-8	n-Butylbenzene	25.1	5.0	1.1	ug/l	J
135-98-8	sec-Butylbenzene	7.3	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	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	

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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-070814		
Lab Sample ID:	MC31956-5	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	U.J
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	1920 [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	94.8	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	4.6	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	228	5.0	0.69	ug/l	J
103-65-1	n-Propylbenzene	160	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	1550 [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	607 [a]	250	16	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	285	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	4480 [a]	50	47	ug/l	
95-47-6	o-Xylene	929 [a]	50	18	ug/l	
1330-20-7	Xylene (total)	5410 [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-070814		
Lab Sample ID:	MC31956-5	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	80%	108%	70-130%
2037-26-5	Toluene-D8	74%	106%	70-130%
460-00-4	4-Bromofluorobenzene	102%	113%	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-070814		
Lab Sample ID:	MC31956-5	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X03499.D	1	07/16/14	WK	07/10/14	OP38904	MSX121
Run #2	F74785.D	5	07/23/14	WK	07/10/14	OP38904	MSF3294

	Initial Volume	Final Volume
Run #1	870 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	ND	11	2.9	ug/l	
95-57-8	2-Chlorophenol	ND	5.7	0.36	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.95	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.46	ug/l	
105-67-9	2,4-Dimethylphenol	170 [a]	57	3.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	23	2.9	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.2	ug/l	
95-48-7	2-Methylphenol	79.3	11	0.26	ug/l	
	3&4-Methylphenol	18.4	11	0.54	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.3	ug/l	
100-02-7	4-Nitrophenol	ND	23	0.61	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.7	0.35	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.43	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.20	ug/l	
62-53-3	Aniline	ND	11	0.73	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.7	0.54	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.7	0.61	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.6	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.7	0.36	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.64	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.7	0.33	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.7	0.40	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.7	0.38	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.7	0.29	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.7	0.28	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.52	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.35	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.7	0.31	ug/l	
132-64-9	Dibenzofuran	ND	2.3	0.30	ug/l	
84-74-2	Di-n-butyl phthalate	0.45	5.7	0.20	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.7	0.32	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-070814		
Lab Sample ID:	MC31956-5	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.7	0.23	ug/l	
131-11-3	Dimethyl phthalate	ND	5.7	0.39	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.3	0.38	ug/l	
118-74-1	Hexachlorobenzene	ND	5.7	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.5	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.7	0.35	ug/l	
78-59-1	Isophorone	ND	5.7	0.52	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.46	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.5	ug/l	
98-95-3	Nitrobenzene	ND	5.7	0.45	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.7	1.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.7	0.46	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.7	0.22	ug/l	
110-86-1	Pyridine	ND	11	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	19%	48%	15-110%
4165-62-2	Phenol-d5	30%	26%	15-110%
118-79-6	2,4,6-Tribromophenol	90%	79%	15-110%
4165-60-0	Nitrobenzene-d5	87%	66%	30-130%
321-60-8	2-Fluorobiphenyl	72%	68%	30-130%
1718-51-0	Terphenyl-d14	86%	72%	30-130%

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

(a) Result is from Run# 2

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

Report of Analysis

Client Sample ID:	P59-ROX-070814		
Lab Sample ID:	MC31956-5	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90804.D	1	07/18/14	MR	07/10/14	OP38905	MSI3380
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	1.5	0.11	0.079	ug/l	
208-96-8	Acenaphthylene	0.091	0.11	0.057	ug/l	J
120-12-7	Anthracene	0.12	0.11	0.11	ug/l	
56-55-3	Benzo(a)anthracene	0.029	0.057	0.022	ug/l	J
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	0.027	0.11	0.027	ug/l	J
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.037	ug/l	
206-44-0	Fluoranthene	0.053	0.11	0.047	ug/l	J
86-73-7	Fluorene	0.46	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.035	ug/l	
90-12-0	1-Methylnaphthalene	18.1	0.23	0.057	ug/l	
91-57-6	2-Methylnaphthalene	29.1	0.23	0.085	ug/l	
85-01-8	Phenanthrene	0.88	0.057	0.014	ug/l	
129-00-0	Pyrene	0.10	0.11	0.044	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	84%		30-130%
321-60-8	2-Fluorobiphenyl	65%		30-130%
1718-51-0	Terphenyl-d14	69%		30-130%

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

Report of Analysis

Client Sample ID:	P59-ROX-070814		
Lab Sample ID:	MC31956-5	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8011 SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39542.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
Run #2							

	Initial Volume	Final Volume
Run #1	36.5 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	99%		36-173%
460-00-4	Bromofluorobenzene (S)	91%		36-173%

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

Report of Analysis

Client Sample ID:	P57-ROX-070814		
Lab Sample ID:	MC31956-6	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V32990.D	1	07/18/14	AMY	n/a	n/a	MSV1220
Run #2	H67602.D	100	07/20/14	AMY	n/a	n/a	MSH2247
Run #3	H67604.D	5000	07/20/14	AMY	n/a	n/a	MSH2247

	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	49.7	10	2.5	ug/l	J
107-02-8	Acrolein	ND	25	6.0	ug/l	UJ
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	UJ
71-43-2	Benzene	384000 [a]	2500	1600	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	UJ
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	11.0	5.0	1.1	ug/l	J
135-98-8	sec-Butylbenzene	9.1	5.0	0.42	ug/l	J
98-06-6	tert-Butylbenzene	6.6	5.0	0.39	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	UJ
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	

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:	P57-ROX-070814		
Lab Sample ID:	MC31956-6	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

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	UJ
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	0.50	ug/l	
100-41-4	Ethylbenzene	1120 b	100	38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	UJ
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	UJ
98-82-8	Isopropylbenzene	65.6	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	8.1	5.0	0.37	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	UJ
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	128	5.0	0.69	ug/l	J
103-65-1	n-Propylbenzene	60.5	5.0	0.49	ug/l	J
100-42-5	Styrene	ND	5.0	0.85	ug/l	UJ
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	154	1.0	0.33	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	UJ
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	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	375	5.0	0.32	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	91.3	5.0	0.38	ug/l	J
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	UJ
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	UJ
	m,p-Xylene	1460 b	100	93	ug/l	
95-47-6	o-Xylene	237 b	100	36	ug/l	
1330-20-7	Xylene (total)	1700 b	100	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-070814		
Lab Sample ID:	MC31956-6	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	69% c	107%	109%	70-130%
2037-26-5	Toluene-D8	75%	104%	106%	70-130%
460-00-4	4-Bromofluorobenzene	101%	112%	114%	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) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

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

Report of Analysis

Client Sample ID:	P57-ROX-070814		
Lab Sample ID:	MC31956-6	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X03500.D	1	07/16/14	WK	07/10/14	OP38904	MSX121
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
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	30.3	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	141	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	UJ
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	UJ
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	0.70	2.1	0.28	ug/l	J
84-74-2	Di-n-butyl phthalate	0.26	5.3	0.18	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.3	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-070814		
Lab Sample ID:	MC31956-6	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.3	0.21	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.36	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.35	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	UJ
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	44%		15-110%
4165-62-2	Phenol-d5	29%		15-110%
118-79-6	2,4,6-Tribromophenol	85%		15-110%
4165-60-0	Nitrobenzene-d5	84%		30-130%
321-60-8	2-Fluorobiphenyl	78%		30-130%
1718-51-0	Terphenyl-d14	89%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
95-13-6	Indene	4.21	24	ug/l	JN
	Total TIC, Semi-Volatile		24	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:	P57-ROX-070814		
Lab Sample ID:	MC31956-6	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90805.D	1	07/18/14	MR	07/10/14	OP38905	MSI3380
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.29	0.11	0.073	ug/l	
208-96-8	Acenaphthylene	0.069	0.11	0.053	ug/l	J
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	UJ
86-73-7	Fluorene	0.55	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	22.0	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	30.6	0.21	0.079	ug/l	
85-01-8	Phenanthrene	0.47	0.053	0.013	ug/l	
129-00-0	Pyrene	ND	0.11	0.041	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	77%		30-130%
321-60-8	2-Fluorobiphenyl	71%		30-130%
1718-51-0	Terphenyl-d14	71%		30-130%

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

Report of Analysis

Client Sample ID:	P57-ROX-070814		
Lab Sample ID:	MC31956-6	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8011 SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39543.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
Run #2							

	Initial Volume	Final Volume
Run #1	36.7 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	96%		36-173%
460-00-4	Bromofluorobenzene (S)	118%		36-173%

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

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

Report of Analysis

Client Sample ID:	P57-ROX-070814-DUP		
Lab Sample ID:	MC31956-7	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V32991.D	1	07/18/14	AMY	n/a	n/a	MSV1220
Run #2	H67603.D	100	07/20/14	AMY	n/a	n/a	MSH2247
Run #3	H67605.D	5000	07/20/14	AMY	n/a	n/a	MSH2247

	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	44.1	10	2.5	ug/l	J
107-02-8	Acrolein	ND	25	6.0	ug/l	UJ
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	UJ
71-43-2	Benzene	377000 [a]	2500	1600	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	UJ
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)	8.6	5.0	2.5	ug/l	J
104-51-8	n-Butylbenzene	11.4	5.0	1.1	ug/l	J
135-98-8	sec-Butylbenzene	9.7	5.0	0.42	ug/l	J
98-06-6	tert-Butylbenzene	7.0	5.0	0.39	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	UJ
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	

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

J = Indicates 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-070814-DUP		
Lab Sample ID:	MC31956-7	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

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	UJ
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	0.50	ug/l	
100-41-4	Ethylbenzene	1210 [b]	100	38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	UJ
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	UJ
98-82-8	Isopropylbenzene	68.9	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	8.5	5.0	0.37	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	UJ
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	139	5.0	0.69	ug/l	J
103-65-1	n-Propylbenzene	63.3	5.0	0.49	ug/l	J
100-42-5	Styrene	ND	5.0	0.85	ug/l	UJ
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	160	1.0	0.33	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	UJ
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	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	392	5.0	0.32	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	95.4	5.0	0.38	ug/l	J
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	UJ
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	UJ
	m,p-Xylene	1560 [b]	100	93	ug/l	
95-47-6	o-Xylene	234 [b]	100	36	ug/l	
1330-20-7	Xylene (total)	1790 [b]	100	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-070814-DUP		
Lab Sample ID:	MC31956-7	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	68% c	107%	108%	70-130%
2037-26-5	Toluene-D8	74%	105%	104%	70-130%
460-00-4	4-Bromofluorobenzene	102%	114%	115%	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) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

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

Report of Analysis

Client Sample ID:	P57-ROX-070814-DUP		
Lab Sample ID:	MC31956-7	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X03501.D	1	07/16/14	WK	07/10/14	OP38904	MSX121
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.90	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.61	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	29.9	11	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	136	5.4	0.33	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.40	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.51	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.58	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.61	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.38	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.36	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.27	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.29	ug/l	
132-64-9	Dibenzofuran	0.71	2.2	0.28	ug/l	J
84-74-2	Di-n-butyl phthalate	0.27	5.4	0.19	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.4	0.31	ug/l	

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

Report of Analysis

Client Sample ID:	P57-ROX-070814-DUP		
Lab Sample ID:	MC31956-7	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	UJ
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	41%		15-110%
4165-62-2	Phenol-d5	28%		15-110%
118-79-6	2,4,6-Tribromophenol	85%		15-110%
4165-60-0	Nitrobenzene-d5	84%		30-130%
321-60-8	2-Fluorobiphenyl	79%		30-130%
1718-51-0	Terphenyl-d14	90%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
95-13-6	Indene	4.21	23	ug/l	JN
	Total TIC, Semi-Volatile		23	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:	P57-ROX-070814-DUP		
Lab Sample ID:	MC31956-7	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90806.D	1	07/18/14	MR	07/10/14	OP38905	MSI3380
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.29	0.11	0.075	ug/l	
208-96-8	Acenaphthylene	0.075	0.11	0.054	ug/l	J
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	U J
86-73-7	Fluorene	0.54	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	22.0	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	30.0	0.22	0.081	ug/l	
85-01-8	Phenanthrene	0.48	0.054	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.042	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	72%		30-130%
321-60-8	2-Fluorobiphenyl	70%		30-130%
1718-51-0	Terphenyl-d14	70%		30-130%

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

Report of Analysis

Client Sample ID:	P57-ROX-070814-DUP		
Lab Sample ID:	MC31956-7	Date Sampled:	07/08/14
Matrix:	AQ - Ground Water	Date Received:	07/09/14
Method:	SW846 8011 SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39544.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
Run #2							

	Initial Volume	Final Volume
Run #1	36.0 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	111%		36-173%
460-00-4	Bromofluorobenzene (S)	130%		36-173%

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

Report of Analysis

Client Sample ID:	TB-070814-HCL		
Lab Sample ID:	MC31956-8	Date Sampled:	07/08/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V32976.D	1	07/18/14	AMY	n/a	n/a	MSV1220
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB-070814-HCL		
Lab Sample ID:	MC31956-8	Date Sampled:	07/08/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.8

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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	TB-070814-HCL		
Lab Sample ID:	MC31956-8	Date Sampled:	07/08/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	116%		70-130%
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	100%		70-130%

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

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

Report of Analysis

Client Sample ID:	TB-070814-ST		
Lab Sample ID:	MC31956-9	Date Sampled:	07/08/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/09/14
Method:	SW846 8011 SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39545.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
Run #2							

	Initial Volume	Final Volume
Run #1	34.9 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	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	103%		36-173%
460-00-4	Bromofluorobenzene (S)	105%		36-173%

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

New England ACCUTEST LABORATORIES

Custody Documents and Other Forms

Includes the following where applicable:

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

LAB (LOCATION)

☐ SHELL (_____)
☐ CALSCIENCE
☑ OTHER Accutest New England 495 Technology Ctr W Marlborough, MA 01752 (508) 481-6200
☐ GEL ☐ Lab Vendor # (_____)
Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

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

Print Bill To Contact Name: Bob Bellman

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

☐ CHECK IF NEW INCIDENT # APPLIES

DATE: 7-8-14

PO #

SAP #: 3 4 0 0 0 5 1

PAGE: 1 of 1

URS CORPORATION

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

Project Contact (Name) and Phone: Elizabeth Kunkel, Wendy Pennington, Bob Bellman, Lindsay Rainnow

Phone: 314-429-0100 Fax: 314-429-0462

Sampler(s) Name(s) and Signature(s): C. Williams, B. Koca

Site Address: 900 South Central Ave; ROXANA

Shell Facility #: Shell Project #: Site Global ID #:

Enfos Project #: Roxana Quarterly GW / 21502973.03003

LAB USE ONLY: MC31956

Turnaround Time (Business Days): ☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON (MM/DD/YY)

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY

Data Package: ☐ LEVEL 1 ☑ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☑ OTHER (SPECIFY) EDD

Temperature on Receipt C°: Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
- Please include "J" values on Reports
- Please provide sample receipt upon login.

☑ SHELL CONTRACT RATE APPLIES
☐ SHELL NON-CONTRACT RATE APPLIES
☐ DO NOT MCGCD
☐ SPECIAL VOA LIMITS REQUESTED
☐ PREVIOUS USED DISK

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATION HCL	PRESERVATION NaOH	PRESERVATION H2SO4	PRESERVATION NONE	PRESERVATION OTHER	NO. OF CONT.	VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL	PID (ppm)	FIELD NOTES: Container PID Readings or Laboratory Notes
-1	P74-Rox-070814	7/8/14	0950	Water	2			2	2	6	X	X	X	X	0	
-2	P56-Rox-070814	7/8/14	1110								X	X	X	X		
-3	T12-Rox-070814	7/8/14	1400								X	X	X	X		
-4	P59-Rox-070814-EB	7/8/14	1420								X	X	X	X		
-5	P59-Rox-070814	7/8/14	1505								X	X	X	X		
-6	P57-Rox-070814	7/8/14	1615								X	X	X	X		
-7	P57-Rox-070814-DUP	7/8/14	1615					↓	↓	↓	X	X	X	X		19BB, 3M3
-8	TB-070814-HCL	7/8/14	0000							2	X					
-9	TB-070814-ST	7/8/14	0000						2	2		X			↓	
																0.7° 1.2°

Relinquished by (Signature)	Received by (Signature)	Date	Time
Cindy Williams	FED EX	07/08/14	1830
FX		7/9/14	9:30
Relinquished by (Signature)	Received by (Signature)	Date	Time

5.1

MC31956: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC31956 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 7/9/2014 **Delivery Method:** **Client Service Action Required at Login:** No

Project: 900 SOUTH CENTRAL **No. Coolers:** 2 **Airbill #'s:**

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

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

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

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

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

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

Comments

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC31956

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC31956-1 Collected: 08-JUL-14 09:50 By: CWBK Received: 09-JUL-14 By: P74-ROX-070814						
MC31956-1	SW846 8270D BY SIM	14-JUL-14 11:56	MR	10-JUL-14	FC	B8270SIMSL
MC31956-1	SW846 8011	15-JUL-14 20:36	NK	14-JUL-14	AW	V8011SL
MC31956-1	SW846 8270D	16-JUL-14 12:56	WK	10-JUL-14	FC	AB8270SL+
MC31956-1	SW846 8260C	18-JUL-14 16:56	AMY			V8260SL+
MC31956-2 Collected: 08-JUL-14 11:10 By: CWBK Received: 09-JUL-14 By: P56-ROX-070814						
MC31956-2	SW846 8270D BY SIM	14-JUL-14 12:42	MR	10-JUL-14	FC	B8270SIMSL
MC31956-2	SW846 8011	15-JUL-14 20:56	NK	14-JUL-14	AW	V8011SL
MC31956-2	SW846 8270D	16-JUL-14 13:16	WK	10-JUL-14	FC	AB8270SL+
MC31956-2	SW846 8260C	18-JUL-14 17:23	AMY			V8260SL+
MC31956-2	SW846 8260C	18-JUL-14 20:51	AMY			V8260SL+
MC31956-3 Collected: 08-JUL-14 14:00 By: CWBK Received: 09-JUL-14 By: T12-ROX-070814						
MC31956-3	SW846 8270D BY SIM	14-JUL-14 13:07	MR	10-JUL-14	FC	B8270SIMSL
MC31956-3	SW846 8011	15-JUL-14 21:15	NK	14-JUL-14	AW	V8011SL
MC31956-3	SW846 8270D	16-JUL-14 13:37	WK	10-JUL-14	FC	AB8270SL+
MC31956-3	SW846 8260C	18-JUL-14 17:48	AMY			V8260SL+
MC31956-3	SW846 8260C	20-JUL-14 18:18	AMY			V8260SL+
MC31956-4 Collected: 08-JUL-14 14:20 By: CWBK Received: 09-JUL-14 By: P59-ROX-070814-EB						
MC31956-4	SW846 8011	15-JUL-14 21:34	NK	14-JUL-14	AW	V8011SL
MC31956-4	SW846 8270D	16-JUL-14 13:57	WK	10-JUL-14	FC	AB8270SL+
MC31956-4	SW846 8270D BY SIM	18-JUL-14 08:27	MR	10-JUL-14	FC	B8270SIMSL
MC31956-4	SW846 8260C	18-JUL-14 13:54	AMY			V8260SL+
MC31956-5 Collected: 08-JUL-14 15:06 By: CWBK Received: 09-JUL-14 By: P59-ROX-070814						
MC31956-5	SW846 8011	15-JUL-14 21:54	NK	14-JUL-14	AW	V8011SL
MC31956-5	SW846 8270D	16-JUL-14 14:18	WK	10-JUL-14	FC	AB8270SL+
MC31956-5	SW846 8270D BY SIM	18-JUL-14 08:50	MR	10-JUL-14	FC	B8270SIMSL

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC31956

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC31956-5	SW846 8260C	18-JUL-14 18:15	AMY			V8260SL+
MC31956-5	SW846 8260C	20-JUL-14 18:46	AMY			V8260SL+
MC31956-5	SW846 8270D	23-JUL-14 12:01	WK	10-JUL-14	FC	AB8270SL+
MC31956-6 Collected: 08-JUL-14 16:15 By: CWBK Received: 09-JUL-14 By: P57-ROX-070814						
MC31956-6	SW846 8011	15-JUL-14 22:13	NK	14-JUL-14	AW	V8011SL
MC31956-6	SW846 8270D	16-JUL-14 14:38	WK	10-JUL-14	FC	AB8270SL+
MC31956-6	SW846 8270D BY SIM	18-JUL-14 09:14	MR	10-JUL-14	FC	B8270SIMSL
MC31956-6	SW846 8260C	18-JUL-14 18:41	AMY			V8260SL+
MC31956-6	SW846 8260C	20-JUL-14 19:14	AMY			V8260SL+
MC31956-6	SW846 8260C	20-JUL-14 20:11	AMY			V8260SL+
MC31956-7 Collected: 08-JUL-14 16:15 By: CWBK Received: 09-JUL-14 By: P57-ROX-070814-DUP						
MC31956-7	SW846 8011	15-JUL-14 22:32	NK	14-JUL-14	AW	V8011SL
MC31956-7	SW846 8270D	16-JUL-14 14:59	WK	10-JUL-14	FC	AB8270SL+
MC31956-7	SW846 8270D BY SIM	18-JUL-14 09:39	MR	10-JUL-14	FC	B8270SIMSL
MC31956-7	SW846 8260C	18-JUL-14 19:07	AMY			V8260SL+
MC31956-7	SW846 8260C	20-JUL-14 19:42	AMY			V8260SL+
MC31956-7	SW846 8260C	20-JUL-14 20:39	AMY			V8260SL+
MC31956-8 Collected: 08-JUL-14 00:00 By: CWBK Received: 09-JUL-14 By: TB-070814-HCL						
MC31956-8	SW846 8260C	18-JUL-14 12:35	AMY			V8260SL+
MC31956-9 Collected: 08-JUL-14 00:00 By: CWBK Received: 09-JUL-14 By: TB-070814-ST						
MC31956-9	SW846 8011	15-JUL-14 22:52	NK	14-JUL-14	AW	V8011SL

Accutest Internal Chain of Custody

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Received: 07/09/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC31956-1.2	Walk In Ref #22	Michael DiBuono	07/10/14 16:14	Retrieve from Storage
MC31956-1.3	VOC Ref #3	Amy Min Yang	07/18/14 10:26	Retrieve from Storage
MC31956-1.3	Amy Min Yang	GCMSV	07/18/14 10:26	Load on Instrument
MC31956-1.3	GCMSV	Amy Min Yang	07/21/14 11:41	Unload from Instrument
MC31956-1.3	Amy Min Yang	VOC Ref #3	07/21/14 11:41	Return to Storage
MC31956-1.5	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage
MC31956-2.1	Walk In Ref #22	Michael DiBuono	07/10/14 16:14	Retrieve from Storage
MC31956-2.3	VOC Ref #3	Amy Min Yang	07/18/14 10:26	Retrieve from Storage
MC31956-2.3	Amy Min Yang	GCMSV	07/18/14 10:26	Load on Instrument
MC31956-2.3	GCMSV	Amy Min Yang	07/21/14 11:41	Unload from Instrument
MC31956-2.3	Amy Min Yang	VOC Ref #3	07/21/14 11:41	Return to Storage
MC31956-2.6	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage
MC31956-3.2	Walk In Ref #22	Michael DiBuono	07/10/14 16:14	Retrieve from Storage
MC31956-3.3	VOC Ref #3	Amy Min Yang	07/20/14 11:15	Retrieve from Storage
MC31956-3.3	Amy Min Yang	GCMSH	07/20/14 11:15	Load on Instrument
MC31956-3.3	GCMSH	Amy Min Yang	07/22/14 09:51	Unload from Instrument
MC31956-3.3	Amy Min Yang	VOC Ref #3	07/22/14 09:51	Return to Storage
MC31956-3.4	VOC Ref #3	Amy Min Yang	07/18/14 10:26	Retrieve from Storage
MC31956-3.4	Amy Min Yang	GCMSV	07/18/14 10:26	Load on Instrument
MC31956-3.4	GCMSV	Amy Min Yang	07/21/14 11:41	Unload from Instrument
MC31956-3.4	Amy Min Yang	VOC Ref #3	07/21/14 11:41	Return to Storage
MC31956-3.6	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage
MC31956-4.2	Walk In Ref #22	Michael DiBuono	07/10/14 16:14	Retrieve from Storage
MC31956-4.3	VOC Ref #3	Amy Min Yang	07/18/14 10:26	Retrieve from Storage
MC31956-4.3	Amy Min Yang	GCMSV	07/18/14 10:26	Load on Instrument
MC31956-4.3	GCMSV	Amy Min Yang	07/21/14 11:41	Unload from Instrument
MC31956-4.3	Amy Min Yang	VOC Ref #3	07/21/14 11:41	Return to Storage
MC31956-4.5	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage
MC31956-5.2	Walk In Ref #22	Michael DiBuono	07/10/14 16:14	Retrieve from Storage
MC31956-5.3	VOC Ref #3	Amy Min Yang	07/20/14 11:15	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Received: 07/09/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC31956-5.3	Amy Min Yang	GCMSH	07/20/14 11:15	Load on Instrument
MC31956-5.3	GCMSH	Amy Min Yang	07/22/14 09:51	Unload from Instrument
MC31956-5.3	Amy Min Yang	VOC Ref #3	07/22/14 09:51	Return to Storage
MC31956-5.4	VOC Ref #3	Amy Min Yang	07/18/14 10:26	Retrieve from Storage
MC31956-5.4	Amy Min Yang	GCMSV	07/18/14 10:26	Load on Instrument
MC31956-5.4	GCMSV	Amy Min Yang	07/21/14 11:41	Unload from Instrument
MC31956-5.4	Amy Min Yang	VOC Ref #3	07/21/14 11:41	Return to Storage
MC31956-5.5	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage
MC31956-6.1	Walk In Ref #22	Michael DiBuono	07/10/14 16:14	Retrieve from Storage
MC31956-6.3	VOC Ref #3	Amy Min Yang	07/18/14 10:26	Retrieve from Storage
MC31956-6.3	Amy Min Yang	GCMSV	07/18/14 10:26	Load on Instrument
MC31956-6.3	GCMSV	Amy Min Yang	07/21/14 11:41	Unload from Instrument
MC31956-6.3	Amy Min Yang	VOC Ref #3	07/21/14 11:41	Return to Storage
MC31956-6.4	VOC Ref #3	Amy Min Yang	07/20/14 11:15	Retrieve from Storage
MC31956-6.4	Amy Min Yang	GCMSH	07/20/14 11:15	Load on Instrument
MC31956-6.4	GCMSH	Amy Min Yang	07/22/14 09:51	Unload from Instrument
MC31956-6.4	Amy Min Yang	VOC Ref #3	07/22/14 09:51	Return to Storage
MC31956-6.6	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage
MC31956-7.2	Walk In Ref #22	Michael DiBuono	07/10/14 16:14	Retrieve from Storage
MC31956-7.3	VOC Ref #3	Amy Min Yang	07/20/14 11:15	Retrieve from Storage
MC31956-7.3	Amy Min Yang	GCMSH	07/20/14 11:15	Load on Instrument
MC31956-7.3	GCMSH	Amy Min Yang	07/22/14 09:51	Unload from Instrument
MC31956-7.3	Amy Min Yang	VOC Ref #3	07/22/14 09:51	Return to Storage
MC31956-7.4	VOC Ref #3	Amy Min Yang	07/18/14 10:26	Retrieve from Storage
MC31956-7.4	Amy Min Yang	GCMSV	07/18/14 10:26	Load on Instrument
MC31956-7.4	GCMSV	Amy Min Yang	07/21/14 11:41	Unload from Instrument
MC31956-7.4	Amy Min Yang	VOC Ref #3	07/21/14 11:41	Return to Storage
MC31956-7.5	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage
MC31956-8.1	VOC Ref #3	Amy Min Yang	07/18/14 10:26	Retrieve from Storage
MC31956-8.1	Amy Min Yang	GCMSV	07/18/14 10:26	Load on Instrument
MC31956-8.1	GCMSV	Amy Min Yang	07/21/14 11:41	Unload from Instrument
MC31956-8.1	Amy Min Yang	VOC Ref #3	07/21/14 11:41	Return to Storage

Accutest Internal Chain of Custody

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Received: 07/09/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC31956-9.2	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage

New England ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1220-MB	V32973.D	1	07/18/14	AMY	n/a	n/a	MSV1220

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

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7, MC31956-8

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1220-MB	V32973.D	1	07/18/14	AMY	n/a	n/a	MSV1220

6.1.1

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

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7, MC31956-8

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

Method Blank Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1220-MB	V32973.D	1	07/18/14	AMY	n/a	n/a	MSV1220

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

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7, MC31956-8

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	112%	70-130%
2037-26-5	Toluene-D8	91%	70-130%
460-00-4	4-Bromofluorobenzene	99%	70-130%

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

Method Blank Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSH2247-MB	H67585.D	1	07/20/14	AMY	n/a	n/a	MSH2247

6.1.2

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

MC31956-3, MC31956-5, MC31956-6, MC31956-7

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	103%	70-130%
2037-26-5	Toluene-D8	107%	70-130%
460-00-4	4-Bromofluorobenzene	111%	70-130%

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

Blank Spike Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1220-BS	V32969.D	1	07/18/14	AMY	n/a	n/a	MSV1220

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

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7, MC31956-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	28.1	56* a	70-130
107-02-8	Acrolein	250	259	104	70-130
107-13-1	Acrylonitrile	50	51.3	103	70-130
71-43-2	Benzene	50	51.5	103	70-130
108-86-1	Bromobenzene	50	50.9	102	70-130
74-97-5	Bromochloromethane	50	50.1	100	70-130
75-27-4	Bromodichloromethane	50	56.5	113	70-130
75-25-2	Bromoform	50	55.1	110	70-130
74-83-9	Bromomethane	50	74.7	149* a	70-130
78-93-3	2-Butanone (MEK)	50	38.4	77	70-130
104-51-8	n-Butylbenzene	50	53.6	107	70-130
135-98-8	sec-Butylbenzene	50	55.5	111	70-130
98-06-6	tert-Butylbenzene	50	54.5	109	70-130
75-15-0	Carbon disulfide	50	43.8	88	70-130
56-23-5	Carbon tetrachloride	50	60.6	121	70-130
108-90-7	Chlorobenzene	50	50.8	102	70-130
75-00-3	Chloroethane	50	77.1	154* a	70-130
110-75-8	2-Chloroethyl vinyl ether	50	42.4	85	70-130
67-66-3	Chloroform	50	53.8	108	70-130
74-87-3	Chloromethane	50	73.1	146* a	70-130
95-49-8	o-Chlorotoluene	50	53.3	107	70-130
106-43-4	p-Chlorotoluene	50	54.2	108	70-130
124-48-1	Dibromochloromethane	50	52.1	104	70-130
95-50-1	1,2-Dichlorobenzene	50	51.7	103	70-130
541-73-1	1,3-Dichlorobenzene	50	51.8	104	70-130
106-46-7	1,4-Dichlorobenzene	50	51.3	103	70-130
75-71-8	Dichlorodifluoromethane	50	49.7	99	70-130
75-34-3	1,1-Dichloroethane	50	57.8	116	70-130
107-06-2	1,2-Dichloroethane	50	56.4	113	70-130
75-35-4	1,1-Dichloroethene	50	53.7	107	70-130
156-59-2	cis-1,2-Dichloroethene	50	51.9	104	70-130
156-60-5	trans-1,2-Dichloroethene	50	57.1	114	70-130
78-87-5	1,2-Dichloropropane	50	48.4	97	70-130
142-28-9	1,3-Dichloropropane	50	49.4	99	70-130
594-20-7	2,2-Dichloropropane	50	60.6	121	70-130
563-58-6	1,1-Dichloropropene	50	54.8	110	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1220-BS	V32969.D	1	07/18/14	AMY	n/a	n/a	MSV1220

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

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7, MC31956-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	52.6	105	70-130
10061-02-6	trans-1,3-Dichloropropene	50	58.2	116	70-130
123-91-1	1,4-Dioxane	250	246	98	70-130
97-63-2	Ethyl methacrylate	50	38.7	77	77-137
100-41-4	Ethylbenzene	50	53.8	108	70-130
87-68-3	Hexachlorobutadiene	50	46.7	93	70-130
591-78-6	2-Hexanone	50	35.5	71	70-130
98-82-8	Isopropylbenzene	50	57.1	114	70-130
99-87-6	p-Isopropyltoluene	50	55.2	110	70-130
1634-04-4	Methyl Tert Butyl Ether	50	54.6	109	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	43.6	87	70-130
74-95-3	Methylene bromide	50	49.7	99	70-130
75-09-2	Methylene chloride	50	54.7	109	70-130
91-20-3	Naphthalene	50	39.5	79	70-130
103-65-1	n-Propylbenzene	50	53.2	106	70-130
100-42-5	Styrene	50	50.5	101	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	56.9	114	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	50.5	101	70-130
127-18-4	Tetrachloroethene	50	50.9	102	70-130
108-88-3	Toluene	50	47.2	94	70-130
87-61-6	1,2,3-Trichlorobenzene	50	42.9	86	70-130
120-82-1	1,2,4-Trichlorobenzene	50	44.9	90	70-130
71-55-6	1,1,1-Trichloroethane	50	54.9	110	70-130
79-00-5	1,1,2-Trichloroethane	50	43.9	88	70-130
79-01-6	Trichloroethene	50	48.7	97	70-130
75-69-4	Trichlorofluoromethane	50	71.0	142* [a]	70-130
96-18-4	1,2,3-Trichloropropane	50	53.2	106	70-130
95-63-6	1,2,4-Trimethylbenzene	50	53.8	108	70-130
108-67-8	1,3,5-Trimethylbenzene	50	54.0	108	70-130
108-05-4	Vinyl Acetate	50	52.5	105	70-130
75-01-4	Vinyl chloride	50	70.9	142* [b]	70-130
	m,p-Xylene	100	106	106	70-130
95-47-6	o-Xylene	50	53.7	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: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1220-BS	V32969.D	1	07/18/14	AMY	n/a	n/a	MSV1220

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

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7, MC31956-8

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	70-130%
2037-26-5	Toluene-D8	90%	70-130%
460-00-4	4-Bromofluorobenzene	94%	70-130%

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

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSH2247-BS	H67582.D	1	07/20/14	AMY	n/a	n/a	MSH2247
MSH2247-BSD	H67583.D	1	07/20/14	AMY	n/a	n/a	MSH2247

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

MC31956-3, MC31956-5, MC31956-6, MC31956-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	50	52.8	106	52.3	105	1	70-130/25
100-41-4	Ethylbenzene	50	49.8	100	49.0	98	2	70-130/25
108-88-3	Toluene	50	53.1	106	51.9	104	2	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	52.5	105	51.4	103	2	70-130/25
	m,p-Xylene	100	98.5	99	96.7	97	2	70-130/25
95-47-6	o-Xylene	50	47.5	95	47.6	95	0	70-130/25
1330-20-7	Xylene (total)	150	146	97	144	96	1	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	106%	107%	70-130%
2037-26-5	Toluene-D8	109%	108%	70-130%
460-00-4	4-Bromofluorobenzene	101%	102%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC31918-3MS	V32992.D	1	07/18/14	AMY	n/a	n/a	MSV1220
MC31918-3MSD	V32993.D	1	07/18/14	AMY	n/a	n/a	MSV1220
MC31918-3	V32980.D	1	07/18/14	AMY	n/a	n/a	MSV1220

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

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7, MC31956-8

6.4.1

CAS No.	Compound	MC31918-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	66.5	133* [a]	50	66.1	132* [a]	1	70-130/30
107-02-8	Acrolein	ND		250	245	98	250	246	98	0	70-130/30
107-13-1	Acrylonitrile	ND		50	46.6	93	50	47.5	95	2	70-130/30
71-43-2	Benzene	42.9		50	205	324* [a]	50	126	166* [a]	48* [b]	70-130/30
108-86-1	Bromobenzene	ND		50	53.5	107	50	51.3	103	4	70-130/30
74-97-5	Bromochloromethane	ND		50	51.8	104	50	50.9	102	2	70-130/30
75-27-4	Bromodichloromethane	ND		50	57.7	115	50	57.9	116	0	70-130/30
75-25-2	Bromoform	ND		50	53.0	106	50	54.6	109	3	70-130/30
74-83-9	Bromomethane	ND		50	65.0	130	50	62.2	124	4	70-130/30
78-93-3	2-Butanone (MEK)	ND		50	45.4	91	50	46.4	93	2	70-130/30
104-51-8	n-Butylbenzene	11.2		50	76.7	131* [a]	50	74.0	126	4	70-130/30
135-98-8	sec-Butylbenzene	14.7		50	79.1	129	50	75.5	122	5	70-130/30
98-06-6	tert-Butylbenzene	2.3	J	50	61.5	118	50	58.2	112	6	70-130/30
75-15-0	Carbon disulfide	ND		50	51.8	104	50	50.4	101	3	70-130/30
56-23-5	Carbon tetrachloride	ND		50	50.3	101	50	50.4	101	0	70-130/30
108-90-7	Chlorobenzene	ND		50	54.2	108	50	52.9	106	2	70-130/30
75-00-3	Chloroethane	ND		50	65.8	132* [a]	50	63.1	126	4	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		50	4.2	8* [a]	50	ND	0* [a]	200* [b]	70-130/30
67-66-3	Chloroform	ND		50	52.6	105	50	51.3	103	3	70-130/30
74-87-3	Chloromethane	ND		50	64.1	128	50	61.0	122	5	70-130/30
95-49-8	o-Chlorotoluene	ND		50	58.9	118	50	56.2	112	5	70-130/30
106-43-4	p-Chlorotoluene	ND		50	58.2	116	50	55.8	112	4	70-130/30
124-48-1	Dibromochloromethane	ND		50	49.4	99	50	49.9	100	1	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		50	61.2	122	50	60.3	121	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		50	56.3	113	50	55.1	110	2	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		50	56.2	112	50	54.7	109	3	70-130/30
75-71-8	Dichlorodifluoromethane	ND		50	41.4	83	50	39.6	79	4	70-130/30
75-34-3	1,1-Dichloroethane	ND		50	62.7	125	50	61.0	122	3	70-130/30
107-06-2	1,2-Dichloroethane	ND		50	46.7	93	50	46.2	92	1	70-130/30
75-35-4	1,1-Dichloroethene	ND		50	63.7	127	50	61.4	123	4	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50	60.0	120	50	57.8	116	4	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50	65.1	130	50	63.1	126	3	70-130/30
78-87-5	1,2-Dichloropropane	ND		50	66.0	132* [a]	50	65.4	131* [a]	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	55.1	110	50	54.1	108	2	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	65.0	130	50	63.1	126	3	70-130/30
563-58-6	1,1-Dichloropropene	ND		50	54.3	109	50	53.7	107	1	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC31918-3MS	V32992.D	1	07/18/14	AMY	n/a	n/a	MSV1220
MC31918-3MSD	V32993.D	1	07/18/14	AMY	n/a	n/a	MSV1220
MC31918-3	V32980.D	1	07/18/14	AMY	n/a	n/a	MSV1220

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

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7, MC31956-8

CAS No.	Compound	MC31918-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		50	60.4	121	50	60.7	121	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		50	64.2	128	50	64.9	130	1	70-130/30
123-91-1	1,4-Dioxane	ND		250	327	131* a	250	334	134* a	2	70-130/30
97-63-2	Ethyl methacrylate	ND		50	62.5	125	50	63.2	126	1	72-139/30
100-41-4	Ethylbenzene	1.6		50	62.7	122	50	59.9	117	5	70-130/30
87-68-3	Hexachlorobutadiene	ND		50	65.2	130	50	63.1	126	3	70-130/30
591-78-6	2-Hexanone	ND		50	48.8	98	50	49.7	99	2	70-130/30
98-82-8	Isopropylbenzene	144		50	173	58* c	50	164	40* c	5	70-130/30
99-87-6	p-Isopropyltoluene	ND		50	64.4	129	50	61.8	124	4	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		50	96.4	193* a	50	97.1	194* a	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	55.7	111	50	57.2	114	3	70-130/30
74-95-3	Methylene bromide	ND		50	53.5	107	50	53.7	107	0	70-130/30
75-09-2	Methylene chloride	ND		50	63.0	126	50	61.1	122	3	70-130/30
91-20-3	Naphthalene	ND		50	77.9	156* a	50	72.0	144* a	8	70-130/30
103-65-1	n-Propylbenzene	102		50	139	74	50	133	62* c	4	70-130/30
100-42-5	Styrene	ND		50	56.3	113	50	55.3	111	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	56.0	112	50	55.6	111	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	57.3	115	50	56.5	113	1	70-130/30
127-18-4	Tetrachloroethene	ND		50	56.7	113	50	54.3	109	4	70-130/30
108-88-3	Toluene	2.2		50	59.9	115	50	58.7	113	2	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	60.6	121	50	63.6	127	5	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	65.2	130	50	65.8	132* a	1	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		50	54.7	109	50	54.2	108	1	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50	53.4	107	50	54.2	108	1	70-130/30
79-01-6	Trichloroethene	ND		50	51.3	103	50	49.8	100	3	70-130/30
75-69-4	Trichlorofluoromethane	ND		50	56.4	113	50	54.2	108	4	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		50	56.0	112	50	55.7	111	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		50	62.1	124	50	58.5	117	6	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		50	62.0	124	50	58.5	117	6	70-130/30
108-05-4	Vinyl Acetate	ND		50	79.8	160* a	50	78.2	156* a	2	70-130/30
75-01-4	Vinyl chloride	ND		50	64.7	129	50	61.8	124	5	70-130/30
	m,p-Xylene	1.0		100	123	122	100	118	117	4	70-130/30
95-47-6	o-Xylene	0.99	J	50	63.6	125	50	61.4	121	4	70-130/30
1330-20-7	Xylene (total)	2.0		150	187	123	150	180	119	4	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC31918-3MS	V32992.D	1	07/18/14	AMY	n/a	n/a	MSV1220
MC31918-3MSD	V32993.D	1	07/18/14	AMY	n/a	n/a	MSV1220
MC31918-3	V32980.D	1	07/18/14	AMY	n/a	n/a	MSV1220

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

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7, MC31956-8

CAS No.	Surrogate Recoveries	MS	MSD	MC31918-3	Limits
1868-53-7	Dibromofluoromethane	86%	87%	92%	70-130%
2037-26-5	Toluene-D8	98%	99%	102%	70-130%
460-00-4	4-Bromofluorobenzene	90%	89%	101%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample non-homogeneity.
(c) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

6.4.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32208-1MS	H67590.D	5	07/20/14	AMY	n/a	n/a	MSH2247
MC32208-1MSD	H67591.D	5	07/20/14	AMY	n/a	n/a	MSH2247
MC32208-1	H67588.D	1	07/20/14	AMY	n/a	n/a	MSH2247

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

MC31956-3, MC31956-5, MC31956-6, MC31956-7

CAS No.	Compound	MC32208-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		250	272	109	250	270	108	1	70-130/30
100-41-4	Ethylbenzene	ND		250	255	102	250	246	98	4	70-130/30
108-88-3	Toluene	ND		250	270	108	250	264	106	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	265	106	250	256	102	3	70-130/30
	m,p-Xylene	ND		500	499	100	500	483	97	3	70-130/30
95-47-6	o-Xylene	ND		250	247	99	250	238	95	4	70-130/30
1330-20-7	Xylene (total)	ND		750	746	99	750	720	96	4	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC32208-1	Limits
1868-53-7	Dibromofluoromethane	109%	109%	104%	70-130%
2037-26-5	Toluene-D8	108%	109%	107%	70-130%
460-00-4	4-Bromofluorobenzene	103%	103%	111%	70-130%

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSH2247-CC2244	Injection Date:	07/20/14
Lab File ID:	H67581.D	Injection Time:	09:22
Instrument ID:	GCMSH	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	430437	8.62	737083	9.49	415358	12.74	305735	15.31	122837	6.20
Upper Limit [a]	860874	9.12	1474166	9.99	830716	13.24	611470	15.81	245674	6.70
Lower Limit [b]	215219	8.12	368542	8.99	207679	12.24	152868	14.81	61419	5.70
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSH2247-BS	420877	8.62	729229	9.49	412775	12.74	302760	15.31	126928	6.20
MSH2247-BSD	417937	8.63	718985	9.49	407882	12.74	296241	15.31	114294	6.20
MSH2247-MB	413656	8.62	712195	9.49	381311	12.74	256705	15.31	111453	6.22
ZZZZZZ	413193	8.62	705328	9.49	375530	12.74	254530	15.31	94093	6.21
ZZZZZZ	402474	8.63	698970	9.49	379091	12.74	252260	15.31	100118	6.22
MC32208-1	399857	8.63	699759	9.49	380990	12.74	249660	15.31	102718	6.22
ZZZZZZ	402964	8.63	709303	9.49	379561	12.74	251783	15.31	107538	6.20
MC32208-1MS	415851	8.62	724238	9.49	409666	12.74	297468	15.31	111296	6.21
MC32208-1MSD	422382	8.62	737497	9.49	422143	12.74	304038	15.31	126303	6.21
ZZZZZZ	410200	8.63	728192	9.49	388580	12.74	258157	15.31	116403	6.20
ZZZZZZ	404869	8.62	706473	9.49	385203	12.74	250717	15.31	112938	6.20
ZZZZZZ	411183	8.63	735541	9.49	391892	12.74	246607	15.31	117191	6.21
ZZZZZZ	409172	8.62	723210	9.49	376180	12.74	244973	15.31	109981	6.21
ZZZZZZ	393726	8.63	701144	9.49	377376	12.74	229940	15.31	115245	6.21
ZZZZZZ	387204	8.63	694570	9.49	375746	12.74	232009	15.31	108077	6.21
ZZZZZZ	385972	8.62	698919	9.49	370159	12.75	230711	15.31	111265	6.20
MC31956-3	386380	8.62	682841	9.49	366125	12.74	248096	15.31	113120	6.21
MC31956-5	389899	8.63	708306	9.49	372145	12.74	249191	15.31	120779	6.20
MC31956-6	386814	8.63	708087	9.49	364584	12.74	237328	15.31	118931	6.21
MC31956-7	370878	8.62	677496	9.49	355786	12.74	224201	15.31	110486	6.21
MC31956-6	363537	8.63	661807	9.49	349927	12.74	216192	15.31	107846	6.21
MC31956-7	359340	8.62	659260	9.49	347020	12.74	216204	15.31	103741	6.20
ZZZZZZ	349596	8.62	619102	9.49	335363	12.74	208032	15.31	94051	6.21

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.

6.5.1

Volatile Internal Standard Area Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSV1220-CC1177	Injection Date:	07/18/14
Lab File ID:	V32968.D	Injection Time:	09:06
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	517777	6.54	634373	7.73	220822	11.07	307127	13.28	91119	3.50
Upper Limit [a]	1035554	7.04	1268746	8.23	441644	11.57	614254	13.78	182238	4.00
Lower Limit [b]	258889	6.04	317187	7.23	110411	10.57	153564	12.78	45560	3.00
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1220-BS	480540	6.55	607660	7.73	209306	11.07	283291	13.28	80302	3.50
MSV1220-MB	341148	6.54	459492	7.73	177546	11.07	194914	13.28	66364	3.50
ZZZZZZ	313394	6.54	419580	7.73	166513	11.07	188656	13.28	66870	3.49
ZZZZZZ	328352	6.55	447829	7.73	175129	11.07	194073	13.28	65194	3.50
MC31956-8	307064	6.55	420438	7.73	166070	11.07	180053	13.28	60290	3.49
ZZZZZZ	498860	6.54	614602	7.73	180378	11.07	179224	13.28	173495	3.51
ZZZZZZ	328636	6.54	442659	7.73	172066	11.07	198871	13.28	83109	3.49
MC31956-4	297291	6.54	399750	7.73	157970	11.07	186378	13.28	67531	3.49
MC31918-3	452614	6.54	602828	7.73	226166	11.07	264564	13.28	115198	3.49
ZZZZZZ	489519	6.54	557457	7.73	203848	11.07	231181	13.28	107261	3.50
ZZZZZZ	434429	6.54	570271	7.73	205314	11.07	241064	13.28	93373	3.49
ZZZZZZ	517670	6.55	592051	7.73	210352	11.07	229122	13.28	94650	3.50
ZZZZZZ	408704	6.54	528454	7.73	194127	11.07	216187	13.28	91645	3.50
ZZZZZZ	385392	6.54	578415	7.73	190544	11.07	213838	13.28	89136	3.49
MC31956-1	561731	6.54	742229	7.73	252432	11.07	310148	13.28	136656	3.50
MC31956-2	1059510[c]	6.54	1349063[c]	7.73	417553	11.07	794902[c]	13.28	469621[c]	3.51
MC31956-3	730708	6.55	1266234	7.73	370126	11.07	600478	13.28	442776[d]	3.52
MC31956-5	954446	6.55	1753793[c]	7.73	513416[c]	11.07	760111[c]	13.28	389417[c]	3.52
MC31956-6	1211802[c]	6.67	1794648[c]	7.77	402127	11.07	644086[c]	13.28	448170[c]	3.55
MC31956-7	1106689[c]	6.65	1721039[c]	7.77	385607	11.07	601058	13.28	467721[c]	3.54
MC31918-3MS	620644	6.54	898986	7.73	314658	11.07	444228	13.28	139883	3.50
MC31918-3MSD	651086	6.54	923749	7.73	328793	11.07	477190	13.28	154193	3.50
ZZZZZZ	463882	6.54	596151	7.72	207598	11.07	234547	13.28	113031	3.49
MC31956-2	458633	6.54	580766	7.73	206498	11.07	240798	13.28	105162	3.49

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

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Outside control limits due to possible matrix interference. Confirmed by reanalysis.
(d) Outside control limits. Target analytes not associated with this internal standard.

6.5.2

Volatile Surrogate Recovery Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC31956-1	V32986.D	92	88	94
MC31956-2	V32995.D	84	90	101
MC31956-2	V32987.D	74	86	95
MC31956-3	H67600.D	109	107	108
MC31956-3	V32988.D	84	74	95
MC31956-4	V32979.D	110	93	95
MC31956-5	H67601.D	108	106	113
MC31956-5	V32989.D	80	74	102
MC31956-6	H67602.D	107	104	112
MC31956-6	H67604.D	109	106	114
MC31956-6	V32990.D	69* [a]	75	101
MC31956-7	H67603.D	107	105	114
MC31956-7	H67605.D	108	104	115
MC31956-7	V32991.D	68* [a]	74	102
MC31956-8	V32976.D	116	94	100
MC31918-3MS	V32992.D	86	98	90
MC31918-3MSD	V32993.D	87	99	89
MC32208-1MS	H67590.D	109	108	103
MC32208-1MSD	H67591.D	109	109	103
MSH2247-BS	H67582.D	106	109	101
MSH2247-BSD	H67583.D	107	108	102
MSH2247-MB	H67585.D	103	107	111
MSV1220-BS	V32969.D	98	90	94
MSV1220-MB	V32973.D	112	91	99

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.

New England ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38904-MB	X03487.D	1	07/16/14	WK	07/10/14	OP38904	MSX121

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

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7

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

7.1.1

Method Blank Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38904-MB	X03487.D	1	07/16/14	WK	07/10/14	OP38904	MSX121

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

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7

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	44%	15-110%
4165-62-2	Phenol-d5	32%	15-110%
118-79-6	2,4,6-Tribromophenol	74%	15-110%
4165-60-0	Nitrobenzene-d5	82%	30-130%
321-60-8	2-Fluorobiphenyl	78%	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	

Method Blank Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38905-MB	I90649.D	1	07/14/14	MR	07/10/14	OP38905	MSI3375

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

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7

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	91%	30-130%
321-60-8	2-Fluorobiphenyl	68%	30-130%
1718-51-0	Terphenyl-d14	75%	30-130%

7.1.2

Blank Spike Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38904-BS	X03488.D	1	07/16/14	WK	07/10/14	OP38904	MSX121

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

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	19.5	39	30-130
95-57-8	2-Chlorophenol	50	40.0	80	30-130
59-50-7	4-Chloro-3-methyl phenol	50	42.3	85	30-130
120-83-2	2,4-Dichlorophenol	50	42.8	86	30-130
105-67-9	2,4-Dimethylphenol	50	22.5	45	30-130
51-28-5	2,4-Dinitrophenol	50	25.5	51	30-130
534-52-1	4,6-Dinitro-o-cresol	50	33.7	67	30-130
95-48-7	2-Methylphenol	50	34.4	69	30-130
	3&4-Methylphenol	100	62.1	62	30-130
88-75-5	2-Nitrophenol	50	43.2	86	30-130
100-02-7	4-Nitrophenol	50	17.5	35	30-130
87-86-5	Pentachlorophenol	50	37.4	75	30-130
108-95-2	Phenol	50	17.4	35	30-130
95-95-4	2,4,5-Trichlorophenol	50	45.6	91	30-130
88-06-2	2,4,6-Trichlorophenol	50	45.2	90	30-130
62-53-3	Aniline	50	29.6	59	40-140
101-55-3	4-Bromophenyl phenyl ether	50	48.9	98	40-140
85-68-7	Butyl benzyl phthalate	50	48.9	98	40-140
100-51-6	Benzyl Alcohol	50	28.6	57	40-140
91-58-7	2-Chloronaphthalene	50	42.3	85	40-140
106-47-8	4-Chloroaniline	50	40.2	80	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	43.0	86	40-140
111-44-4	bis(2-Chloroethyl)ether	50	43.4	87	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	46.8	94	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	43.5	87	40-140
122-66-7	1,2-Diphenylhydrazine	50	43.3	87	40-140
121-14-2	2,4-Dinitrotoluene	50	47.8	96	40-140
606-20-2	2,6-Dinitrotoluene	50	46.3	93	40-140
91-94-1	3,3'-Dichlorobenzidine	50	42.9	86	40-140
132-64-9	Dibenzofuran	50	39.4	79	40-140
84-74-2	Di-n-butyl phthalate	50	45.0	90	40-140
117-84-0	Di-n-octyl phthalate	50	59.0	118	40-140
84-66-2	Diethyl phthalate	50	46.9	94	40-140
131-11-3	Dimethyl phthalate	50	46.9	94	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	53.5	107	40-140
118-74-1	Hexachlorobenzene	50	46.7	93	40-140

* = Outside of Control Limits.

7.2.1

Blank Spike Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38904-BS	X03488.D	1	07/16/14	WK	07/10/14	OP38904	MSX121

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

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	19.0	38* a	40-140
67-72-1	Hexachloroethane	50	30.6	61	40-140
78-59-1	Isophorone	50	40.5	81	40-140
88-74-4	2-Nitroaniline	50	47.7	95	40-140
99-09-2	3-Nitroaniline	50	43.8	88	40-140
100-01-6	4-Nitroaniline	50	42.7	85	40-140
98-95-3	Nitrobenzene	50	43.5	87	40-140
62-75-9	n-Nitrosodimethylamine	50	24.2	48	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	43.8	88	40-140
86-30-6	N-Nitrosodiphenylamine	50	42.1	84	40-140
110-86-1	Pyridine	50	21.6	43	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	47%	15-110%
4165-62-2	Phenol-d5	33%	15-110%
118-79-6	2,4,6-Tribromophenol	85%	15-110%
4165-60-0	Nitrobenzene-d5	87%	30-130%
321-60-8	2-Fluorobiphenyl	82%	30-130%
1718-51-0	Terphenyl-d14	91%	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: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38905-BS	190641.D	1	07/14/14	MR	07/10/14	OP38905	MSI3375

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

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	33.6	67	40-140
208-96-8	Acenaphthylene	50	28.2	56	40-140
120-12-7	Anthracene	50	34.1	68	40-140
56-55-3	Benzo(a)anthracene	50	42.9	86	40-140
50-32-8	Benzo(a)pyrene	50	36.2	72	40-140
205-99-2	Benzo(b)fluoranthene	50	39.4	79	40-140
191-24-2	Benzo(g,h,i)perylene	50	38.3	77	40-140
207-08-9	Benzo(k)fluoranthene	50	36.8	74	40-140
218-01-9	Chrysene	50	40.0	80	40-140
53-70-3	Dibenzo(a,h)anthracene	50	38.8	78	40-140
206-44-0	Fluoranthene	50	33.9	68	40-140
86-73-7	Fluorene	50	43.8	88	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	31.3	63	40-140
90-12-0	1-Methylnaphthalene	50	33.4	67	40-140
91-57-6	2-Methylnaphthalene	50	34.8	70	40-140
85-01-8	Phenanthrene	50	35.8	72	40-140
129-00-0	Pyrene	50	35.4	71	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	96%	30-130%
321-60-8	2-Fluorobiphenyl	71%	30-130%
1718-51-0	Terphenyl-d14	76%	30-130%

* = Outside of Control Limits.

7.2.2

7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38904-MS	X03489.D	1	07/16/14	WK	07/10/14	OP38904	MSX121
OP38904-MSD	X03490.D	1	07/16/14	WK	07/10/14	OP38904	MSX121
MC31918-3	X03491.D	1	07/16/14	WK	07/10/14	OP38904	MSX121

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

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7

7.3.1

7

CAS No.	Compound	MC31918-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		54.9	30.1	55	54.9	29.5	54	2	30-130/20
95-57-8	2-Chlorophenol	ND		54.9	39.6	72	54.9	34.8	63	13	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		54.9	42.8	78	54.9	40.4	74	6	30-130/20
120-83-2	2,4-Dichlorophenol	ND		54.9	43.7	80	54.9	38.5	70	13	30-130/20
105-67-9	2,4-Dimethylphenol	ND		54.9	43.5	79	54.9	39.2	71	10	30-130/20
51-28-5	2,4-Dinitrophenol	ND		54.9	29.4	54	54.9	29.2	53	1	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		54.9	36.7	67	54.9	35.9	65	2	30-130/20
95-48-7	2-Methylphenol	ND		54.9	38.0	69	54.9	33.5	61	13	30-130/20
	3&4-Methylphenol	ND		110	62.8	57	110	56.3	51	11	30-130/20
88-75-5	2-Nitrophenol	ND		54.9	44.5	81	54.9	37.9	69	16	30-130/20
100-02-7	4-Nitrophenol	ND		54.9	24.9	45	54.9	23.7	43	5	30-130/20
87-86-5	Pentachlorophenol	ND		54.9	43.0	78	54.9	39.6	72	8	30-130/20
108-95-2	Phenol	ND		54.9	19.5	35	54.9	18.0	33	8	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		54.9	47.1	86	54.9	41.2	75	13	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		54.9	44.3	81	54.9	39.2	71	12	30-130/20
62-53-3	Aniline	ND		54.9	25.4	46	54.9	27.3	50	7	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		54.9	48.1	88	54.9	42.7	78	12	40-140/20
85-68-7	Butyl benzyl phthalate	ND		54.9	48.7	89	54.9	45.0	82	8	40-140/20
100-51-6	Benzyl Alcohol	ND		54.9	27.1	49	54.9	26.3	48	3	40-140/20
91-58-7	2-Chloronaphthalene	ND		54.9	43.8	80	54.9	37.5	68	15	40-140/20
106-47-8	4-Chloroaniline	ND		54.9	36.5	66	54.9	39.5	72	8	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		54.9	42.2	77	54.9	35.3	64	18	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		54.9	43.0	78	54.9	36.4	66	17	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		54.9	46.2	84	54.9	39.6	72	15	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		54.9	43.7	80	54.9	38.3	70	13	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		54.9	45.7	83	54.9	40.6	74	12	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		54.9	45.7	83	54.9	41.7	76	9	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		54.9	46.6	85	54.9	41.3	75	12	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		54.9	7.7	14* [a]	54.9	7.1	13* [a]	8	40-140/20
132-64-9	Dibenzofuran	ND		54.9	39.6	72	54.9	34.6	63	13	40-140/20
84-74-2	Di-n-butyl phthalate	0.30	J	54.9	44.1	80	54.9	40.4	73	9	40-140/20
117-84-0	Di-n-octyl phthalate	ND		54.9	60.6	110	54.9	55.7	101	8	40-140/20
84-66-2	Diethyl phthalate	ND		54.9	45.8	83	54.9	41.9	76	9	40-140/20
131-11-3	Dimethyl phthalate	ND		54.9	44.9	82	54.9	40.7	74	10	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		54.9	53.4	97	54.9	49.5	90	8	40-140/20
118-74-1	Hexachlorobenzene	ND		54.9	45.4	83	54.9	41.7	76	8	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38904-MS	X03489.D	1	07/16/14	WK	07/10/14	OP38904	MSX121
OP38904-MSD	X03490.D	1	07/16/14	WK	07/10/14	OP38904	MSX121
MC31918-3	X03491.D	1	07/16/14	WK	07/10/14	OP38904	MSX121

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

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7

7.3.1

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CAS No.	Compound	MC31918-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		54.9	21.1	38* [b]	54.9	17.9	33* [b]	16	40-140/20
67-72-1	Hexachloroethane	ND		54.9	35.9	65	54.9	30.5	56	16	40-140/20
78-59-1	Isophorone	ND		54.9	40.3	73	54.9	34.9	64	14	40-140/20
88-74-4	2-Nitroaniline	ND		54.9	46.2	84	54.9	41.8	76	10	40-140/20
99-09-2	3-Nitroaniline	ND		54.9	38.9	71	54.9	40.2	73	3	40-140/20
100-01-6	4-Nitroaniline	ND		54.9	35.7	65	54.9	34.0	62	5	40-140/20
98-95-3	Nitrobenzene	ND		54.9	47.6	87	54.9	40.3	73	17	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		54.9	24.9	45	54.9	23.6	43	5	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		54.9	42.9	78	54.9	36.6	67	16	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		54.9	42.7	78	54.9	38.7	70	10	40-140/20
110-86-1	Pyridine	ND		54.9	23.6	43	54.9	23.6	43	0	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC31918-3	Limits
367-12-4	2-Fluorophenol	40%	36%	36%	15-110%
4165-62-2	Phenol-d5	28%	26%	25%	15-110%
118-79-6	2,4,6-Tribromophenol	79%	73%	90%	15-110%
4165-60-0	Nitrobenzene-d5	80%	66%	71%	30-130%
321-60-8	2-Fluorobiphenyl	73%	62%	68%	30-130%
1718-51-0	Terphenyl-d14	81%	75%	89%	30-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38905-MS	I90642.D	1	07/14/14	MR	07/10/14	OP38905	MSI3375
OP38905-MSD	I90643.D	1	07/14/14	MR	07/10/14	OP38905	MSI3375
MC31918-3	I90644.D	1	07/14/14	MR	07/10/14	OP38905	MSI3375

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

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7

7.3.2

CAS No.	Compound	MC31918-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	0.33		54.9	34.0	61	54.9	30.3	55	12	40-140/20
208-96-8	Acenaphthylene	0.16		54.9	28.3	51	54.9	24.9	45	13	40-140/20
120-12-7	Anthracene	ND		54.9	33.6	61	54.9	30.8	56	9	40-140/20
56-55-3	Benzo(a)anthracene	ND		54.9	43.8	80	54.9	39.5	72	10	40-140/20
50-32-8	Benzo(a)pyrene	ND		54.9	35.5	65	54.9	32.1	58	10	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		54.9	40.4	74	54.9	35.0	64	14	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		54.9	37.5	68	54.9	33.9	62	10	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		54.9	34.1	62	54.9	33.0	60	3	40-140/20
218-01-9	Chrysene	ND		54.9	39.4	72	54.9	35.7	65	10	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		54.9	37.8	69	54.9	34.1	62	10	40-140/20
206-44-0	Fluoranthene	ND		54.9	34.7	63	54.9	31.4	57	10	40-140/20
86-73-7	Fluorene	0.78		54.9	42.4	76	54.9	38.2	68	10	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		54.9	30.3	55	54.9	27.7	50	9	40-140/20
90-12-0	1-Methylnaphthalene	44.5		54.9	82.5	69	54.9	72.3	51	13	40-140/20
91-57-6	2-Methylnaphthalene	6.0		54.9	43.3	68	54.9	36.9	56	16	40-140/20
85-01-8	Phenanthrene	0.41		54.9	35.3	63	54.9	31.8	57	10	40-140/20
129-00-0	Pyrene	ND		54.9	36.2	66	54.9	32.8	60	10	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC31918-3	Limits
4165-60-0	Nitrobenzene-d5	87%	73%	78%	30-130%
321-60-8	2-Fluorobiphenyl	64%	55%	59%	30-130%
1718-51-0	Terphenyl-d14	70%	64%	78%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSF3294-CC3270	Injection Date:	07/23/14
Lab File ID:	F74779.D	Injection Time:	09:40
Instrument ID:	GCMSF	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	180471	3.38	602357	4.41	420839	5.91	739683	7.16	967542	9.51	859365	11.03
Upper Limit [a]	360942	3.88	1204714	4.91	841678	6.41	1479366	7.66	1935084	10.01	1718730	11.53
Lower Limit [b]	90236	2.88	301179	3.91	210420	5.41	369842	6.66	483771	9.01	429683	10.53
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP38997-MB	246325	3.38	830984	4.41	561678	5.91	1052846	7.16	1204158	9.51	1149995	11.03
OP38997-BS	231498	3.38	796776	4.41	555329	5.91	998407	7.16	1270498	9.51	1150215	11.03
ZZZZZZ	267434	3.38	893138	4.41	603694	5.91	1114097	7.16	1291047	9.51	1247054	11.03
ZZZZZZ	233198	3.38	792528	4.41	533327	5.91	999469	7.16	1212629	9.51	1222112	11.03
ZZZZZZ	239878	3.38	802770	4.41	540634	5.91	1005404	7.16	1131487	9.51	1086318	11.03
MC31956-5	211138	3.38	705631	4.41	477664	5.91	895722	7.16	1042879	9.51	1033224	11.03
ZZZZZZ	201642	3.38	689788	4.41	485947	5.91	991281	7.17	1008138	9.56	1392234	11.10
ZZZZZZ	281108	3.38	939480	4.41	640027	5.91	1280228	7.17	1071313	9.58	1564885	11.13
ZZZZZZ	272332	3.38	898171	4.41	618311	5.91	1122114	7.16	1320479	9.51	1379082	11.03

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: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSI3375-CC3320	Injection Date:	07/14/14
Lab File ID:	I90639.D	Injection Time:	08:27
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	462556	3.39	954441	4.41	569474	5.91	974997	7.23	637182	9.99	1748256	11.39
Upper Limit [a]	925112	3.89	1908882	4.91	1138948	6.41	1949994	7.73	1274364	10.49	3496512	11.89
Lower Limit [b]	231278	2.89	477221	3.91	284737	5.41	487499	6.73	318591	9.49	874128	10.89
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP38905-BS	526245	3.39	1095332	4.42	632313	5.92	1061342	7.23	718261	9.99	1880536	11.40
OP38905-MS	508238	3.39	1041213	4.42	602306	5.92	1000057	7.23	648293	10.00	1755578	11.40
OP38905-MSD	500503	3.37	1034532	4.41	603760	5.92	1003527	7.23	649074	10.00	1750521	11.40
MC31918-3	483582	3.39	996089	4.42	589657	5.92	977205	7.23	620975	9.99	1714098	11.39
ZZZZZZ	530101	3.39	1100334	4.41	641902	5.91	1074490	7.23	685385	9.99	1901638	11.39
ZZZZZZ	445157	3.39	925912	4.41	547444	5.91	919716	7.23	606598	9.98	1673547	11.39
ZZZZZZ	525430	3.39	1071920	4.41	614737	5.92	1036598	7.23	636921	9.99	1717712	11.40
MC31956-1	458487	3.39	952635	4.41	562640	5.91	950761	7.23	630211	9.99	1733165	11.39
OP38905-MB	500580	3.39	1043934	4.41	613985	5.91	1037318	7.23	676217	9.99	1846758	11.39
MC31956-2	497402	3.39	1022897	4.42	595283	5.91	992866	7.23	639343	9.99	1769986	11.39
MC31956-3	508768	3.39	1034747	4.42	582401	5.92	960844	7.23	592855	9.99	1635553	11.39
ZZZZZZ	492938	3.39	1019299	4.41	595164	5.91	1009168	7.23	649999	9.99	1765263	11.39
ZZZZZZ	480952	3.39	1011798	4.41	596512	5.91	1010071	7.23	660804	9.98	1806827	11.39

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

7.4.2

Semivolatile Internal Standard Area Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSI3380-CC3320	Injection Date:	07/18/14
Lab File ID:	I90802.D	Injection Time:	08:04
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	392999	3.25	820345	4.28	495538	5.77	857804	7.07	663250	9.82	1710034	11.21
Upper Limit [a]	785998	3.75	1640690	4.78	991076	6.27	1715608	7.57	1326500	10.32	3420068	11.71
Lower Limit [b]	196500	2.75	410173	3.78	247769	5.27	428902	6.57	331625	9.32	855017	10.71
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
MC31956-4	448139	3.25	921309	4.28	550592	5.77	941866	7.07	738297	9.82	1955382	11.21
MC31956-5	414411	3.26	866050	4.28	536597	5.78	881273	7.08	649549	9.82	1712697	11.21
MC31956-6	296475	3.26	608700	4.28	356416	5.77	622780	7.07	455702	9.82	1253554	11.20
MC31956-7	296216	3.25	614646	4.28	363295	5.77	630111	7.07	477476	9.82	1270583	11.20
ZZZZZZ	207902	3.25	437519	4.28	260764	5.77	447607	7.07	339220	9.81	904768	11.20
ZZZZZZ	212562	3.25	440624	4.28	262042	5.77	448356	7.07	339611	9.81	906367	11.20
MC32000-6	66154*	3.26	141537*	4.28	82001*	5.77	146082*	7.07	104754*	9.81	278199*	11.19

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

7.4.3

Semivolatile Internal Standard Area Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSX121-CC106	Injection Date:	07/16/14
Lab File ID:	X03482.D	Injection Time:	08:30
Instrument ID:	GCMSX	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	328847	3.99	1246051	5.04	662656	6.57	1030023	7.86	804495	10.42	599036	12.10
Upper Limit [a]	657694	4.49	2492102	5.54	1325312	7.07	2060046	8.36	1608990	10.92	1198072	12.60
Lower Limit [b]	164424	3.49	623026	4.54	331328	6.07	515012	7.36	402248	9.92	299518	11.60
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP38948-MB	296163	3.98	1095841	5.03	568725	6.57	812580	7.86	545899	10.41	405923	12.09
OP38948-BS	260776	3.98	918600	5.04	491876	6.57	723367	7.85	531423	10.41	441379	12.09
ZZZZZZ	226294	3.98	799031	5.04	398059	6.57	535605	7.86	377722[c]	10.45	259680[c]	12.14
ZZZZZZ	224975	3.98	828986	5.03	424914	6.56	613477	7.85	426536	10.40	345296	12.09
OP38904-MB	341026	3.98	1239217	5.04	649510	6.57	954996	7.86	714197	10.41	562323	12.09
OP38904-BS	344883	3.98	1242584	5.04	648886	6.57	993817	7.86	776080	10.41	621017	12.10
OP38904-MS	322426	3.98	1135051	5.04	602891	6.57	896381	7.86	696546	10.41	530117	12.10
OP38904-MSD	315128	3.98	1116556	5.04	607032	6.57	911053	7.86	713550	10.41	546041	12.10
MC31918-3	304500	3.98	1090059	5.04	578629	6.57	851332	7.86	647424	10.41	523014	12.10
ZZZZZZ	365863	3.98	1324915	5.04	701814	6.57	1029789	7.85	791409	10.41	629700	12.10
ZZZZZZ	295300	3.98	1058396	5.03	552873	6.57	811127	7.85	594802	10.41	468733	12.09
ZZZZZZ	326854	3.98	1182764	5.04	616133	6.57	899538	7.85	686895	10.41	526011	12.10
MC31956-1	297225	3.98	1083396	5.04	576413	6.57	855450	7.85	633488	10.41	508342	12.09
MC31956-2	312486	3.98	1136406	5.04	593444	6.57	884052	7.85	653593	10.41	533083	12.09
MC31956-3	301396	3.98	1122929	5.04	586294	6.57	855191	7.85	633412	10.41	518967	12.09
MC31956-4	291350	3.98	1053255	5.03	553933	6.57	815178	7.85	588737	10.41	450795	12.09
MC31956-5	308394	3.99	1097465	5.04	594326	6.57	890471	7.86	683205	10.41	529536	12.10
MC31956-6	283436	3.98	1035604	5.04	549331	6.57	805277	7.85	588290	10.41	485501	12.09
MC31956-7	312529	3.98	1125298	5.04	591670	6.57	861764	7.85	635481	10.41	531910	12.09
OP38931-MB	322546	3.98	1163915	5.04	597939	6.57	846511	7.86	601970	10.42	484287	12.11
OP38931-BS	258166	3.98	929660	5.04	494898	6.57	740175	7.86	572938	10.41	474314	12.10
ZZZZZZ	259314	3.98	919618	5.03	485310	6.57	704763	7.85	507789	10.40	389468	12.09
OP38966-MB	299946	3.98	1092618	5.03	567510	6.57	825596	7.85	600143	10.40	458125	12.09
OP38966-BS	280307	3.98	1005521	5.04	538132	6.57	811110	7.86	632229	10.41	514221	12.09
OP38966-MS	264921	3.98	943767	5.04	495987	6.57	724759	7.85	556330	10.41	465282	12.09
OP38966-MSD	264180	3.98	937027	5.04	495692	6.57	741487	7.85	564682	10.41	461048	12.09
MC32000-10	274922	3.98	998834	5.03	514627	6.57	752861	7.85	548502	10.40	415829	12.09

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

Semivolatile Internal Standard Area Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSX121-CC106	Injection Date:	07/16/14
Lab File ID:	X03482.D	Injection Time:	08:30
Instrument ID:	GCMSX	Method:	SW846 8270D

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

7.4.4

Semivolatile Surrogate Recovery Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC31956-1	X03495.D	42	30	84	81	76	93
MC31956-2	X03496.D	33	24	80	66	67	89
MC31956-3	X03497.D	36	25	75	71	67	82
MC31956-4	X03498.D	30	22	69	59	57	93
MC31956-5	F74785.D	48	26	79	66	68	72
MC31956-5	X03499.D	19	30	90	87	72	86
MC31956-6	X03500.D	44	29	85	84	78	89
MC31956-7	X03501.D	41	28	85	84	79	90
OP38904-BS	X03488.D	47	33	85	87	82	91
OP38904-MB	X03487.D	44	32	74	82	78	88
OP38904-MS	X03489.D	40	28	79	80	73	81
OP38904-MSD	X03490.D	36	26	73	66	62	75

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: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC31956-1	I90648.D	91	67	80
MC31956-2	I90650.D	73	58	77
MC31956-3	I90651.D	78	60	72
MC31956-4	I90803.D	59	50	73
MC31956-5	I90804.D	84	65	69
MC31956-6	I90805.D	77	71	71
MC31956-7	I90806.D	72	70	70
OP38905-BS	I90641.D	96	71	76
OP38905-MB	I90649.D	91	68	75
OP38905-MS	I90642.D	87	64	70
OP38905-MSD	I90643.D	73	55	64

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

7.5.2

New England ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

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: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38952-MB	BK39526.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283

The QC reported here applies to the following samples: Method: SW846 8011

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7, MC31956-9

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	118%	36-173%
460-00-4	Bromofluorobenzene (S)	112%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38952-BS	BK39527.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283

The QC reported here applies to the following samples: Method: SW846 8011

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7, MC31956-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.142	0.10	71	60-140
106-93-4	1,2-Dibromoethane	0.142	0.11	78	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	114%	36-173%
460-00-4	Bromofluorobenzene (S)	103%	36-173%

8.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL;Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38952-MS	BK39528.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
OP38952-MSD	BK39529.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
MC31918-3	BK39534.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283

The QC reported here applies to the following samples: Method: SW846 8011

MC31956-1, MC31956-2, MC31956-3, MC31956-4, MC31956-5, MC31956-6, MC31956-7, MC31956-9

CAS No.	Compound	MC31918-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.139	0.10	72	0.138	0.092	67	8	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.139	0.11	79	0.138	0.095	69	15	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC31918-3	Limits
460-00-4	Bromofluorobenzene (S)	112%	112%	115%	36-173%
460-00-4	Bromofluorobenzene (S)	108%	117%	115%	36-173%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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]
MC31956-1	BK39538.D	132	132
MC31956-2	BK39539.D	106	125
MC31956-3	BK39540.D	116	119
MC31956-4	BK39541.D	117	114
MC31956-5	BK39542.D	99	91
MC31956-6	BK39543.D	96	118
MC31956-7	BK39544.D	111	130
MC31956-9	BK39545.D	103	105
OP38952-BS	BK39527.D	114	103
OP38952-MB	BK39526.D	118	112
OP38952-MS	BK39528.D	112	108
OP38952-MSD	BK39529.D	112	117

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	GBK1283-ICC1283	Injection Date:	07/15/14
Lab File ID:	BK39522.D	Injection Time:	15:19
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.38	4.40

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP38952-MB	BK39526.D	07/15/14	16:39	4.38	4.40
OP38952-BS	BK39527.D	07/15/14	16:58	4.38	4.40
OP38952-MS	BK39528.D	07/15/14	17:18	4.38	4.40
OP38952-MSD	BK39529.D	07/15/14	17:38	4.38	4.40
OP38952-MS1	BK39530.D	07/15/14	17:57	4.38	4.40
OP38952-MSD1	BK39531.D	07/15/14	18:17	4.38	4.40
ZZZZZZ	BK39532.D	07/15/14	18:37	4.38	4.40
ZZZZZZ	BK39533.D	07/15/14	18:57	4.38	4.40
MC31918-3	BK39534.D	07/15/14	19:17	4.38	4.40
ZZZZZZ	BK39535.D	07/15/14	19:37	4.38	4.40

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: MC31956
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	GBK1283-CC1283	Injection Date:	07/15/14
Lab File ID:	BK39536.D	Injection Time:	19:57
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.38	4.40

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BK39537.D	07/15/14	20:16	4.38	4.40
MC31956-1	BK39538.D	07/15/14	20:36	4.38	4.40
MC31956-2	BK39539.D	07/15/14	20:56	4.38	4.40
MC31956-3	BK39540.D	07/15/14	21:15	4.38	4.40
MC31956-4	BK39541.D	07/15/14	21:34	4.38	4.40
MC31956-5	BK39542.D	07/15/14	21:54	4.38	4.40
MC31956-6	BK39543.D	07/15/14	22:13	4.38	4.40
MC31956-7	BK39544.D	07/15/14	22:32	4.38	4.40
MC31956-9	BK39545.D	07/15/14	22:52	4.39	4.41
MC31999-1	BK39546.D	07/15/14	23:11	4.39	4.41

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 – 3rd Quarter 2014 Data Review

Laboratory SDG: MC31999

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 7/28/2014

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

Sample Identification	Sample Identification
MW1-ROX-070914	MW12-ROX-070914
MW11-ROX-070914	MW10-ROX-070914
MW9-ROX-070914	TB-070914-HCL
TB-070914-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. VOC and SVOC LCS recoveries were outside evaluation criteria. VOC MS/MSD recoveries were outside evaluation criteria in sample MW1-ROX-070914. Internal standard area recoveries were outside criteria in MW12-ROX-070914. These issues are addressed further in the appropriate sections below. Additionally, initial calibration verification for dichlorodifluoromethane exceeded 30 percent difference (%D). Also, the continuing calibration standard for several analytes exceeded 40 percent difference (%D).

The cooler receipt form indicated that one of two coolers were received by the laboratory at a temperature of 1.5ºC, which is outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
OP38921-MB	SVOCs	Di-n-butyl phthalate	0.24 µg/L
OP38922-MB	PAHs	2-Methylnaphthalene	0.075 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 the equipment blank.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
MW12-ROX-070914	SVOCs	Di-n-butyl phthalate	-	**U**
MW11-ROX-070914	SVOCs	Di-n-butyl phthalate	-	**U**
MW10-ROX-070914	SVOCs	Di-n-butyl phthalate	-	**U**
MW9-ROX-070914	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
MSV1221-BS	VOCs	Acetone	**62**	70-130
MSV1221-BS	VOCs	Bromomethane	**161**	70-130
MSV1221-BS	VOCs	Chloroethane	**166**	70-130
MSV1221-BS	VOCs	Chloromethane	**167**	70-130
MSV1221-BS	VOCs	Trichlorofluoromethane	**142**	70-130
MSV1221-BS	VOCs	Vinyl chloride	**156**	70-130
OP38921-BS	SVOCs	2,4-Dinitrophenol	**28**	40-140
OP38921-BS	SVOCs	Hexachlorocyclopentadiene	**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. LCS MSV1221-BS was also associated with the trip blank. Blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
MW1-ROX-070914	VOCs	Acetone	**UJ**
MW12-ROX-070914	VOCs	Acetone	**UJ**
MW11-ROX-070914	VOCs	Acetone	**UJ**
MW10-ROX-070914	VOCs	Acetone	**UJ**
MW9-ROX-070914	VOCs	Acetone	**UJ**
MW1-ROX-070914	SVOCs	2,4-Dinitrophenol	**UJ**
MW1-ROX-070914	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW12-ROX-070914	SVOCs	2,4-Dinitrophenol	**UJ**
MW12-ROX-070914	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW11-ROX-070914	SVOCs	2,4-Dinitrophenol	**UJ**
MW11-ROX-070914	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW10-ROX-070914	SVOCs	2,4-Dinitrophenol	**UJ**

Sample ID	Parameter	Analyte	Qualification
MW10-ROX-070914	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW9-ROX-070914	SVOCs	2,4-Dinitrophenol	**UJ**
MW9-ROX-070914	SVOCs	Hexachlorocyclopentadiene	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

Yes, sample MW1-ROX-070914 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-070914	VOCs	Acetone	**69**/75	8	70-130/30
MW1-ROX-070914	VOCs	Bromomethane	**177/170**	4	70-130/30
MW1-ROX-070914	VOCs	Carbon tetrachloride	**134**/126	6	70-130/30
MW1-ROX-070914	VOCs	Chloroethane	**189/183**	3	70-130/30
MW1-ROX-070914	VOCs	2-Chloroethyl vinyl ether	**0/0**	NA	70-130/30
MW1-ROX-070914	VOCs	Chloromethane	**175/165**	6	70-130/30
MW1-ROX-070914	VOCs	Trichlorofluoromethane	**176/162**	9	70-130/30
MW1-ROX-070914	VOCs	Vinyl chloride	**169/165**	2	70-130/30
MW1-ROX-070914	SVOCs	3,3'-Dichlorobenzidine	79/59	**29**	40-140/20

LCS/LCSD recoveries were within evaluation criteria with the exception of analytes listed and qualified as appropriate in Section 5.0 of this data review. No further qualification of data was required.

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

No

Sample ID	Parameter	Analyte	IS Area Recovery	IS Criteria
MW12-ROX-070914	PAHs	1,4-Dichlorobenzene-d_4	**264417**	55943-223770
MW12-ROX-070914	PAHs	Naphthalene-d_8	**1032893**	235778-943110

Analytical data reported as non-detect and associated with IS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. 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; samples analyzed did not require dilution.

12.0 Additional Qualifications

Were additional qualifications applied?

Yes, professional judgment was also used to qualify as estimated, however not reject, data that was associated with method blank MB-OP38922, due to comparable historical detections.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
MW1-ROX-070914	PAHs	2-Methylnaphthalene	-	**J**

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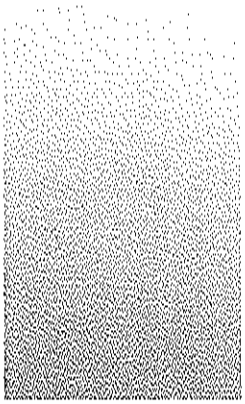
07/28/14





Technical Report for

Shell Oil

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana,

Accutest Job Number: MC31999

Sampling Date: 07/09/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: **88**

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 7/28/14

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: MC31999

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time By	Received	Matrix Code	Matrix Type	Client Sample ID
MC31999-1	07/09/14	09:50 BKCW	07/10/14	AQ	Ground Water	MW1-ROX-070914
MC31999-1D	07/09/14	09:50 BKCW	07/10/14	AQ	Water Dup/MSD	MW1-ROX-070914
MC31999-1S	07/09/14	09:50 BKCW	07/10/14	AQ	Water Matrix Spike	MW1-ROX-070914
MC31999-2	07/09/14	11:00 BKCW	07/10/14	AQ	Ground Water	MW12-ROX-070914
MC31999-3	07/09/14	12:10 BKCW	07/10/14	AQ	Ground Water	MW11-ROX-070914
MC31999-4	07/09/14	14:50 BKCW	07/10/14	AQ	Ground Water	MW10-ROX-070914
MC31999-5	07/09/14	15:40 BKCW	07/10/14	AQ	Ground Water	MW9-ROX-070914
MC31999-6	07/09/14	00:00 BKCW	07/10/14	AQ	Trip Blank Water	TB-070914-HCL
MC31999-7	07/09/14	00:00 BKCW	07/10/14	AQ	Trip Blank Water	TB-070914-ST

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SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC31999
Site:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central	**Report Date**	7/24/2014 5:36:38 PM

5 Sample(s) and 2 Trip Blank(s) were collected on 07/09/2014 and were received at Accutest on 07/10/2014 properly preserved, at 2.9 Deg. C and intact. These Samples received an Accutest job number of MC31999. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Sample 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: MSV1221

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC31999-1MS, MC31999-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MSV1221-BS Recovery(s) for Acetone, Bromomethane, Chloromethane, Trichlorofluoromethane are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2-Chloroethyl vinyl ether, Acetone, Bromomethane, Carbon tetrachloride, Chloromethane, Trichlorofluoromethane 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, Bromomethane, Chloromethane, Trichlorofluoromethane are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- BS, MC31999-1MS/MSD for Chloroethane, Vinyl chloride: Outside control limits. Associated samples are non-detect for this compound.
- Initial calibration verification MSV1177-ICV1177 for dichlorodifluoromethane exceed 30% Difference (response bias high). Associated samples are non-detect for this compound.
- Continuing calibration check standard MSV1221-CC1177 for chloromethane, vinyl chloride, bromomethane, chloroethane, trichlorofluoromethane exceed 40% Difference (response bias high) Associated samples are non-detect for these compounds.

Extractables by GCMS By Method SW846 8270D

Matrix AQ	Batch ID: OP38921

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC31999-1MS, MC31999-1MSD were used as the QC samples indicated.
- Sample(s) MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5 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, Hexachlorocyclopentadiene are outside control limits. Blank Spike meets program technical requirements.
- RPD(s) for MSD for 3,3'-Dichlorobenzidine are outside control limits for sample OP38921-MSD. High RPD due to possible matrix interference and/or sample heterogeneity.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ	Batch ID: OP38922

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC31999-1MS, MC31999-1MSD were used as the QC samples indicated.
- Sample(s) MC31999-1 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: OP38952

- 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) MC31999-1MS, MC31999-1MSD were used as the QC samples indicated.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC31999).

Summary of Hits

Job Number: MC31999
Account: Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Collected: 07/09/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC31999-1	MW1-ROX-070914					
Methyl Tert Butyl Ether		3.5	1.0	0.51	ug/l	SW846 8260C
Di-n-butyl phthalate		1.6 JB	5.4	0.19	ug/l	SW846 8270D
1-Methylnaphthalene		0.085 J	0.22	0.054	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		0.12 JB J	0.22	0.081	ug/l	SW846 8270D BY SIM
MC31999-2	MW12-ROX-070914					
Di-n-butyl phthalate		~~0.98 JB~~ U	5.6	0.19	ug/l	SW846 8270D
MC31999-3	MW11-ROX-070914					
Di-n-butyl phthalate		~~0.42 JB~~ U	5.7	0.20	ug/l	SW846 8270D
Phenanthrene		0.030 J	0.057	0.014	ug/l	SW846 8270D BY SIM
MC31999-4	MW10-ROX-070914					
Di-n-butyl phthalate		~~0.65 JB~~ U	5.4	0.19	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.52 J	2.2	0.36	ug/l	SW846 8270D
MC31999-5	MW9-ROX-070914					
Di-n-butyl phthalate		~~0.60 J~~ U	5.4	0.19	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.36 J	2.2	0.36	ug/l	SW846 8270D
MC31999-6	TB-070914-HCL					
No hits reported in this sample.						
MC31999-7	TB-070914-ST					
No hits reported in this sample.						

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4

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW1-ROX-070914		
Lab Sample ID:	MC31999-1	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33062.D	1	07/21/14	AMY	n/a	n/a	MSV1221
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	UJ
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	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:	MW1-ROX-070914		
Lab Sample ID:	MC31999-1	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3.5	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	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:	MW1-ROX-070914		
Lab Sample ID:	MC31999-1	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	123%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	101%		70-130%

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

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Report of Analysis

Client Sample ID:	MW1-ROX-070914		
Lab Sample ID:	MC31999-1	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X03882.D	1	07/23/14	WK	07/11/14	OP38921	MSX128
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.90	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.61	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	U5
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	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	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	1.6	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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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW1-ROX-070914		
Lab Sample ID:	MC31999-1	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.37	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.36	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.4	0.33	ug/l	
78-59-1	Isophorone	ND	5.4	0.49	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.43	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.44	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		15-110%
4165-62-2	Phenol-d5	32%		15-110%
118-79-6	2,4,6-Tribromophenol	89%		15-110%
4165-60-0	Nitrobenzene-d5	86%		30-130%
321-60-8	2-Fluorobiphenyl	80%		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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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW1-ROX-070914		
Lab Sample ID:	MC31999-1	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R39477.D	1	07/23/14	WK	07/11/14	OP38922	MSR1454
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.075	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	0.085	0.22	0.054	ug/l	J
91-57-6	2-Methylnaphthalene	0.12	0.22	0.081	ug/l	JB J
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	77%		30-130%
321-60-8	2-Fluorobiphenyl	69%		30-130%
1718-51-0	Terphenyl-d14	75%		30-130%

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Report of Analysis

Client Sample ID:	MW1-ROX-070914		
Lab Sample ID:	MC31999-1	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8011 SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39546.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
Run #2							

	Initial Volume	Final Volume
Run #1	36.2 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	124%		36-173%
460-00-4	Bromofluorobenzene (S)	124%		36-173%

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

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

Report of Analysis

Client Sample ID:	MW12-ROX-070914		
Lab Sample ID:	MC31999-2	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33071.D	1	07/21/14	AMY	n/a	n/a	MSV1221
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	UJ
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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Report of Analysis

Client Sample ID:	MW12-ROX-070914		
Lab Sample ID:	MC31999-2	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	MW12-ROX-070914		
Lab Sample ID:	MC31999-2	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		70-130%
2037-26-5	Toluene-D8	90%		70-130%
460-00-4	4-Bromofluorobenzene	103%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW12-ROX-070914		
Lab Sample ID:	MC31999-2	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X03883.D	1	07/23/14	WK	07/11/14	OP38921	MSX128
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	UJ
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	~~0.98~~ JA	5.6	0.19	ug/l	JB JA
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range
J = Indicates 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-070914		
Lab Sample ID:	MC31999-2	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.2

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	U.5
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	33%		15-110%
4165-62-2	Phenol-d5	23%		15-110%
118-79-6	2,4,6-Tribromophenol	76%		15-110%
4165-60-0	Nitrobenzene-d5	63%		30-130%
321-60-8	2-Fluorobiphenyl	60%		30-130%
1718-51-0	Terphenyl-d14	83%		30-130%

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

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-070914		
Lab Sample ID:	MC31999-2	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R39478.D	1	07/23/14	WK	07/11/14	OP38922	MSR1454
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.055	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	ND	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	57%		30-130%
321-60-8	2-Fluorobiphenyl	52%		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:	MW12-ROX-070914		
Lab Sample ID:	MC31999-2	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8011 SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39548.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
Run #2							

	Initial Volume	Final Volume
Run #1	36.5 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	111%		36-173%
460-00-4	Bromofluorobenzene (S)	111%		36-173%

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

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

Report of Analysis

Client Sample ID:	MW11-ROX-070914		
Lab Sample ID:	MC31999-3	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33072.D	1	07/21/14	AMY	n/a	n/a	MSV1221
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW11-ROX-070914		
Lab Sample ID:	MC31999-3	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW11-ROX-070914		
Lab Sample ID:	MC31999-3	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	117%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	101%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW11-ROX-070914		
Lab Sample ID:	MC31999-3	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X03884.D	1	07/23/14	WK	07/11/14	OP38921	MSX128
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.9	ug/l	
95-57-8	2-Chlorophenol	ND	5.7	0.36	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.95	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.46	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.64	ug/l	
51-28-5	2,4-Dinitrophenol	ND	23	2.9	ug/l	UJ
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.2	ug/l	
95-48-7	2-Methylphenol	ND	11	0.26	ug/l	
	3&4-Methylphenol	ND	11	0.54	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.3	ug/l	
100-02-7	4-Nitrophenol	ND	23	0.61	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.7	0.35	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.43	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.20	ug/l	
62-53-3	Aniline	ND	11	0.73	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.7	0.54	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.7	0.61	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.6	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.7	0.36	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.64	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.7	0.33	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.7	0.40	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.7	0.38	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.7	0.29	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.7	0.28	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.52	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.35	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.7	0.31	ug/l	
132-64-9	Dibenzofuran	ND	2.3	0.30	ug/l	
84-74-2	Di-n-butyl phthalate	0.42	5.7	0.20	ug/l	JB U
117-84-0	Di-n-octyl phthalate	ND	5.7	0.32	ug/l	

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

Report of Analysis

Client Sample ID:	MW11-ROX-070914		
Lab Sample ID:	MC31999-3	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.7	0.23	ug/l	
131-11-3	Dimethyl phthalate	ND	5.7	0.39	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.3	0.38	ug/l	
118-74-1	Hexachlorobenzene	ND	5.7	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.5	ug/l	V,5
67-72-1	Hexachloroethane	ND	5.7	0.35	ug/l	
78-59-1	Isophorone	ND	5.7	0.52	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.46	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.5	ug/l	
98-95-3	Nitrobenzene	ND	5.7	0.45	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.7	1.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.7	0.46	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.7	0.22	ug/l	
110-86-1	Pyridine	ND	11	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	44%		15-110%
4165-62-2	Phenol-d5	30%		15-110%
118-79-6	2,4,6-Tribromophenol	78%		15-110%
4165-60-0	Nitrobenzene-d5	78%		30-130%
321-60-8	2-Fluorobiphenyl	71%		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
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-070914		
Lab Sample ID:	MC31999-3	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R39479.D	1	07/23/14	WK	07/11/14	OP38922	MSR1454
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.079	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.057	ug/l	
120-12-7	Anthracene	ND	0.11	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.057	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.033	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.057	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.031	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.044	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.037	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.047	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.035	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.23	0.057	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.23	0.085	ug/l	
85-01-8	Phenanthrene	0.030	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	69%		30-130%
321-60-8	2-Fluorobiphenyl	62%		30-130%
1718-51-0	Terphenyl-d14	75%		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-070914		
Lab Sample ID:	MC31999-3	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8011 SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39549.D	1	07/16/14	NK	07/14/14	OP38952	GBK1283
Run #2							

	Initial Volume	Final Volume
Run #1	36.2 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	105%		36-173%
460-00-4	Bromofluorobenzene (S)	103%		36-173%

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

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

Report of Analysis

Client Sample ID:	MW10-ROX-070914		
Lab Sample ID:	MC31999-4	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33073.D	1	07/21/14	AMY	n/a	n/a	MSV1221
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	U
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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Report of Analysis

Client Sample ID:	MW10-ROX-070914		
Lab Sample ID:	MC31999-4	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	MW10-ROX-070914		
Lab Sample ID:	MC31999-4	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	105%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW10-ROX-070914		
Lab Sample ID:	MC31999-4	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X03885.D	1	07/23/14	WK	07/11/14	OP38921	MSX128
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.33	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.89	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.60	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	UJ
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.24	ug/l	
	3&4-Methylphenol	ND	11	0.50	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.57	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.4	0.32	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.40	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.51	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.57	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.4	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.60	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.38	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.36	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.27	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.49	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.29	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.28	ug/l	
84-74-2	Di-n-butyl phthalate	~~0.65~~ J	5.4	0.19	ug/l	JB U
117-84-0	Di-n-octyl phthalate	ND	5.4	0.30	ug/l	

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

Report of Analysis

Client Sample ID:	MW10-ROX-070914		
Lab Sample ID:	MC31999-4	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.4

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	0.52	2.2	0.36	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	us
67-72-1	Hexachloroethane	ND	5.4	0.32	ug/l	
78-59-1	Isophorone	ND	5.4	0.48	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.43	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.42	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.43	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.55	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	47%		15-110%
4165-62-2	Phenol-d5	32%		15-110%
118-79-6	2,4,6-Tribromophenol	84%		15-110%
4165-60-0	Nitrobenzene-d5	84%		30-130%
321-60-8	2-Fluorobiphenyl	77%		30-130%
1718-51-0	Terphenyl-d14	83%		30-130%

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

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

Report of Analysis

Client Sample ID:	MW10-ROX-070914		
Lab Sample ID:	MC31999-4	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R39480.D	1	07/23/14	WK	07/11/14	OP38922	MSR1454
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.074	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.053	ug/l	
120-12-7	Anthracene	ND	0.11	0.099	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.034	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.080	ug/l	
85-01-8	Phenanthrene	ND	0.054	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.041	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	76%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	75%		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-070914		
Lab Sample ID:	MC31999-4	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8011 SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39550.D	1	07/16/14	NK	07/14/14	OP38952	GBK1283
Run #2							

	Initial Volume	Final Volume
Run #1	36.5 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	106%		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

Report of Analysis

Client Sample ID:	MW9-ROX-070914		
Lab Sample ID:	MC31999-5	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33074.D	1	07/21/14	AMY	n/a	n/a	MSV1221
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	U
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

Report of Analysis

Client Sample ID:	MW9-ROX-070914		
Lab Sample ID:	MC31999-5	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	MW9-ROX-070914		
Lab Sample ID:	MC31999-5	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	121%		70-130%
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	101%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW9-ROX-070914		
Lab Sample ID:	MC31999-5	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X03886.D	1	07/23/14	WK	07/11/14	OP38921	MSX128
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.90	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.61	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	UJ
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	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	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	~~0.60~~	5.4	0.19	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.4	0.31	ug/l	

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

Report of Analysis

Client Sample ID:	MW9-ROX-070914		
Lab Sample ID:	MC31999-5	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.36	2.2	0.36	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	WJ
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	41%		15-110%
4165-62-2	Phenol-d5	28%		15-110%
118-79-6	2,4,6-Tribromophenol	80%		15-110%
4165-60-0	Nitrobenzene-d5	75%		30-130%
321-60-8	2-Fluorobiphenyl	70%		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:	MW9-ROX-070914		
Lab Sample ID:	MC31999-5	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R39481.D	1	07/24/14	WK	07/11/14	OP38922	MSR1454
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.075	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	ND	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	65%		30-130%
321-60-8	2-Fluorobiphenyl	59%		30-130%
1718-51-0	Terphenyl-d14	76%		30-130%

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

Report of Analysis

Client Sample ID:	MW9-ROX-070914		
Lab Sample ID:	MC31999-5	Date Sampled:	07/09/14
Matrix:	AQ - Ground Water	Date Received:	07/10/14
Method:	SW846 8011 SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39551.D	1	07/16/14	NK	07/14/14	OP38952	GBK1283
Run #2							

	Initial Volume	Final Volume
Run #1	34.9 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	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	108%		36-173%
460-00-4	Bromofluorobenzene (S)	103%		36-173%

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

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

Report of Analysis

Client Sample ID:	TB-070914-HCL		
Lab Sample ID:	MC31999-6	Date Sampled:	07/09/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33059.D	1	07/21/14	AMY	n/a	n/a	MSV1221
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

Report of Analysis

Client Sample ID:	TB-070914-HCL		
Lab Sample ID:	MC31999-6	Date Sampled:	07/09/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	TB-070914-HCL		
Lab Sample ID:	MC31999-6	Date Sampled:	07/09/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	117%		70-130%
2037-26-5	Toluene-D8	95%		70-130%
460-00-4	4-Bromofluorobenzene	100%		70-130%

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

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

Report of Analysis

Client Sample ID:	TB-070914-ST		
Lab Sample ID:	MC31999-7	Date Sampled:	07/09/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/10/14
Method:	SW846 8011 SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39552.D	1	07/16/14	NK	07/14/14	OP38952	GBK1283
Run #2							

	Initial Volume	Final Volume
Run #1	35.7 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0060	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	87%		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

New England ACCUTEST LABORATORIES

Custody Documents and Other Forms

Includes the following where applicable:

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

LAB (LOCATION)

☐ XENCO ( )
☐ CALSCIENCE
☑ OTHER Accutest Labs: 405 Technology Cir W Marlborough, MA 01752 (508-481-0200)
☐ SPL ☐ Lab Vendor # ( )

Shell Oil Products Chain Of Custody Record

URS

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

Print Bill To Contact Name: Bob Bilman

PO #

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

SAP #: 3 4 0 0 8 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 7/09/14

PAGE: 1 of 1

URS CORPORATION

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

Elizabeth Kunkel, Wendy Pennington, Bob Bilman, Lindsay Rathview

314-429-0100 | 314-429-0462

BOB.BILMAN@URS.COM, elizabeth.kunkel@urs.com, wendy.pennington@urs.com, lindsay.rathview@urs.com

900 South Central Ave; ROXANA

Roxana Quarterly GW / 21862073.03003

B.Koca C. Williams Lucy. C Headle

LAB USE ONLY: MC31999

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 1 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON CALL-END

☐ LA - HAZCH REPORT FORMAT ☐ UST AGENCY

DELIVERABLES: ☐ LEVEL 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Reports.
* Please provide sample receipt upon login.

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ FOR NOT REQUIRED
☑ RECEIPT VERIFICATION REQUESTED
☐ PRINTED LEDD DISK

REQUESTED ANALYSIS

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	MW1-ROX-070914	07/09/14	0950	Water	2			2	2	6	X	X	X	X	0	
-1S	MW1-ROX-070914-MS	07/09/14	0950								X	X	X	X		
-1SD	MW1-ROX-070914-MSD	07/09/14	0950								X	X	X	X		
-2	MW12-ROX-070914	07/09/14	1100								X	X	X	X		
-3	MW11-ROX-070914	07/09/14	1210								X	X	X	X		
-4	MW10-ROX-070914	07/09/14	1450								X	X	X	X		
-5	MW9-ROX-070914	07/09/14	1540								X	X	X	X		198,304
-6	TB-070914-HCL	07/09/14	00:00							2	X					
-7	TB-070914-ST	07/09/14	00:00						2	2		X				
								BAK								

Relinquished by (Signature)	Relinquished by (Signature)	Date	Time
[signature]	FED EX	07/09/14	1800
Relinquished by (Signature): FK	Relinquished by (Signature): [signature]	Date: 7-10-14	Time: 930
Relinquished by (Signature)	Relinquished by (Signature)	Date	Time

2.9°C
1.5°C

5.1

5

MC31999: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC31999 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 7/10/2014 **Delivery Method:** **Client Service Action Required at Login:** No

Project: 900 SOUTH CENTRAL **No. Coolers:** 2 **Airbill #'s:**

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

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

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

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

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

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

Comments

MC31999: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC31999

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC31999-1 Collected: 09-JUL-14 09:50 By: BKCW Received: 10-JUL-14 By: MW1-ROX-070914						
MC31999-1	SW846 8011	15-JUL-14 23:11	NK	14-JUL-14	AW	V8011SL
MC31999-1	SW846 8260C	21-JUL-14 12:49	AMY			V8260SL+
MC31999-1	SW846 8270D	23-JUL-14 16:55	WK	11-JUL-14	MD	AB8270SL+
MC31999-1	SW846 8270D BY SIM	23-JUL-14 22:27	WK	11-JUL-14	MD	B8270SIMSL
MC31999-2 Collected: 09-JUL-14 11:00 By: BKCW Received: 10-JUL-14 By: MW12-ROX-070914						
MC31999-2	SW846 8011	15-JUL-14 23:50	NK	14-JUL-14	AW	V8011SL
MC31999-2	SW846 8260C	21-JUL-14 17:18	AMY			V8260SL+
MC31999-2	SW846 8270D	23-JUL-14 17:16	WK	11-JUL-14	MD	AB8270SL+
MC31999-2	SW846 8270D BY SIM	23-JUL-14 22:52	WK	11-JUL-14	MD	B8270SIMSL
MC31999-3 Collected: 09-JUL-14 12:10 By: BKCW Received: 10-JUL-14 By: MW11-ROX-070914						
MC31999-3	SW846 8011	16-JUL-14 00:09	NK	14-JUL-14	AW	V8011SL
MC31999-3	SW846 8260C	21-JUL-14 17:44	AMY			V8260SL+
MC31999-3	SW846 8270D	23-JUL-14 17:37	WK	11-JUL-14	MD	AB8270SL+
MC31999-3	SW846 8270D BY SIM	23-JUL-14 23:18	WK	11-JUL-14	MD	B8270SIMSL
MC31999-4 Collected: 09-JUL-14 14:50 By: BKCW Received: 10-JUL-14 By: MW10-ROX-070914						
MC31999-4	SW846 8011	16-JUL-14 00:29	NK	14-JUL-14	AW	V8011SL
MC31999-4	SW846 8260C	21-JUL-14 18:10	AMY			V8260SL+
MC31999-4	SW846 8270D	23-JUL-14 17:57	WK	11-JUL-14	MD	AB8270SL+
MC31999-4	SW846 8270D BY SIM	23-JUL-14 23:43	WK	11-JUL-14	MD	B8270SIMSL
MC31999-5 Collected: 09-JUL-14 15:40 By: BKCW Received: 10-JUL-14 By: MW9-ROX-070914						
MC31999-5	SW846 8011	16-JUL-14 00:48	NK	14-JUL-14	AW	V8011SL
MC31999-5	SW846 8260C	21-JUL-14 18:36	AMY			V8260SL+
MC31999-5	SW846 8270D	23-JUL-14 18:18	WK	11-JUL-14	MD	AB8270SL+
MC31999-5	SW846 8270D BY SIM	24-JUL-14 00:08	WK	11-JUL-14	MD	B8270SIMSL

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC31999

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC31999-6 Collected: 09-JUL-14 00:00 By: BKCW Received: 10-JUL-14 By: TB-070914-HCL						
MC31999-6	SW846 8260C	21-JUL-14 11:30	AMY			V8260SL+
MC31999-7 Collected: 09-JUL-14 00:00 By: BKCW Received: 10-JUL-14 By: TB-070914-ST						
MC31999-7	SW846 8011	16-JUL-14 01:08	NK	14-JUL-14	AW	V8011SL

Accutest Internal Chain of Custody

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Received: 07/10/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC31999-1.2	Walk In Ref #22	Michael DiBuono	07/11/14 15:53	Retrieve from Storage
MC31999-1.5	Walk In Ref #22	Michael DiBuono	07/11/14 15:53	Retrieve from Storage
MC31999-1.6	Walk In Ref #22	Michael DiBuono	07/11/14 15:53	Retrieve from Storage
MC31999-1.7	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage
MC31999-1.9	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage
MC31999-1.12	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage
MC31999-1.13	VOC Ref #3	Amy Min Yang	07/21/14 11:51	Retrieve from Storage
MC31999-1.13	Amy Min Yang	GCMSV	07/21/14 11:51	Load on Instrument
MC31999-1.13	GCMSV	Amy Min Yang	07/22/14 15:18	Unload from Instrument
MC31999-1.13	Amy Min Yang	VOC Ref #3	07/22/14 15:18	Return to Storage
MC31999-1.14	VOC Ref #3	Amy Min Yang	07/21/14 11:51	Retrieve from Storage
MC31999-1.14	Amy Min Yang	GCMSV	07/21/14 11:51	Load on Instrument
MC31999-1.14	GCMSV	Amy Min Yang	07/22/14 15:18	Unload from Instrument
MC31999-1.14	Amy Min Yang	VOC Ref #3	07/22/14 15:18	Return to Storage
MC31999-1.15	VOC Ref #3	Amy Min Yang	07/21/14 11:51	Retrieve from Storage
MC31999-1.15	Amy Min Yang	GCMSV	07/21/14 11:51	Load on Instrument
MC31999-1.15	GCMSV	Amy Min Yang	07/22/14 15:18	Unload from Instrument
MC31999-1.15	Amy Min Yang	VOC Ref #3	07/22/14 15:18	Return to Storage
MC31999-1.16	VOC Ref #3	Amy Min Yang	07/21/14 11:51	Retrieve from Storage
MC31999-1.16	Amy Min Yang	GCMSV	07/21/14 11:51	Load on Instrument
MC31999-1.16	GCMSV	Amy Min Yang	07/22/14 15:18	Unload from Instrument
MC31999-1.16	Amy Min Yang	VOC Ref #3	07/22/14 15:18	Return to Storage
MC31999-2.2	Walk In Ref #22	Michael DiBuono	07/11/14 15:53	Retrieve from Storage
MC31999-2.4	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage
MC31999-2.6	VOC Ref #3	Amy Min Yang	07/21/14 11:51	Retrieve from Storage
MC31999-2.6	Amy Min Yang	GCMSV	07/21/14 11:51	Load on Instrument
MC31999-2.6	GCMSV	Amy Min Yang	07/22/14 15:18	Unload from Instrument
MC31999-2.6	Amy Min Yang	VOC Ref #3	07/22/14 15:18	Return to Storage
MC31999-3.2	Walk In Ref #22	Michael DiBuono	07/11/14 15:53	Retrieve from Storage
MC31999-3.3	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Received: 07/10/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC31999-3.6	VOC Ref #3	Amy Min Yang	07/21/14 11:51	Retrieve from Storage
MC31999-3.6	Amy Min Yang	GCMSV	07/21/14 11:51	Load on Instrument
MC31999-3.6	GCMSV	Amy Min Yang	07/22/14 15:18	Unload from Instrument
MC31999-3.6	Amy Min Yang	VOC Ref #3	07/22/14 15:18	Return to Storage
MC31999-4.2	Walk In Ref #22	Michael DiBuono	07/11/14 15:53	Retrieve from Storage
MC31999-4.3	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage
MC31999-4.5	VOC Ref #3	Amy Min Yang	07/21/14 11:51	Retrieve from Storage
MC31999-4.5	Amy Min Yang	GCMSV	07/21/14 11:51	Load on Instrument
MC31999-4.5	GCMSV	Amy Min Yang	07/22/14 15:18	Unload from Instrument
MC31999-4.5	Amy Min Yang	VOC Ref #3	07/22/14 15:18	Return to Storage
MC31999-5.1	Walk In Ref #22	Michael DiBuono	07/11/14 15:53	Retrieve from Storage
MC31999-5.4	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage
MC31999-5.5	VOC Ref #3	Amy Min Yang	07/21/14 11:51	Retrieve from Storage
MC31999-5.5	Amy Min Yang	GCMSV	07/21/14 11:51	Load on Instrument
MC31999-5.5	GCMSV	Amy Min Yang	07/22/14 15:18	Unload from Instrument
MC31999-5.5	Amy Min Yang	VOC Ref #3	07/22/14 15:18	Return to Storage
MC31999-6.1	VOC Ref #3	Amy Min Yang	07/21/14 10:27	Retrieve from Storage
MC31999-6.1	Amy Min Yang	GCMSV	07/21/14 10:27	Load on Instrument
MC31999-6.1	GCMSV	Amy Min Yang	07/22/14 15:18	Unload from Instrument
MC31999-6.1	Amy Min Yang	VOC Ref #3	07/22/14 15:18	Return to Storage
MC31999-7.1	VOC Ref #3	Marc Tahtamoni	07/14/14 16:33	Retrieve from Storage

New England ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1221-MB	V33057.D	1	07/21/14	AMY	n/a	n/a	MSV1221

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

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5, MC31999-6

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1221-MB	V33057.D	1	07/21/14	AMY	n/a	n/a	MSV1221

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

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5, MC31999-6

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

Method Blank Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1221-MB	V33057.D	1	07/21/14	AMY	n/a	n/a	MSV1221

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

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5, MC31999-6

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	113%	70-130%
2037-26-5	Toluene-D8	93%	70-130%
460-00-4	4-Bromofluorobenzene	101%	70-130%

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

Blank Spike Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1221-BS	V33055.D	1	07/21/14	AMY	n/a	n/a	MSV1221

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

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5, MC31999-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	31.2	62* a	70-130
107-02-8	Acrolein	250	262	105	70-130
107-13-1	Acrylonitrile	50	55.5	111	70-130
71-43-2	Benzene	50	53.1	106	70-130
108-86-1	Bromobenzene	50	50.6	101	70-130
74-97-5	Bromochloromethane	50	50.2	100	70-130
75-27-4	Bromodichloromethane	50	55.1	110	70-130
75-25-2	Bromoform	50	50.9	102	70-130
74-83-9	Bromomethane	50	80.5	161* a	70-130
78-93-3	2-Butanone (MEK)	50	38.5	77	70-130
104-51-8	n-Butylbenzene	50	56.0	112	70-130
135-98-8	sec-Butylbenzene	50	58.3	117	70-130
98-06-6	tert-Butylbenzene	50	55.7	111	70-130
75-15-0	Carbon disulfide	50	44.8	90	70-130
56-23-5	Carbon tetrachloride	50	62.8	126	70-130
108-90-7	Chlorobenzene	50	51.0	102	70-130
75-00-3	Chloroethane	50	82.9	166* b	70-130
110-75-8	2-Chloroethyl vinyl ether	50	39.0	78	70-130
67-66-3	Chloroform	50	54.5	109	70-130
74-87-3	Chloromethane	50	83.4	167* a	70-130
95-49-8	o-Chlorotoluene	50	54.9	110	70-130
106-43-4	p-Chlorotoluene	50	55.5	111	70-130
124-48-1	Dibromochloromethane	50	49.1	98	70-130
95-50-1	1,2-Dichlorobenzene	50	52.7	105	70-130
541-73-1	1,3-Dichlorobenzene	50	52.5	105	70-130
106-46-7	1,4-Dichlorobenzene	50	51.4	103	70-130
75-71-8	Dichlorodifluoromethane	50	52.9	106	70-130
75-34-3	1,1-Dichloroethane	50	60.0	120	70-130
107-06-2	1,2-Dichloroethane	50	56.9	114	70-130
75-35-4	1,1-Dichloroethene	50	56.3	113	70-130
156-59-2	cis-1,2-Dichloroethene	50	53.0	106	70-130
156-60-5	trans-1,2-Dichloroethene	50	58.8	118	70-130
78-87-5	1,2-Dichloropropane	50	50.7	101	70-130
142-28-9	1,3-Dichloropropane	50	50.5	101	70-130
594-20-7	2,2-Dichloropropane	50	64.7	129	70-130
563-58-6	1,1-Dichloropropene	50	56.3	113	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1221-BS	V33055.D	1	07/21/14	AMY	n/a	n/a	MSV1221

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

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5, MC31999-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	54.1	108	70-130
10061-02-6	trans-1,3-Dichloropropene	50	59.1	118	70-130
123-91-1	1,4-Dioxane	250	250	100	70-130
97-63-2	Ethyl methacrylate	50	41.5	83	77-137
100-41-4	Ethylbenzene	50	54.8	110	70-130
87-68-3	Hexachlorobutadiene	50	48.1	96	70-130
591-78-6	2-Hexanone	50	36.5	73	70-130
98-82-8	Isopropylbenzene	50	59.7	119	70-130
99-87-6	p-Isopropyltoluene	50	58.1	116	70-130
1634-04-4	Methyl Tert Butyl Ether	50	59.1	118	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	47.3	95	70-130
74-95-3	Methylene bromide	50	49.7	99	70-130
75-09-2	Methylene chloride	50	57.2	114	70-130
91-20-3	Naphthalene	50	41.7	83	70-130
103-65-1	n-Propylbenzene	50	56.9	114	70-130
100-42-5	Styrene	50	50.9	102	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	55.8	112	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	53.3	107	70-130
127-18-4	Tetrachloroethene	50	50.7	101	70-130
108-88-3	Toluene	50	50.0	100	70-130
87-61-6	1,2,3-Trichlorobenzene	50	45.1	90	70-130
120-82-1	1,2,4-Trichlorobenzene	50	46.4	93	70-130
71-55-6	1,1,1-Trichloroethane	50	58.0	116	70-130
79-00-5	1,1,2-Trichloroethane	50	48.8	98	70-130
79-01-6	Trichloroethene	50	48.4	97	70-130
75-69-4	Trichlorofluoromethane	50	70.9	142* [a]	70-130
96-18-4	1,2,3-Trichloropropane	50	55.3	111	70-130
95-63-6	1,2,4-Trimethylbenzene	50	55.7	111	70-130
108-67-8	1,3,5-Trimethylbenzene	50	55.7	111	70-130
108-05-4	Vinyl Acetate	50	55.9	112	70-130
75-01-4	Vinyl chloride	50	77.9	156* [b]	70-130
	m,p-Xylene	100	107	107	70-130
95-47-6	o-Xylene	50	54.7	109	70-130
1330-20-7	Xylene (total)	150	162	108	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1221-BS	V33055.D	1	07/21/14	AMY	n/a	n/a	MSV1221

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

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5, MC31999-6

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	70-130%
2037-26-5	Toluene-D8	92%	70-130%
460-00-4	4-Bromofluorobenzene	94%	70-130%

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

6.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC31999-1MS	V33065.D	1	07/21/14	AMY	n/a	n/a	MSV1221
MC31999-1MSD	V33066.D	1	07/21/14	AMY	n/a	n/a	MSV1221
MC31999-1	V33062.D	1	07/21/14	AMY	n/a	n/a	MSV1221

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

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5, MC31999-6

CAS No.	Compound	MC31999-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	34.6	69* a	50	37.4	75	8	70-130/30
107-02-8	Acrolein	ND		250	271	108	250	282	113	4	70-130/30
107-13-1	Acrylonitrile	ND		50	59.6	119	50	59.0	118	1	70-130/30
71-43-2	Benzene	ND		50	53.6	107	50	52.7	105	2	70-130/30
108-86-1	Bromobenzene	ND		50	48.7	97	50	48.7	97	0	70-130/30
74-97-5	Bromochloromethane	ND		50	50.2	100	50	50.1	100	0	70-130/30
75-27-4	Bromodichloromethane	ND		50	56.6	113	50	54.7	109	3	70-130/30
75-25-2	Bromoform	ND		50	54.1	108	50	51.8	104	4	70-130/30
74-83-9	Bromomethane	ND		50	88.6	177* a	50	85.1	170* a	4	70-130/30
78-93-3	2-Butanone (MEK)	ND		50	37.0	74	50	37.3	75	1	70-130/30
104-51-8	n-Butylbenzene	ND		50	52.4	105	50	51.2	102	2	70-130/30
135-98-8	sec-Butylbenzene	ND		50	54.5	109	50	53.5	107	2	70-130/30
98-06-6	tert-Butylbenzene	ND		50	51.2	102	50	50.4	101	2	70-130/30
75-15-0	Carbon disulfide	ND		50	46.2	92	50	45.5	91	2	70-130/30
56-23-5	Carbon tetrachloride	ND		50	67.0	134* a	50	63.1	126	6	70-130/30
108-90-7	Chlorobenzene	ND		50	51.3	103	50	49.9	100	3	70-130/30
75-00-3	Chloroethane	ND		50	94.7	189* b	50	91.5	183* b	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	55.5	111	50	54.0	108	3	70-130/30
74-87-3	Chloromethane	ND		50	87.3	175* a	50	82.6	165* a	6	70-130/30
95-49-8	o-Chlorotoluene	ND		50	53.1	106	50	52.1	104	2	70-130/30
106-43-4	p-Chlorotoluene	ND		50	54.1	108	50	53.4	107	1	70-130/30
124-48-1	Dibromochloromethane	ND		50	51.1	102	50	49.3	99	4	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		50	51.3	103	50	49.9	100	3	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		50	50.7	101	50	49.4	99	3	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		50	49.8	100	50	48.8	98	2	70-130/30
75-71-8	Dichlorodifluoromethane	ND		50	55.7	111	50	56.9	114	2	70-130/30
75-34-3	1,1-Dichloroethane	ND		50	60.6	121	50	60.5	121	0	70-130/30
107-06-2	1,2-Dichloroethane	ND		50	59.3	119	50	57.3	115	3	70-130/30
75-35-4	1,1-Dichloroethene	ND		50	57.6	115	50	57.0	114	1	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50	51.1	102	50	52.0	104	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50	59.9	120	50	59.5	119	1	70-130/30
78-87-5	1,2-Dichloropropane	ND		50	50.9	102	50	49.8	100	2	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	49.6	99	50	49.3	99	1	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	64.8	130	50	62.3	125	4	70-130/30
563-58-6	1,1-Dichloropropene	ND		50	56.5	113	50	55.0	110	3	70-130/30

* = Outside of Control Limits.

5.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC31999-1MS	V33065.D	1	07/21/14	AMY	n/a	n/a	MSV1221
MC31999-1MSD	V33066.D	1	07/21/14	AMY	n/a	n/a	MSV1221
MC31999-1	V33062.D	1	07/21/14	AMY	n/a	n/a	MSV1221

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

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5, MC31999-6

CAS No.	Compound	MC31999-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		50	48.9	98	50	48.9	98	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		50	58.5	117	50	57.6	115	2	70-130/30
123-91-1	1,4-Dioxane	ND		250	250	100	250	243	97	3	70-130/30
97-63-2	Ethyl methacrylate	ND		50	40.6	81	50	40.8	82	0	72-139/30
100-41-4	Ethylbenzene	ND		50	54.7	109	50	52.9	106	3	70-130/30
87-68-3	Hexachlorobutadiene	ND		50	43.0	86	50	43.0	86	0	70-130/30
591-78-6	2-Hexanone	ND		50	38.8	78	50	37.9	76	2	70-130/30
98-82-8	Isopropylbenzene	ND		50	55.3	111	50	55.7	111	1	70-130/30
99-87-6	p-Isopropyltoluene	ND		50	53.8	108	50	53.2	106	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	3.5		50	60.8	115	50	61.8	117	2	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	48.1	96	50	46.3	93	4	70-130/30
74-95-3	Methylene bromide	ND		50	51.4	103	50	49.4	99	4	70-130/30
75-09-2	Methylene chloride	ND		50	58.8	118	50	58.1	116	1	70-130/30
91-20-3	Naphthalene	ND		50	36.8	74	50	39.3	79	7	70-130/30
103-65-1	n-Propylbenzene	ND		50	54.1	108	50	53.3	107	1	70-130/30
100-42-5	Styrene	ND		50	51.6	103	50	49.9	100	3	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	56.1	112	50	54.2	108	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	53.3	107	50	52.2	104	2	70-130/30
127-18-4	Tetrachloroethene	ND		50	49.7	99	50	48.3	97	3	70-130/30
108-88-3	Toluene	ND		50	49.8	100	50	48.1	96	3	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	38.6	77	50	40.9	82	6	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	40.5	81	50	41.9	84	3	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		50	57.8	116	50	55.2	110	5	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50	49.4	99	50	47.8	96	3	70-130/30
79-01-6	Trichloroethene	ND		50	48.7	97	50	47.6	95	2	70-130/30
75-69-4	Trichlorofluoromethane	ND		50	88.1	176* a	50	80.8	162* a	9	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		50	55.3	111	50	54.3	109	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		50	52.8	106	50	52.0	104	2	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		50	53.2	106	50	52.0	104	2	70-130/30
108-05-4	Vinyl Acetate	ND		50	56.4	113	50	56.1	112	1	70-130/30
75-01-4	Vinyl chloride	ND		50	84.4	169* b	50	82.7	165* b	2	70-130/30
	m,p-Xylene	ND		100	108	108	100	104	104	4	70-130/30
95-47-6	o-Xylene	ND		50	53.9	108	50	52.7	105	2	70-130/30
1330-20-7	Xylene (total)	ND		150	162	108	150	157	105	3	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC31999-1MS	V33065.D	1	07/21/14	AMY	n/a	n/a	MSV1221
MC31999-1MSD	V33066.D	1	07/21/14	AMY	n/a	n/a	MSV1221
MC31999-1	V33062.D	1	07/21/14	AMY	n/a	n/a	MSV1221

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

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5, MC31999-6

CAS No.	Surrogate Recoveries	MS	MSD	MC31999-1	Limits
1868-53-7	Dibromofluoromethane	101%	100%	123%	70-130%
2037-26-5	Toluene-D8	93%	91%	93%	70-130%
460-00-4	4-Bromofluorobenzene	93%	95%	101%	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.

* = Outside of Control Limits.

6.3.1

Volatile Internal Standard Area Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSV1221-CC1177	Injection Date:	07/21/14
Lab File ID:	V33055.D	Injection Time:	09:46
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	401863	6.54	508277	7.72	184048	11.07	244887	13.28	79484	3.49
Upper Limit [a]	803726	7.04	1016554	8.22	368096	11.57	489774	13.78	158968	3.99
Lower Limit [b]	200932	6.04	254139	7.22	92024	10.57	122444	12.78	39742	2.99

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1221-BS	401863	6.54	508277	7.72	184048	11.07	244887	13.28	79484	3.49
MSV1221-MB	261400	6.54	352622	7.72	137832	11.07	153595	13.28	66613	3.49
ZZZZZZ	251792	6.54	345190	7.73	136035	11.07	146350	13.28	56539	3.50
MC31999-6	224181	6.54	307907	7.73	126393	11.07	137932	13.28	54585	3.49
ZZZZZZ	247145	6.55	342825	7.73	137598	11.07	145735	13.28	54548	3.50
ZZZZZZ	232857	6.55	320962	7.73	132249	11.07	141046	13.28	54085	3.50
MC31999-1	245453	6.55	340370	7.73	133722	11.07	142451	13.28	59640	3.50
ZZZZZZ	239403	6.55	421084	7.73	142954	11.07	150830	13.28	53260	3.50
MC31999-1MS	382051	6.54	468165	7.73	171760	11.07	240391	13.28	80781	3.50
MC31999-1MSD	423651	6.54	520451	7.73	187320	11.07	253886	13.28	89238	3.50
MC31990-2MS	628980	6.54	786539	7.73	270930	11.07	386051	13.29	130817	3.50
MC31990-2MSD	532245	6.55	674442	7.73	238491	11.07	322234	13.29	114781	3.50
ZZZZZZ	353028	6.55	496011	7.73	178385	11.07	192723	13.29	85884	3.51
MC31990-2	324944	6.55	446696	7.73	169610	11.07	180998	13.29	81707	3.50
MC31999-2	292005	6.55	399118	7.73	150485	11.07	161632	13.29	78470	3.50
MC31999-3	267761	6.55	361190	7.73	141603	11.07	150939	13.29	71105	3.50
MC31999-4	316441	6.55	397464	7.73	152322	11.07	158016	13.29	87209	3.50
MC31999-5	242532	6.54	337194	7.73	136864	11.07	147838	13.29	64160	3.49
ZZZZZZ	247791	6.55	345214	7.73	135933	11.07	146403	13.29	66260	3.50
ZZZZZZ	231514	6.54	323287	7.73	130269	11.07	140531	13.29	59277	3.49
ZZZZZZ	213270	6.54	300029	7.73	122023	11.07	131468	13.29	55721	3.49
ZZZZZZ	232827	6.55	329910	7.73	132578	11.07	142506	13.29	58381	3.50
ZZZZZZ	248706	6.55	343424	7.73	133658	11.07	146520	13.28	64230	3.50
ZZZZZZ	227439	6.54	313942	7.73	122940	11.07	131023	13.28	54322	3.49

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

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

6.4.1

Volatile Surrogate Recovery Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC31999-1	V33062.D	123	93	101
MC31999-2	V33071.D	115	90	103
MC31999-3	V33072.D	117	93	101
MC31999-4	V33073.D	106	93	105
MC31999-5	V33074.D	121	94	101
MC31999-6	V33059.D	117	95	100
MC31999-1MS	V33065.D	101	93	93
MC31999-1MSD	V33066.D	100	91	95
MSV1221-BS	V33055.D	98	92	94
MSV1221-MB	V33057.D	113	93	101

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

6.5.1

New England ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38921-MB	X03878.D	1	07/23/14	WK	07/11/14	OP38921	MSX128

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

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5

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

Method Blank Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38921-MB	X03878.D	1	07/23/14	WK	07/11/14	OP38921	MSX128

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

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5

7.1.1

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	41%	15-110%
4165-62-2	Phenol-d5	28%	15-110%
118-79-6	2,4,6-Tribromophenol	74%	15-110%
4165-60-0	Nitrobenzene-d5	78%	30-130%
321-60-8	2-Fluorobiphenyl	72%	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	

Method Blank Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38922-MB	R39473.D	1	07/23/14	WK	07/11/14	OP38922	MSR1454

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

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5

7.1.2

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	0.075	0.20	0.074	ug/l	J
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	43%	15-110%
4165-62-2	Phenol-d5	31%	15-110%
118-79-6	2,4,6-Tribromophenol	87%	15-110%
4165-60-0	Nitrobenzene-d5	69%	30-130%
321-60-8	2-Fluorobiphenyl	61%	30-130%
1718-51-0	Terphenyl-d14	76%	30-130%

Blank Spike Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38921-BS	X03879.D	1	07/23/14	WK	07/11/14	OP38921	MSX128

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

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5

7.2.1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	16.1	32	30-130
95-57-8	2-Chlorophenol	50	43.1	86	30-130
59-50-7	4-Chloro-3-methyl phenol	50	44.4	89	30-130
120-83-2	2,4-Dichlorophenol	50	45.5	91	30-130
105-67-9	2,4-Dimethylphenol	50	42.3	85	30-130
51-28-5	2,4-Dinitrophenol	50	14.1	28*	30-130
534-52-1	4,6-Dinitro-o-cresol	50	22.4	45	30-130
95-48-7	2-Methylphenol	50	38.3	77	30-130
	3&4-Methylphenol	100	69.2	69	30-130
88-75-5	2-Nitrophenol	50	46.0	92	30-130
100-02-7	4-Nitrophenol	50	17.9	36	30-130
87-86-5	Pentachlorophenol	50	38.2	76	30-130
108-95-2	Phenol	50	21.5	43	30-130
95-95-4	2,4,5-Trichlorophenol	50	48.3	97	30-130
88-06-2	2,4,6-Trichlorophenol	50	47.6	95	30-130
62-53-3	Aniline	50	33.3	67	40-140
101-55-3	4-Bromophenyl phenyl ether	50	51.3	103	40-140
85-68-7	Butyl benzyl phthalate	50	48.7	97	40-140
100-51-6	Benzyl Alcohol	50	33.6	67	40-140
91-58-7	2-Chloronaphthalene	50	45.0	90	40-140
106-47-8	4-Chloroaniline	50	41.9	84	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	44.7	89	40-140
111-44-4	bis(2-Chloroethyl)ether	50	45.5	91	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	43.9	88	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	47.5	95	40-140
122-66-7	1,2-Diphenylhydrazine	50	47.6	95	40-140
121-14-2	2,4-Dinitrotoluene	50	50.9	102	40-140
606-20-2	2,6-Dinitrotoluene	50	50.9	102	40-140
91-94-1	3,3'-Dichlorobenzidine	50	46.9	94	40-140
132-64-9	Dibenzofuran	50	42.2	84	40-140
84-74-2	Di-n-butyl phthalate	50	45.0	90	40-140
117-84-0	Di-n-octyl phthalate	50	55.7	111	40-140
84-66-2	Diethyl phthalate	50	49.1	98	40-140
131-11-3	Dimethyl phthalate	50	49.2	98	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	52.7	105	40-140
118-74-1	Hexachlorobenzene	50	50.0	100	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38921-BS	X03879.D	1	07/23/14	WK	07/11/14	OP38921	MSX128

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

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	18.8	38* [a]	40-140
67-72-1	Hexachloroethane	50	33.6	67	40-140
78-59-1	Isophorone	50	41.7	83	40-140
88-74-4	2-Nitroaniline	50	50.1	100	40-140
99-09-2	3-Nitroaniline	50	45.4	91	40-140
100-01-6	4-Nitroaniline	50	43.9	88	40-140
98-95-3	Nitrobenzene	50	45.9	92	40-140
62-75-9	n-Nitrosodimethylamine	50	23.1	46	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	46.7	93	40-140
86-30-6	N-Nitrosodiphenylamine	50	44.2	88	40-140
110-86-1	Pyridine	50	21.3	43	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	49%	15-110%
4165-62-2	Phenol-d5	33%	15-110%
118-79-6	2,4,6-Tribromophenol	91%	15-110%
4165-60-0	Nitrobenzene-d5	87%	30-130%
321-60-8	2-Fluorobiphenyl	82%	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

7

Blank Spike Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38922-BS	R39474.D	1	07/23/14	WK	07/11/14	OP38922	MSR1454

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

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	41.7	83	40-140
208-96-8	Acenaphthylene	50	37.1	74	40-140
120-12-7	Anthracene	50	42.9	86	40-140
56-55-3	Benzo(a)anthracene	50	47.1	94	40-140
50-32-8	Benzo(a)pyrene	50	48.2	96	40-140
205-99-2	Benzo(b)fluoranthene	50	50.0	100	40-140
191-24-2	Benzo(g,h,i)perylene	50	51.4	103	40-140
207-08-9	Benzo(k)fluoranthene	50	49.8	100	40-140
218-01-9	Chrysene	50	43.6	87	40-140
53-70-3	Dibenzo(a,h)anthracene	50	52.3	105	40-140
206-44-0	Fluoranthene	50	42.8	86	40-140
86-73-7	Fluorene	50	48.6	97	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	53.2	106	40-140
90-12-0	1-Methylnaphthalene	50	43.2	86	40-140
91-57-6	2-Methylnaphthalene	50	42.4	85	40-140
85-01-8	Phenanthrene	50	42.4	85	40-140
129-00-0	Pyrene	50	41.7	83	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	47%	15-110%
4165-62-2	Phenol-d5	37%	15-110%
118-79-6	2,4,6-Tribromophenol	88%	15-110%
4165-60-0	Nitrobenzene-d5	77%	30-130%
321-60-8	2-Fluorobiphenyl	66%	30-130%
1718-51-0	Terphenyl-d14	76%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38921-MS	X03880.D	1	07/23/14	WK	07/11/14	OP38921	MSX128
OP38921-MSD	X03881.D	1	07/23/14	WK	07/11/14	OP38921	MSX128
MC31999-1	X03882.D	1	07/23/14	WK	07/11/14	OP38921	MSX128

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

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5

7.3.1

CAS No.	Compound	MC31999-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		55.6	23.1	42	55.6	22.4	40	3	30-130/20
95-57-8	2-Chlorophenol	ND		55.6	45.1	81	55.6	45.8	82	2	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		55.6	48.5	87	55.6	45.6	82	6	30-130/20
120-83-2	2,4-Dichlorophenol	ND		55.6	48.5	87	55.6	47.2	85	3	30-130/20
105-67-9	2,4-Dimethylphenol	ND		55.6	48.0	86	55.6	46.8	84	3	30-130/20
51-28-5	2,4-Dinitrophenol	ND		55.6	25.3	46	55.6	27.1	49	7	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		55.6	35.7	64	55.6	35.9	65	1	30-130/20
95-48-7	2-Methylphenol	ND		55.6	40.9	74	55.6	40.5	73	1	30-130/20
	3&4-Methylphenol	ND		111	72.7	65	111	74.3	67	2	30-130/20
88-75-5	2-Nitrophenol	ND		55.6	48.4	87	55.6	47.6	86	2	30-130/20
100-02-7	4-Nitrophenol	ND		55.6	21.2	38	55.6	22.0	40	4	30-130/20
87-86-5	Pentachlorophenol	ND		55.6	46.4	84	55.6	44.3	80	5	30-130/20
108-95-2	Phenol	ND		55.6	22.5	41	55.6	23.0	41	2	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		55.6	54.5	98	55.6	49.6	89	9	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		55.6	51.3	92	55.6	49.7	89	3	30-130/20
62-53-3	Aniline	ND		55.6	35.5	64	55.6	32.3	58	9	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		55.6	57.5	104	55.6	54.8	99	5	40-140/20
85-68-7	Butyl benzyl phthalate	ND		55.6	53.5	96	55.6	49.8	90	7	40-140/20
100-51-6	Benzyl Alcohol	ND		55.6	33.8	61	55.6	35.7	64	5	40-140/20
91-58-7	2-Chloronaphthalene	ND		55.6	50.3	91	55.6	49.3	89	2	40-140/20
106-47-8	4-Chloroaniline	ND		55.6	47.4	85	55.6	40.9	74	15	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		55.6	47.2	85	55.6	45.6	82	3	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		55.6	47.7	86	55.6	46.5	84	3	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		55.6	46.9	84	55.6	46.1	83	2	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		55.6	54.2	98	55.6	50.1	90	8	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		55.6	53.4	96	55.6	46.7	84	13	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		55.6	57.2	103	55.6	52.1	94	9	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		55.6	55.9	101	55.6	52.9	95	6	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		55.6	44.1	79	55.6	32.9	59	29* a	40-140/20
132-64-9	Dibenzofuran	ND		55.6	47.1	85	55.6	44.0	79	7	40-140/20
84-74-2	Di-n-butyl phthalate	1.6	JB	55.6	50.7	88	55.6	49.2	86	3	40-140/20
117-84-0	Di-n-octyl phthalate	ND		55.6	62.3	112	55.6	59.2	107	5	40-140/20
84-66-2	Diethyl phthalate	ND		55.6	54.7	98	55.6	50.6	91	8	40-140/20
131-11-3	Dimethyl phthalate	ND		55.6	55.5	100	55.6	51.6	93	7	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		55.6	58.2	105	55.6	54.8	99	6	40-140/20
118-74-1	Hexachlorobenzene	ND		55.6	57.5	104	55.6	53.7	97	7	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38921-MS	X03880.D	1	07/23/14	WK	07/11/14	OP38921	MSX128
OP38921-MSD	X03881.D	1	07/23/14	WK	07/11/14	OP38921	MSX128
MC31999-1	X03882.D	1	07/23/14	WK	07/11/14	OP38921	MSX128

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

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5

7.3.1

CAS No.	Compound	MC31999-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		55.6	23.3	42	55.6	24.1	43	3	40-140/20
67-72-1	Hexachloroethane	ND		55.6	46.4	84	55.6	47.4	85	2	40-140/20
78-59-1	Isophorone	ND		55.6	44.6	80	55.6	42.5	77	5	40-140/20
88-74-4	2-Nitroaniline	ND		55.6	56.3	101	55.6	51.8	93	8	40-140/20
99-09-2	3-Nitroaniline	ND		55.6	51.5	93	55.6	47.2	85	9	40-140/20
100-01-6	4-Nitroaniline	ND		55.6	48.2	87	55.6	44.2	80	9	40-140/20
98-95-3	Nitrobenzene	ND		55.6	48.5	87	55.6	47.0	85	3	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		55.6	26.6	48	55.6	27.1	49	2	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		55.6	49.3	89	55.6	47.8	86	3	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		55.6	49.9	90	55.6	47.4	85	5	40-140/20
110-86-1	Pyridine	ND		55.6	24.2	44	55.6	22.5	41	7	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC31999-1	Limits
367-12-4	2-Fluorophenol	45%	46%	48%	15-110%
4165-62-2	Phenol-d5	32%	32%	32%	15-110%
118-79-6	2,4,6-Tribromophenol	91%	84%	89%	15-110%
4165-60-0	Nitrobenzene-d5	83%	80%	86%	30-130%
321-60-8	2-Fluorobiphenyl	77%	76%	80%	30-130%
1718-51-0	Terphenyl-d14	87%	79%	88%	30-130%

(a) High RPD due to possible matrix interference and/or sample heterogeneity.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38922-MS	R39475.D	1	07/23/14	WK	07/11/14	OP38922	MSR1454
OP38922-MSD	R39476.D	1	07/23/14	WK	07/11/14	OP38922	MSR1454
MC31999-1	R39477.D	1	07/23/14	WK	07/11/14	OP38922	MSR1454

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

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5

7.3.2

CAS No.	Compound	MC31999-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		55.6	45.9	83	55.6	43.2	78	6	40-140/20
208-96-8	Acenaphthylene	ND		55.6	40.9	74	55.6	38.4	69	6	40-140/20
120-12-7	Anthracene	ND		55.6	47.9	86	55.6	44.3	80	8	40-140/20
56-55-3	Benzo(a)anthracene	ND		55.6	51.4	93	55.6	48.4	87	6	40-140/20
50-32-8	Benzo(a)pyrene	ND		55.6	51.9	93	55.6	48.9	88	6	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		55.6	53.9	97	55.6	49.7	89	8	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		55.6	59.4	107	55.6	53.7	97	10	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		55.6	55.1	99	55.6	50.0	90	10	40-140/20
218-01-9	Chrysene	ND		55.6	48.3	87	55.6	44.9	81	7	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		55.6	60.4	109	55.6	54.8	99	10	40-140/20
206-44-0	Fluoranthene	ND		55.6	45.5	82	55.6	44.6	80	2	40-140/20
86-73-7	Fluorene	ND		55.6	54.2	98	55.6	49.3	89	9	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		55.6	60.3	109	55.6	54.7	98	10	40-140/20
90-12-0	1-Methylnaphthalene	0.085	J	55.6	49.3	89	55.6	46.7	84	5	40-140/20
91-57-6	2-Methylnaphthalene	0.12	JB	55.6	48.3	87	55.6	46.1	83	5	40-140/20
85-01-8	Phenanthrene	ND		55.6	47.3	85	55.6	43.7	79	8	40-140/20
129-00-0	Pyrene	ND		55.6	44.8	81	55.6	43.6	78	3	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC31999-1	Limits
4165-60-0	Nitrobenzene-d5	72%	71%	77%	30-130%
321-60-8	2-Fluorobiphenyl	62%	61%	69%	30-130%
1718-51-0	Terphenyl-d14	72%	70%	75%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSR1454-CC1401	Injection Date:	07/23/14
Lab File ID:	R39472.D	Injection Time:	20:20
Instrument ID:	GCMSR	Method:	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	111885	5.13	471555	6.23	373778	7.78	840982	9.05	1100940	11.59	1876857	13.26
Upper Limit [a]	223770	5.63	943110	6.73	747556	8.28	1681964	9.55	2201880	12.09	3753714	13.76
Lower Limit [b]	55943	4.63	235778	5.73	186889	7.28	420491	8.55	550470	11.09	938429	12.76
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP38922-MB	203969	5.13	831907	6.23	613540	7.78	1248589	9.05	1444848	11.58	2385159	13.26
OP38922-BS	149354	5.13	640201	6.23	507660	7.78	1118192	9.06	1364150	11.59	2276167	13.27
OP38922-MS	102952	5.13	448036	6.23	361574	7.78	820212	9.05	1073671	11.59	1871400	13.26
OP38922-MSD	164665	5.13	704208	6.23	543535	7.78	1162857	9.06	1376968	11.59	2297612	13.27
MC31999-1	137591	5.13	584304	6.23	446522	7.78	957589	9.05	1201513	11.58	2071725	13.26
MC31999-2	264417[c]	5.13	1032893[c]	6.23	721229	7.78	1397477	9.05	1528025	11.59	2514567	13.26
MC31999-3	214642	5.13	854757	6.23	609266	7.78	1198616	9.05	1324511	11.58	2164446	13.26
MC31999-4	220582	5.13	860991	6.23	611802	7.77	1226248	9.05	1385934	11.58	2296432	13.26
MC31999-5	159177	5.13	650534	6.23	489753	7.78	1050886	9.05	1269183	11.58	2165721	13.26
ZZZZZZ	170550	5.13	685708	6.23	491266	7.78	1023927	9.05	1256031	11.58	2131126	13.26
ZZZZZZ	160227	5.13	647203	6.23	467923	7.77	960385	9.05	1133550	11.58	1909492	13.26
ZZZZZZ	151414	5.13	622988	6.23	453799	7.77	939250	9.05	1115040	11.58	1863303	13.26
ZZZZZZ	153505	5.13	629353	6.23	451817	7.77	940738	9.05	1144722	11.58	1952727	13.26
ZZZZZZ	168629	5.13	685842	6.23	513717	7.77	1069140	9.05	1261158	11.58	2141830	13.26
ZZZZZZ	137938	5.13	562926	6.23	407765	7.78	867391	9.05	1035982	11.59	1776443	13.27
ZZZZZZ	155663	5.13	629599	6.23	475581	7.77	1011741	9.05	1232154	11.58	2104986	13.26

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.Sample results confirmed by reanalysis.

7.4.1

Semivolatile Internal Standard Area Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSX128-CC106	Injection Date:	07/23/14
Lab File ID:	X03856.D	Injection Time:	07:52
Instrument ID:	GCMSX	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	288726	3.61	1086265	4.65	590468	6.17	934953	7.45	763927	9.90	626735	11.50
Upper Limit [a]	577452	4.11	2172530	5.15	1180936	6.67	1869906	7.95	1527854	10.40	1253470	12.00
Lower Limit [b]	144363	3.11	543133	4.15	295234	5.67	467477	6.95	381964	9.40	313368	11.00
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP39049-MB	342567	3.61	1286522	4.65	704429	6.17	1083321	7.45	838821	9.90	657950	11.51
OP39049-BS	341521	3.61	1307837	4.65	704827	6.17	1082163	7.45	826063	9.90	706012	11.50
ZZZZZZ	346754	3.61	1302854	4.65	696262	6.17	1043727	7.45	760262	9.89	660460	11.50
ZZZZZZ	421114	3.61	1565082	4.65	783797	6.17	1113815	7.45	774016	9.90	626772	11.50
ZZZZZZ	363683	3.61	1331467	4.65	702634	6.17	1016912	7.45	732400	9.90	677547	11.50
ZZZZZZ	402153	3.61	1503744	4.65	801100	6.17	1191386	7.45	841647	9.90	717594	11.50
ZZZZZZ	414790	3.61	1524267	4.65	815827	6.17	1164203	7.45	793848	9.90	682768	11.50
ZZZZZZ	364406	3.61	1326016	4.66	670166	6.18	968032	7.48	703345	9.95	329857	11.56
ZZZZZZ	304210	3.61	1091518	4.66	610223	6.18	939614	7.46	667477	9.93	482746	11.54
OP39068-MB	320944	3.61	1211592	4.65	654332	6.17	974664	7.45	700372	9.90	557491	11.50
OP39068-BS	341032	3.61	1272191	4.66	664286	6.17	991387	7.45	757620	9.90	656765	11.51
MC31912-11	404131	3.61	1508914	4.65	795818	6.17	1134936	7.45	769168	9.90	653002	11.51
ZZZZZZ	288015	3.61	1053416	4.65	567765	6.17	851431	7.46	613595	9.92	514920	11.53
ZZZZZZ	326906	3.61	1203848	4.65	641074	6.17	899501	7.45	619501	9.90	542189	11.51
ZZZZZZ	297153	3.61	1115393	4.65	591339	6.17	874907	7.45	691778	9.90	564880	11.51
ZZZZZZ	357971	3.61	1360364	4.65	744115	6.17	1078946	7.45	732379	9.90	617831	11.51
ZZZZZZ	323736	3.61	1185044	4.65	613596	6.17	913714	7.45	652889	9.92	574461	11.53
OP38921-MB	358380	3.61	1335687	4.65	720023	6.17	1099567	7.45	861200	9.90	738847	11.51
OP38921-BS	405544	3.61	1512423	4.66	800420	6.18	1245543	7.46	1001453	9.91	836638	11.51
OP38921-MS	341989	3.61	1258212	4.66	675188	6.18	1053166	7.46	859950	9.91	702124	11.51
OP38921-MSD	401881	3.61	1501540	4.66	776521	6.18	1182420	7.45	979189	9.91	792303	11.51
MC31999-1	362228	3.61	1365593	4.65	742579	6.17	1107693	7.45	901617	9.90	765021	11.51
MC31999-2	363500	3.61	1347057	4.65	741168	6.17	1142957	7.45	906541	9.90	772685	11.51
MC31999-3	324610	3.61	1190647	4.65	654115	6.17	1007812	7.45	800117	9.90	667205	11.50
MC31999-4	356707	3.61	1325349	4.65	719700	6.17	1094677	7.45	881887	9.90	737719	11.50
MC31999-5	363441	3.61	1346762	4.65	715448	6.17	1085320	7.45	853114	9.90	727295	11.50

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

Semivolatile Internal Standard Area Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSX128-CC106	Injection Date:	07/23/14
Lab File ID:	X03856.D	Injection Time:	07:52
Instrument ID:	GCMSX	Method:	SW846 8270D

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

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

7.4.2

Semivolatile Surrogate Recovery Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC31999-1	X03882.D	48	32	89	86	80	88
MC31999-2	X03883.D	33	23	76	63	60	83
MC31999-3	X03884.D	44	30	78	78	71	84
MC31999-4	X03885.D	47	32	84	84	77	83
MC31999-5	X03886.D	41	28	80	75	70	88
OP38921-BS	X03879.D	49	33	91	87	82	88
OP38921-MB	X03878.D	41	28	74	78	72	85
OP38921-MS	X03880.D	45	32	91	83	77	87
OP38921-MSD	X03881.D	46	32	84	80	76	79

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

Semivolatile Surrogate Recovery Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC31999-1	R39477.D	77	69	75
MC31999-2	R39478.D	57	52	74
MC31999-3	R39479.D	69	62	75
MC31999-4	R39480.D	76	68	75
MC31999-5	R39481.D	65	59	76
OP38922-BS	R39474.D	77	66	76
OP38922-MB	R39473.D	69	61	76
OP38922-MS	R39475.D	72	62	72
OP38922-MSD	R39476.D	71	61	70

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

7.5.2

New England ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

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: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38952-MB	BK39526.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283

The QC reported here applies to the following samples: Method: SW846 8011

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5, MC31999-7

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	118%	36-173%
460-00-4	Bromofluorobenzene (S)	112%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38952-BS	BK39527.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283

The QC reported here applies to the following samples: Method: SW846 8011

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5, MC31999-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.142	0.10	71	60-140
106-93-4	1,2-Dibromoethane	0.142	0.11	78	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	114%	36-173%
460-00-4	Bromofluorobenzene (S)	103%	36-173%

8.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38952-MS1	BK39530.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
OP38952-MSD1	BK39531.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283
MC31999-1	BK39546.D	1	07/15/14	NK	07/14/14	OP38952	GBK1283

The QC reported here applies to the following samples: Method: SW846 8011

MC31999-1, MC31999-2, MC31999-3, MC31999-4, MC31999-5, MC31999-7

CAS No.	Compound	MC31999-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.135	0.094	70	0.136	0.093	69	1	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.135	0.11	82	0.136	0.11	81	0	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC31999-1	Limits
460-00-4	Bromofluorobenzene (S)	103%	113%	124%	36-173%
460-00-4	Bromofluorobenzene (S)	100%	115%	124%	36-173%

8.3.1

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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]
MC31999-1	BK39546.D	124	124
MC31999-2	BK39548.D	111	111
MC31999-3	BK39549.D	105	103
MC31999-4	BK39550.D	106	108
MC31999-5	BK39551.D	108	103
MC31999-7	BK39552.D	87	88
OP38952-BS	BK39527.D	114	103
OP38952-MB	BK39526.D	118	112
OP38952-MS1	BK39530.D	103	100
OP38952-MSD1	BK39531.D	113	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

GC Surrogate Retention Time Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	GBK1283-ICC1283	Injection Date:	07/15/14
Lab File ID:	BK39522.D	Injection Time:	15:19
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.38	4.40

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP38952-MB	BK39526.D	07/15/14	16:39	4.38	4.40
OP38952-BS	BK39527.D	07/15/14	16:58	4.38	4.40
OP38952-MS	BK39528.D	07/15/14	17:18	4.38	4.40
OP38952-MSD	BK39529.D	07/15/14	17:38	4.38	4.40
OP38952-MS1	BK39530.D	07/15/14	17:57	4.38	4.40
OP38952-MSD1	BK39531.D	07/15/14	18:17	4.38	4.40
ZZZZZZ	BK39532.D	07/15/14	18:37	4.38	4.40
ZZZZZZ	BK39533.D	07/15/14	18:57	4.38	4.40
MC31918-3	BK39534.D	07/15/14	19:17	4.38	4.40
ZZZZZZ	BK39535.D	07/15/14	19:37	4.38	4.40

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: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	GBK1283-CC1283	Injection Date:	07/15/14
Lab File ID:	BK39536.D	Injection Time:	19:57
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.38	4.40

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BK39537.D	07/15/14	20:16	4.38	4.40
ZZZZZZ	BK39538.D	07/15/14	20:36	4.38	4.40
ZZZZZZ	BK39539.D	07/15/14	20:56	4.38	4.40
ZZZZZZ	BK39540.D	07/15/14	21:15	4.38	4.40
ZZZZZZ	BK39541.D	07/15/14	21:34	4.38	4.40
ZZZZZZ	BK39542.D	07/15/14	21:54	4.38	4.40
ZZZZZZ	BK39543.D	07/15/14	22:13	4.38	4.40
ZZZZZZ	BK39544.D	07/15/14	22:32	4.38	4.40
ZZZZZZ	BK39545.D	07/15/14	22:52	4.39	4.41
MC31999-1	BK39546.D	07/15/14	23:11	4.39	4.41

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.2

GC Surrogate Retention Time Summary

Job Number: MC31999
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	GBK1283-CC1283	Injection Date:	07/15/14
Lab File ID:	BK39547.D	Injection Time:	23:31
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.39	4.41

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC31999-2	BK39548.D	07/15/14	23:50	4.39	4.41
MC31999-3	BK39549.D	07/16/14	00:09	4.39	4.41
MC31999-4	BK39550.D	07/16/14	00:29	4.39	4.41
MC31999-5	BK39551.D	07/16/14	00:48	4.39	4.41
MC31999-7	BK39552.D	07/16/14	01:08	4.39	4.41
GBK1283-ECC128	BK39553.D	07/16/14	01:28	4.39	4.41

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.3

Roxana Groundwater Quarterly – 3rd Quarter 2014 Data Review

Laboratory SDG: MC32041

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 7/28/2014

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

Sample Identification	Sample Identification
MW6D-ROX-071014	MW6D-ROX-071014-Dup
MW6C-ROX-071014	MW6B-ROX-071014
MW6A-ROX-071014-EB	MW6A-ROX-071014
MW16-ROX-071014	TB-071014-HCL
TB-071014-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, and di-n-butyl phthalate was 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, initial calibration verification for dichlorodifluoromethane exceeded 30 percent difference (%D). Also, the continuing calibration standard for several analytes exceeded 40 percent difference (%D).

The cooler receipt form indicated that two of two coolers were received by the laboratory at temperatures of 0.9ºC and 1.2ºC, which are outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
MW6A-ROX-071014-EB	SVOCs	Di-n-butyl phthalate	0.25 µg/L
OP28921-MB	SVOCs	Di-n-butyl phthalate	0.24 µg/L
OP38922-MB	PAHs	2-Methylnaphthalene	0.075 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
MW6D-ROX-071014	SVOCs	Di-n-butyl phthalate	-	**U**
MW6D-ROX-071014-Dup	SVOCs	Di-n-butyl phthalate	-	**U**
MW6C-ROX-071014	SVOCs	Di-n-butyl phthalate	-	**U**
MW6A-ROX-071014	SVOCs	Di-n-butyl phthalate	-	**U**
MW16-ROX-071014	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
MSV1221-BS	VOCs	Acetone	**62**	70-130
MSV1221-BS	VOCs	Bromomethane	**161**	70-130
MSV1221-BS	VOCs	Chloroethane	**166**	70-130
MSV1221-BS	VOCs	Chloromethane	**167**	70-130
MSV1221-BS	VOCs	Trichlorofluoromethane	**142**	70-130
MSV1221-BS	VOCs	Vinyl chloride	**156**	70-130
OP38921-BS	SVOCs	2,4-Dinitrophenol	**28**	40-140
OP38921-BS	SVOCs	Hexachlorocyclopentadiene	**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. LCS MSV1221-BS was also associated with the trip blank. Blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
MW6D-ROX-071014	VOCs	Acetone	**UJ**
MW6D-ROX-071014-Dup	VOCs	Acetone	**UJ**
MW6C-ROX-071014	VOCs	Acetone	**UJ**
MW6B-ROX-071014	VOCs	Acetone	**UJ**
MW6A-ROX-071014	VOCs	Acetone	**UJ**
MW16-ROX-071014	VOCs	Acetone	**UJ**
MW6D-ROX-071014	SVOCs	2,4-Dinitrophenol	**UJ**
MW6D-ROX-071014	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW6D-ROX-071014-Dup	SVOCs	2,4-Dinitrophenol	**UJ**
MW6D-ROX-071014-Dup	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW6C-ROX-071014	SVOCs	2,4-Dinitrophenol	**UJ**
MW6C-ROX-071014	SVOCs	Hexachlorocyclopentadiene	**UJ**

Sample ID	Parameter	Analyte	Qualification
MW6B-ROX-071014	SVOCs	2,4-Dinitrophenol	**UJ**
MW6B-ROX-071014	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW6A-ROX-071014	SVOCs	2,4-Dinitrophenol	**UJ**
MW6A-ROX-071014	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW16-ROX-071014	SVOCs	2,4-Dinitrophenol	**UJ**
MW16-ROX-071014	SVOCs	Hexachlorocyclopentadiene	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
MW6D-ROX-071014	MW6D-ROX-071014-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

1.0 VALIDATION OF EDB/DBCP DATA – SDG MC32041

This section describes the validation for seven investigative groundwater samples which were prepared and analyzed for 1,2-dibromoethane (EDB) and 1,2-dibromo-3-chloropropane (DBCP) by USEPA SW-846 Method 8011. The samples were analyzed by Accutest Laboratories of Marlborough, Massachusetts and submitted as part of the sample delivery group (SDG) MC32041. The samples included as part of this validation are listed below.

Sample Identification	Sample Identification
MW6D-ROX-071014	MW6D-ROX-071014-Dup
MW6C-ROX-071014	MW6B-ROX-071014
MW6A-ROX-071014-EB	MW6A-ROX-071014
MW16-ROX-071014	TB-07-1014-HCL
TB-07-1014-ST	

Evaluation of the analytical data followed procedures outlined in the USEPA Contract Laboratory National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2013).

Criteria evaluated included the following method performance criteria:

- Data package completeness
- Laboratory case narrative/cooler receipt form
- Holding times and sample preservation
- GC/MS instrument performance
- Initial calibration
- Calibration verification
- Blank samples
- Surrogate spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) samples
- Internal standards
- Laboratory control spike (LCS) samples
- Target compound identification and quantification
- Overall data assessment

1.1 Data Package Completeness

The data package was reviewed to make certain that it contained the data contractually required in the deliverable. This included checking the data package for the results of each analyte requested for each field sample submitted in the analytical batch, along with requested QC documentation for the respective methods.

1.2 Laboratory Case Narrative/Cooler Receipt Form

No problems were indicated in the laboratory case narrative.

The cooler receipt form indicated two of two coolers were received by the laboratory at temperatures of 0.9ºC and 1.2ºC, which are outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

1.3 Holding Times and Sample Preservation

Review of the sample collection and analysis dates involved comparing the sample chain-of-custody, the summary forms, the raw data forms, and the chromatograms for accuracy, consistency, and holding time compliance. The samples were received in god condition at temperatures of 0.9ºC and 1.2ºC, and maintained at approximately $4^{o}C \pm 2^{o}C$. In addition, the samples were analyzed within 14 days of collection. No qualifications to the data were required based on holding times and sample preservation.

1.4 Initial Calibration

An initial calibration (ICAL) was established to assess whether the instrument was capable of producing acceptable qualitative and quantitative data for EDB/DBCP analyses. Validated samples included in SDG MC32041 were analyzed using instrument GCBK. The ICAL for instrument GCBK was established on 7/15/2014. At least five standard concentrations were used to establish the ICAL curve as required by Method 8011.

Review of the initial calibration summary forms indicated percent relative standard deviations (%RSDs) were ≤ 15% for target analytes. A recalculation of the %RSDs was performed from the raw data and no errors in calculation were noted; therefore, no qualification of data was required.

Review of the sample chromatograms indicated that a second source calibration was performed immediately following the initial calibration. Review of ICV summary forms indicated percent difference (%D) ≤ 15% for target analytes. Recalculation of the percent recoveries was completed and no errors in calculation were noted.

1.5 Calibration Verification

Review of the sample chromatograms indicated that all calibration verifications (CVs) were performed before the start of sample analysis. Percent differences (%Ds) met the evaluation criteria of ≤ 20% for target analytes. Recalculations of the %Ds for target compounds were completed for each CV, and no errors in calculation were noted; therefore, no qualifications of data were required.

1.6 Blank Samples

The purpose of the method blank samples is to evaluate the existence and magnitude of contamination problems emanating from laboratory activities. Method blank samples were analyzed with each analytical batch as required by USEPA SW-846 Method 8011. Also, trip blanks were analyzed to evaluate the existence and magnitude of contamination problems emanating during sample shipment to the laboratory. Equipment blank samples are used to evaluate the efficiency of the decontamination of sampling equipment. Target compounds were reported as non-detect. No qualification of data was required.

1.7 Surrogate Spike Recoveries

Surrogate compounds were used to evaluate the overall laboratory sample preparation efficiency on a per sample basis. Surrogate recoveries were within the method acceptance criteria for the validated samples.

Approximately 10% of the recoveries were recalculated and no calculation or transcription errors were noted.

1.8 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

MS/MSD samples are analyzed to assess potential matrix effects. Although not analyzed as part of SDG MC32041, sample MW1-ROX-070914 (SDG MC31999) was spiked and analyzed for 8011 VOCs. MS/MSD data were within evaluation criteria. No qualification of data was required.

Approximately 10% of the MS/MSD spiking recoveries were verified using the MS/MSD summary forms, and no errors were noted.

1.9 Laboratory Control Spike (LCS) Samples

Laboratory control samples were analyzed with each analytical batch to assess the accuracy of the analytical process. All LCS data were within evaluation criteria. Approximately 10% of spiking compound recoveries for the LCS were recalculated and verified using the LCS summary forms, and no calculation or transcription errors were noted.

1.10 Target Compound Identification and Quantification

For validation of the compound identification, chromatograms were reviewed to verify the major peaks were identified, and the relative retention time was no greater than 0.06 different from the associated CV retention times. Approximately 10% of the detected target analytes were verified. No anomalies were noted with the identification of the target compounds in the samples.

For the validation of compound quantitation, the matrix spike results were recalculated from the raw data since all target analytes were non-detect, and no calculation errors were noted. Additionally, the reporting limits were verified to determine if reporting limits (RLs) were adjusted for dilutions. No qualification of the data was required and review of the data indicated the correct RLs were reported.

1.11 Overall Data Assessment

Based on the criteria outlined, it is recommended that the results reported for these analyses are accepted for their intended use. Acceptable levels of accuracy and precision, based on LCS and surrogate data were achieved for this SDG.

1.0 VALIDATION OF VOC DATA – SDG MC32041

This section describes the validation for seven groundwater samples which were prepared by USEPA SW-846 Method 5030B and analyzed for volatile organic compounds (VOCs) by USEPA SW-846 Method 8260C. The samples were analyzed by Accutest Laboratories of Marlborough, Massachusetts and submitted as part of the sample delivery group (SDG) MC32041. The samples included as part of this validation are listed below.

Sample Identification	Sample Identification
MW6D-ROX-071014	MW6D-ROX-071014-Dup
MW6C-ROX-071014	MW6B-ROX-071014
MW6A-ROX-071014-EB	MW6A-ROX-071014
MW16-ROX-071014	TB-071014-HCL
TB-071014-ST	

Evaluation of the analytical data followed procedures outlined in the USEPA Contract Laboratory National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2013, EPA 2008).

Criteria evaluated included the following method performance criteria:

- Data package completeness
- Laboratory case narrative/cooler receipt form
- Holding times and sample preservation
- GC/MS instrument performance
- Initial calibration
- Calibration verification
- Blank samples
- Surrogate spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) samples
- Internal standards
- Laboratory control spike (LCS) samples
- Target compound identification and quantification
- Overall data assessment

1.1 Data Package Completeness

The data package was reviewed to make certain that it contained the data contractually required in the deliverable. This included checking the data package for the results of each analyte requested for each field sample submitted in the analytical batch, along with requested QC documentation for the respective methods.

1.2 Laboratory Case Narrative/Cooler Receipt Form

The laboratory case narrative indicated VOC LCS recoveries were outside evaluation criteria. Initial calibration verification for dichlorodifluoromethane exceeded 30 percent difference (%D). Continuing calibration %D for several analytes exceeded 40%D. These issues are addressed further in the appropriate sections below.

The cooler receipt form indicated that two of two coolers were received by the laboratory at temperatures of 0.9ºC and 1.2ºC, which are outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

1.3 Holding Times and Sample Preservation

Review of the sample collection and analysis dates involved comparing the sample chain-of-custody, the summary forms, the raw data forms, and the chromatograms for accuracy, consistency, and holding time compliance. The samples were received in good condition at temperatures of 0.9ºC and 1.2ºC, and maintained at approximately $4^{o}C \pm 2^{o}$ C. In addition, the samples were analyzed within 14 days of collection at a pH < 2. No qualifications to the data were required based on holding times and sample preservation.

1.4 GC/MS Instrument Performance

GC/MS instrument performance checks were performed to ensure mass resolution, identification, and instrument sensitivity. Criteria for evaluation of instrument performance included possible transcription/calculation errors, adherence to instrument tuning frequency requirements, mass assignments, and ion abundance criteria. Instrument performance check samples were evaluated against criteria established in USEPA SW-846 Method 8260 C.

Based on the summary forms, the ion abundance criteria were within evaluation criteria for all masses. No qualifications to the data were required based on instrument performance criteria.

1.5 Initial Calibration

An initial calibration (ICAL) was established to assess whether the instrument was capable of producing acceptable qualitative and quantitative data for volatiles analyses. Validated samples included in SDG MC32041 were analyzed using instrument MSV. The ICAL for instrument MSV was established on 6/5/2014. At least five standard concentrations were used to establish the ICAL curve as required by Method 8260C.

The ICAL response factors (RFs) were reviewed and were greater than 0.01 for chloromethane, 0.30 for 1,1-dichloroethane, 0.10 for bromoform, 0.40 for chlorobenzene, 0.20 for 1,1,2,2-tetrachloroethane, and greater than National Functional Guideline (NFG) specified minimum RRFs for all other target analytes. Data associated with low response factors for acrolein (0.041) and 1,4-dioxane (0.001) were qualified as estimated; however, not rejected. NFG (2008) indicated an advisory RF ≥ 0.0050 for 1,4-dioxane as a VOC. Additionally, NFG (2008) indicated that target analytes, unless discussed individually as poor performers, have minimum RRFs ≥ 0.05. NFG (2013) does not list acrolein in any initial calibration tables, and only lists 1,4-dioxane under SVOCs. Qualifications of data due to ICAL RRF are summarized in the following table.

Sample ID	Analyte	Qualification
MW6D-ROX-071014	Acrolein	**UJ**
MW6D-ROX-071014	1,4-Dioxane	**UJ**
MW6D-ROX-071014-Dup	Acrolein	**UJ**
MW6D-ROX-071014-Dup	1,4-Dioxane	**UJ**
MW6C-ROX-071014	Acrolein	**UJ**
MW6C-ROX-071014	1,4-Dioxane	**UJ**
MW6B-ROX-071014	Acrolein	**UJ**
MW6B-ROX-071014	1,4-Dioxane	**UJ**
MW6A-ROX-071014	Acrolein	**UJ**
MW6A-ROX-071014	1,4-Dioxane	**UJ**
MW16-ROX-071014	Acrolein	**UJ**
MW16-ROX-071014	1,4-Dioxane	**UJ**

Review of the initial calibration summary forms indicated %RSDs were $\leq$ 30% for calibration check compounds (CCCs) [1,1-dichloroethene, toluene, chloroform, ethylbenzene, 1,2-dichloropropane, and vinyl chloride], and $\leq$ 15% for non-CCCs with some exceptions. The initial calibration for compounds with %RSD values outside evaluation criteria was determined using least square linear regression: correlation coefficients (r) were greater than 0.990.

Initial calibration verification (ICV) was analyzed following the initial calibration. Percent difference (%D) values from comparing ICV RF to the average ICAL RFs were less than those specified in NFG (2013) with the exceptions of isopropylbenzene (-27.6%).

Results for the compound, isopropyl benzene in the validated samples associated with marginal increases in %D, indicating potential high bias, were non-detect; therefore, professional judgment was used to not qualify data.

A recalculation of the %RSDs and RFs for a compound associated with each internal standard was performed from the raw data and no errors in calculation were noted; therefore, no qualification of data was required.

1.6 Calibration Verification

Review of the sample chromatograms indicated that all calibration verifications (CVs) were performed before the start of sample analysis. Review of CV summary forms indicated RFs met the evaluation criteria of greater than 0.01 for chloromethane, 0.30 for 1,1-dichloroethane, 0.10 for bromoform, 0.40 for chlorobenzene, 0.20 for 1,1,2,2-tetrachloroethane, and greater than NFG specified minimum RRFs for all other target analytes, with exception of acrolein (0.042) for which associated results were previously qualified from the initial calibration. Therefore, no further qualification of data was required. In addition, percent differences (%Ds) for target compounds met the evaluation criteria as specified in NFG (2013), with exceptions summarized in the following table.

CV (Date/Time)	Analyte	%D
7/21/2014 9:46	Chloromethane	**-66.7%**
7/21/2014 9:46	Vinyl chloride	**-55.7%**
7/21/2014 9:46	Bromomethane	**-61.0%**
7/21/2014 9:46	Chloroethane	**-65.8%**

Analytical data that required qualification based on continuing calibration verification data are included in the table below.

Sample ID	Analyte	Qualifications
MW6D-ROX-071014	Chloromethane	**UJ**
MW6D-ROX-071014	Vinyl chloride	**UJ**
MW6D-ROX-071014	Bromomethane	**UJ**
MW6D-ROX-071014	Chloroethane	**UJ**
MW6D-ROX-071014-Dup	Chloromethane	**UJ**
MW6D-ROX-071014-Dup	Vinyl chloride	**UJ**
MW6D-ROX-071014-Dup	Bromomethane	**UJ**
MW6D-ROX-071014-Dup	Chloroethane	**UJ**
MW6C-ROX-071014	Chloromethane	**UJ**
MW6C-ROX-071014	Vinyl chloride	**UJ**
MW6C-ROX-071014	Bromomethane	**UJ**
MW6C-ROX-071014	Chloroethane	**UJ**
MW6B-ROX-071014	Chloromethane	**UJ**
MW6B-ROX-071014	Vinyl chloride	**UJ**
MW6B-ROX-071014	Bromomethane	**UJ**
MW6B-ROX-071014	Chloroethane	**UJ**
MW6A-ROX-071014	Chloromethane	**UJ**
MW6A-ROX-071014	Vinyl chloride	**UJ**
MW6A-ROX-071014	Bromomethane	**UJ**
MW6A-ROX-071014	Chloroethane	**UJ**
MW16-ROX-071014	Chloromethane	**UJ**
MW16-ROX-071014	Vinyl chloride	**UJ**
MW16-ROX-071014	Bromomethane	**UJ**
MW16-ROX-071014	Chloroethane	**UJ**

Recalculations of the RFs and %Ds for two target compounds were completed for each CV, and no errors in calculation were noted; therefore, no qualifications of data were required.

1.7 Blank Samples

The purpose of the method blank samples is to evaluate the existence and magnitude of contamination problems emanating from laboratory activities. Method blank samples were analyzed with each analytical batch as required by USEPA SW-846 Method 8260C. Equipment blank samples are used to evaluate the efficiency of the decontamination of sampling equipment. Target compounds were reported as non-detect. No qualification of data was required.

1.8 Surrogate Spike Recoveries

Surrogate compounds were used to evaluate the overall laboratory sample preparation efficiency on a per sample basis. All surrogate recoveries were within the method acceptance criteria for the validated samples. No qualification of data was required.

Approximately 10% of the recoveries were recalculated and no calculation or transcription errors were noted.

1.9 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

MS/MSD samples are analyzed to assess potential matrix effects. Although not analyzed as part of SDG MC32041, sample MW1-ROX-070914 (SDG MC31999) was spiked and analyzed for 8260 VOCs. MS/MSD data were within evaluation criteria, with the exception of those summarized in the following table.

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
MW1-ROX-070914	VOCs	Acetone	**69**/75	8	70-130/30
MW1-ROX-070914	VOCs	Bromomethane	**177/170**	4	70-130/30
MW1-ROX-070914	VOCs	Carbon tetrachloride	**134**/126	6	70-130/30
MW1-ROX-070914	VOCs	Chloroethane	**189/183**	3	70-130/30
MW1-ROX-070914	VOCs	2-Chloroethyl vinyl ether	**0/0**	NA	70-130/30
MW1-ROX-070914	VOCs	Chloromethane	**175/165**	6	70-130/30
MW1-ROX-070914	VOCs	Trichlorofluoromethane	**176/162**	9	70-130/30
MW1-ROX-070914	VOCs	Vinyl chloride	**169/165**	2	70-130/30

LCS/LCSD recoveries were within evaluation criteria with the exception of analytes listed and qualified as appropriate in the data review for these samples. No further qualification of data was required.

Approximately 10% of the MS/MSD spiking recoveries were recalculated and verified using the MS/MSD summary forms, and no errors were noted.

1.10 Internal Standards

Internal standard (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during each analytical run. IS areas must be within -50% to +100%, and the IS retention times must be within 30 seconds of the IS continuing calibration retention time. IS areas and retention times for the validated samples in this SDG were within evaluation criteria.

The summary forms versus the raw data were verified and no transcription errors were noted. No qualifications to the data were required based on internal standard areas or retention times.

1.11 Laboratory Control Spike (LCS) Samples

Laboratory control samples were analyzed with each analytical batch to assess the accuracy of the analytical process. LCS data were within evaluation criteria, with the exception of those summarized in the following table:

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV1221-BS	VOCs	Acetone	**62**	70-130
MSV1221-BS	VOCs	Bromomethane	**161**	70-130
MSV1221-BS	VOCs	Chloroethane	**166**	70-130

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV1221-BS	VOCs	Chloromethane	**167**	70-130
MSV1221-BS	VOCs	Trichlorofluoromethane	**142**	70-130
MSV1221-BS	VOCs	Vinyl chloride	**156**	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 MSV1221-BS was associated with the trip blank. Blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
MW6D-ROX-071014	VOCs	Acetone	**UJ**
MW6D-ROX-071014-Dup	VOCs	Acetone	**UJ**
MW6C-ROX-071014	VOCs	Acetone	**UJ**
MW6B-ROX-071014	VOCs	Acetone	**UJ**
MW6A-ROX-071014	VOCs	Acetone	**UJ**
MW16-ROX-071014	VOCs	Acetone	**UJ**

Approximately 10% of spiking compound recoveries for the LCS were recalculated and verified using the LCS summary forms, and no calculation or transcription errors were noted.

1.12 Target Compound Identification and Quantification

For validation of the compound identification, chromatograms were reviewed to verify the major peaks were identified, and the relative retention time was no greater than 0.06 different from the associated CV retention times. Approximately10% of the detected target analytes were verified. No anomalies were noted with the identification of the target compounds in the samples.

For the validation of compound quantitation, approximately 10% of the detected target analytes were recalculated from the raw data, and no calculation errors were noted. Additionally, the reporting limits were verified to determine if reporting limits (RLs) were adjusted for dilutions. No qualification of the data was required and review of the data indicated the correct RLs were reported.

1.13 Overall Data Assessment

Based on the criteria outlined, it is recommended that the results for these analyses are accepted for their intended use. Acceptable levels of accuracy and precision, based on LCS and surrogate data were achieved for this SDG.

1.0 VALIDATION OF SVOC DATA – SDG MC32041

This section describes the validation for seven groundwater samples which were prepared by USEPA SW-846 Method 3520C and analyzed for semi-volatile organic compounds (SVOCs) by USEPA SW-846 Method 8270C and for polycyclic aromatic hydrocarbons (PAHs) by USEPA SW-846 Method 8270C SIM. Samples were analyzed by Accutest Laboratories of Marlborough, Massachusetts, and submitted as part of sample delivery group (SDG) MC32041. Samples included as part of this validation are listed below:

Sample Identification	Sample Identification
MW6D-ROX-071014	MW6D-ROX-071014-Dup
MW6C-ROX-071014	MW6B-ROX-071014
MW6A-ROX-071014-EB	MW6A-ROX-071014
MW16-ROX-071014	TB-071014-HCL
TB-071014-ST	

Evaluation of the analytical data followed procedures outlined in the USEPA Contract Laboratory National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2013, EPA 2008).

Criteria evaluated included the following method performance criteria:

- Data package completeness
- Laboratory case narrative/cooler receipt form
- Holding times and sample preservation
- Instrument performance
- Initial calibration
- Calibration verification
- Blank samples
- Surrogate spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) samples
- Internal standard areas
- Laboratory control sample (LCS)
- Target compound identification and quantitation
- Overall data assessment

1.0 Data Package Completeness

The data package was reviewed to make certain that it contained the data contractually required in the deliverable. This included checking the data package for the results of each analyte requested for each field sample submitted in the analytical batch, along with requested QC documentation for the respective methods. The data package was complete.

1.2 Laboratory Case Narrative/Cooler Receipt Form

Yes, the laboratory case narrative indicated that SVOC LCS recoveries were outside evaluation criteria. Initial calibration verification and continuing calibration verification percent differences

were outside evaluation criteria. These issues are addressed further in the appropriate sections below.

The cooler receipt form indicated two of two coolers were received by the laboratory at temperatures of 0.9ºC and 1.2ºC, which are outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

1.3 Holding Times and Sample Preservation

Review of the sample collection and analysis dates involved comparing the chain-of-custody, the summary forms, the raw data forms, and the chromatograms for accuracy, consistency, and holding time compliance. The validated samples were received in good condition temperatures of 0.9ºC and 1.2ºC, and were maintained at $4^{o}C \pm 2^{o}C$, and were extracted within seven days of collection and analyzed within 40 days of extraction. No qualification of data was required due to sample preservation or holding time criteria.

1.4 GC/MS Instrument Performance

GC/MS instrument performance checks were performed to ensure mass resolution, identification, and instrument sensitivity. Criteria for evaluation of instrument performance included possible transcription/calculation errors, adherence to instrument tuning frequency requirements, mass assignments, and ion abundance criteria. Instrument performance check samples were evaluated against the laboratory tuning criteria established in Method 8270C.

Based on the raw data, the ion abundance criteria were within evaluation criteria for all masses, therefore; no qualification of the data was required. The raw data forms were checked against the summary forms and no calculation or transcription errors were noted.

1.5 Initial Calibration

An Initial calibration (ICAL) was established to assess whether the instrument was capable of producing acceptable qualitative and quantitative data for semi-volatile analysis. SVOC samples as part of SDG MC32041 were analyzed using instrument MSF, and PAH samples were analyzed using instrument MSR. The ICAL for instruments MSF and MSR were established on 7/21/2014 and 5/12/2014, respectively. ICALs for instruments MSF and MSR were established prior to sample analysis and using at least five concentration standards to establish the initial calibration curve as required by Method 8270C and 8270C SIM. An average response factor (RF) was determined for each target analyte, and the RFs were reviewed and verified as greater than 0.05 for all target analytes.

Review of the initial calibration summary forms for SVOCs and PAHs indicated calibration check compounds (CCCs) had percent relative standard deviations (%RSDs) $\leq$ 30%. All other target analytes had %RSDs less than 15% for CCCs with some exceptions. The initial calibration for compounds with %RSD values outside evaluation criteria was determined using least square linear regression and the correlation coefficients (r) were greater than 0.990.

Initial calibration verifications (ICVs) for SVOCs and PAHs were analyzed following the initial calibrations. Percent difference (%D) values comparing ICV RF to the average ICAL RFs were less than those specified in NFG (2013) for target, or closely analgous, compounds with the exceptions of aniline (25.8%), bis(2-chloroisopropyl)ether (-22.3%), and 4-chloroaniline (26.0%).

Qualifications of SVOC data due to ICV %D are summarized in the following table. The results for bis(2-chloroisopropyl)ether in the validated samples associated with marginal increases in %D, indicating a potential high bias, were non-detect; professional judgment was used to not qualify.

Sample ID	Analyte	Qualifications
MW6D-ROX-071014	Aniline	**UJ**
MW6D-ROX-071014	4-Chloroaniline	**UJ**
MW6D-ROX-071014-Dup	Aniline	**UJ**
MW6D-ROX-071014-Dup	4-Chloroaniline	**UJ**
MW6C-ROX-071014	Aniline	**UJ**
MW6C-ROX-071014	4-Chloroaniline	**UJ**
MW6B-ROX-071014	Aniline	**UJ**
MW6B-ROX-071014	4-Chloroaniline	**UJ**
MW6A-ROX-071014	Aniline	**UJ**
MW6A-ROX-071014	4-Chloroaniline	**UJ**
MW16-ROX-071014	Aniline	**UJ**
MW16-ROX-071014	4-Chloroaniline	**UJ**

Recalculations of the RFs and %RSD for one compound per internal standard were performed, and no errors in calculation were noted.

1.6 Calibration Verification

Review of sample chromatograms indicated the calibration verifications (CVs) were performed prior to sample analysis. Review of continuing calibration summary forms for SVOCs and PAHs indicated all RFs met the evaluation criteria of greater than 0.05 for all target analytes. In addition, percent differences (%Ds) met the evaluation criteria of less than or equal to specified in NFG (2013) for target, or closely analgous, compounds, with the exception summarized in the table below with the exception of benzoic acid (-37.9%). The results for benzoic acid in the validated samples were non-detect and associated with marginal increases in %D, indicating a potential high bias; professional judgment was used to not qualify.

Recalculations of the RFs and %RSD for one compound per internal standard were performed, and no errors in calculation were noted.

1.7 Blank Samples

The purpose of method blank samples is to evaluate the existence and magnitude of contamination problems emanating from laboratory activities. Method blank samples were analyzed with each analytical batch as required by USEPA SW-846 Method 8270C. Equipment blank samples are used to evaluate the efficiency of the decontamination of sampling equipment. Target compounds in the blank samples were reported as non-detect. No qualifications of data were required.

1.8 Surrogate Spike Recoveries

Surrogate compounds were used to evaluate the overall laboratory sample preparation efficiency on a per-sample basis. Surrogate recoveries were within the method acceptance criteria for all validated samples.

Approximately 10% of the surrogate recoveries were recalculated, and the summary forms versus the raw data were verified. No calculation or transcription errors were noted.

1.9 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

MS/MSD samples are analyzed to assess potential matrix effects. Although not analyzed as part of SDG MC32041, sample MW1-ROX-070914 (SDG MC31999) was spiked and analyzed for SVOCs.

All MS/MSD recoveries and MS/MSD RPDs were within the method acceptance criteria for the validated samples with the exception of those summarized in the table below.

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
MW1-ROX-070914	SVOCs	3,3'-Dichlorobenzidine	79/59	**29**	40-140/20

LCS/LCSD recoveries were within evaluation criteria with the exception of compounds listed and qualified as appropriate in the data review for SDG MC31999. No further qualification of data was required.

Approximately 10% of the MS/MSD spiking recoveries were recalculated and verified using MS/MSD summary forms, and no calculation or transcription errors were noted,

1.10 Internal Standards

Internal standard (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during each analytical run. Following Method 8270C, the IS areas for the samples and CVs must be within –50% to +100% and retention times must be within 30 seconds of the IS area and retention time of the midpoint of the ICAL.

The IS areas for the CVs and the validated samples in this SDG were within evaluation criteria.

1.11 Laboratory Control Spike (LCS) Samples

Laboratory control samples were analyzed with each analytical batch to assess the accuracy of the analytical process. LCS recoveries were within evaluation criteria with the exceptions summarized in the following table.

LCS	Parameter	Analyte	LCS Recovery	LCS Criteria
OP38904-BS	SVOCs	Hexachlorocyclopentadiene	**38**/NA	40-140

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS OP33941-BS was associated with the equipment blank is not qualified.

Sample ID	Parameter	Analyte	Qualification
P74-ROX-070814	SVOCs	Hexachlorocyclopentadiene	**UJ**
P56-ROX-070814	SVOCs	Hexachlorocyclopentadiene	**UJ**
T12-ROX-070814	SVOCs	Hexachlorocyclopentadiene	**UJ**
P59-ROX-070814	SVOCs	Hexachlorocyclopentadiene	**UJ**
P57-ROX-070814	SVOCs	Hexachlorocyclopentadiene	**UJ**
P57-ROX-070814-Dup	SVOCs	Hexachlorocyclopentadiene	**UJ**

Approximately 10% of the spiking compound recoveries for the LCS were recalculated from the raw data and verified using the LCS summary forms, and no calculation or transcription errors were noted.

1.12 Target Compound Identification and Quantification

For validation of the compound identification, chromatograms were reviewed to verify the major peaks were identified, the spectra of the identified compounds were verified against the library spectra, and the relative retention time was no greater than 0.06 different from the associated CV retention times. A minimum of 10% of the detected target analytes and spiking compounds were verified. No anomalies were noted with the identification of the target compounds in the samples.

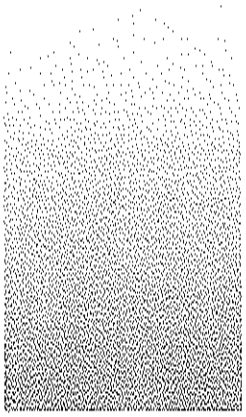
For the validation of compound quantitation, 10% of the target analytes were recalculated from the raw data, and no calculation errors were noted. Additionally, the reporting limits were verified to determine if reporting limits (RLs) were adjusted for dilutions. No qualification of the data was required and review of the data indicated the correct RLs were reported.

1.13 Overall Data Assessment

Based on the criteria outlined, it is recommended that the results reported for these analyses are accepted for their intended use. Acceptable levels of accuracy and precision, based on LCS and surrogate data were achieved for this SDG.

New England ACCUTEST LABORATORIES

07/28/14





Technical Report for

Shell Oil

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana,

Accutest Job Number: MC32041

Sampling Date: 07/10/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: **103**

NELAP ACCREDITED TNI LABORATORY

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

Renewed 7/28/15

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: MC32041

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC32041-1	07/10/14	10:15	BKCW	07/11/14	AQ	Ground Water	MW6D-ROX-071014
MC32041-2	07/10/14	10:15	BKCW	07/11/14	AQ	Ground Water	MW6D-ROX-071014-DUP
MC32041-3	07/10/14	11:10	BKCW	07/11/14	AQ	Ground Water	MW6C-ROX-071014
MC32041-4	07/10/14	12:00	BKCW	07/11/14	AQ	Ground Water	MW6B-ROX-071014
MC32041-5	07/10/14	12:20	BKCW	07/11/14	AQ	Equipment Blank	MW6A-ROX-071014-EB
MC32041-6	07/10/14	13:00	BKCW	07/11/14	AQ	Ground Water	MW6A-ROX-071014
MC32041-7	07/10/14	15:55	BKCW	07/11/14	AQ	Ground Water	MW16-ROX-071014
MC32041-8	07/10/14	00:00	BKCW	07/11/14	AQ	Trip Blank Water	TB-071014-HCL
MC32041-9	07/10/14	00:00	BKCW	07/11/14	AQ	Trip Blank Water	TB-071014-ST

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SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	Job No	MC32041
Site:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central	Report Date	7/25/2014 2:29:12 PM

7 Sample(s) and 2 Trip Blank(s) were collected on 07/10/2014 and were received at Accutest on 07/11/2014 properly preserved, at 0.9 Deg. C and intact. These Samples received an Accutest job number of MC32041. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Sample 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: MSV1221

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC31999-1MS, MC31999-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for Acetone, Bromomethane, Chloromethane, Trichlorofluoromethane are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2-Chloroethyl vinyl ether, Acetone, Bromomethane, Carbon tetrachloride, Chloromethane, Trichlorofluoromethane 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, Bromomethane, Chloromethane, Trichlorofluoromethane are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Continuing calibration check standard MSV1221-CC1177 for chloromethane, vinyl chloride, bromomethane, chloroethane, trichlorofluoromethane exceed 40% Difference (response bias high) Associated samples are non-detect for these compounds.
- MSV1221-BS, MC31999-1MS, MC31999-1MSD for Chloroethane, Vinyl chloride: Outside control limits. Associated samples are non-detect for this compound.
- Initial calibration verification MSV1177-ICV1177 for dichlorodifluoromethane exceed 30% Difference (response bias high). Associated samples are non-detect for this compound.

Extractables by GCMS By Method SW846 8270D

Matrix AQ Batch ID: OP38921

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC31999-1MS, MC31999-1MSD were used as the QC samples indicated.
- Sample(s) MC32041-1, MC32041-2, MC32041-3, MC32041-5, MC32041-6, MC32041-7 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, Hexachlorocyclopentadiene are outside control limits. Blank Spike meets program technical requirements.
- RPD(s) for MSD for 3,3'-Dichlorobenzidine are outside control limits for sample OP38921-MSD. High RPD due to possible matrix interference and/or sample heterogeneity.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ	Batch ID: OP38922

- 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) MC31999-1MS, MC31999-1MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8011

Matrix AQ	Batch ID: OP38972

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32000-12MS, MC32000-12MSD 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(MC32041).

Summary of Hits

Job Number: MC32041
Account: Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Collected: 07/10/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC32041-1	MW6D-ROX-071014					
Di-n-butyl phthalate		~~0.27~~ JB U	5.6	0.19	ug/l	SW846 8270D
MC32041-2	MW6D-ROX-071014-DUP					
Di-n-butyl phthalate		~~0.29~~ JB U	5.4	0.19	ug/l	SW846 8270D
MC32041-3	MW6C-ROX-071014					
Di-n-butyl phthalate		~~0.32~~ JB U	5.6	0.19	ug/l	SW846 8270D
Benzo(a)anthracene		0.034 J	0.056	0.022	ug/l	SW846 8270D BY SIM
Benzo(g,h,i)perylene		0.035 J	0.11	0.030	ug/l	SW846 8270D BY SIM
Chrysene		0.037 J	0.11	0.026	ug/l	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		0.035 J	0.11	0.034	ug/l	SW846 8270D BY SIM
MC32041-4	MW6B-ROX-071014					
Methyl Tert Butyl Ether		5.4	1.0	0.51	ug/l	SW846 8260C
MC32041-5	MW6A-ROX-071014-EB					
Di-n-butyl phthalate		0.25 JB	5.3	0.18	ug/l	SW846 8270D
MC32041-6	MW6A-ROX-071014					
Methyl Tert Butyl Ether		14.8	1.0	0.51	ug/l	SW846 8260C
Di-n-butyl phthalate		~~0.26~~ JB U	5.4	0.19	ug/l	SW846 8270D
Acenaphthylene		0.075 J	0.11	0.054	ug/l	SW846 8270D BY SIM
Fluorene		0.13	0.11	0.11	ug/l	SW846 8270D BY SIM
Phenanthrene		0.046 J	0.054	0.014	ug/l	SW846 8270D BY SIM
MC32041-7	MW16-ROX-071014					
Di-n-butyl phthalate		~~0.21~~ JB U	5.4	0.19	ug/l	SW846 8270D
MC32041-8	TB-071014-HCL					
No hits reported in this sample.						
MC32041-9	TB-071014-ST					
No hits reported in this sample.						

New England ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW6D-ROX-071014		
Lab Sample ID:	MC32041-1	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33075.D	1	07/21/14	AMY	n/a	n/a	MSV1221
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	UJ
107-02-8	Acrolein	ND	25	6.0	ug/l	UJ
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
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	UJ
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	UJ
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	UJ
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-071014		
Lab Sample ID:	MC32041-1	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	MW6D-ROX-071014		
Lab Sample ID:	MC32041-1	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	122%		70-130%
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	100%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW6D-ROX-071014		
Lab Sample ID:	MC32041-1	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F74793.D	1	07/23/14	WK	07/11/14	OP38921	MSF3295
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	UJ
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	UJ
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	UJ
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	~~0.27~~	5.6	0.19	ug/l	JB UA
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:	MW6D-ROX-071014		
Lab Sample ID:	MC32041-1	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	U5
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	40%		15-110%
4165-62-2	Phenol-d5	26%		15-110%
118-79-6	2,4,6-Tribromophenol	84%		15-110%
4165-60-0	Nitrobenzene-d5	68%		30-130%
321-60-8	2-Fluorobiphenyl	73%		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
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-071014		
Lab Sample ID:	MC32041-1	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R39482.D	1	07/24/14	WK	07/11/14	OP38922	MSR1454
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.055	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	ND	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	69%		30-130%
321-60-8	2-Fluorobiphenyl	65%		30-130%
1718-51-0	Terphenyl-d14	70%		30-130%

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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:	MW6D-ROX-071014		
Lab Sample ID:	MC32041-1	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39582.D	1	07/16/14	NK	07/15/14	OP38972	GBK1285
Run #2							

	Initial Volume	Final Volume
Run #1	35.7 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0060	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	113%		36-173%
460-00-4	Bromofluorobenzene (S)	102%		36-173%

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

Report of Analysis

Client Sample ID:	MW6D-ROX-071014-DUP		
Lab Sample ID:	MC32041-2	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33076.D	1	07/21/14	AMY	n/a	n/a	MSV1221
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	UJ
107-02-8	Acrolein	ND	25	6.0	ug/l	UJ
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
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	UJ
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	UJ
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	UJ
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-071014-DUP		
Lab Sample ID:	MC32041-2	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	ب
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	ب
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	MW6D-ROX-071014-DUP		
Lab Sample ID:	MC32041-2	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	125%		70-130%
2037-26-5	Toluene-D8	95%		70-130%
460-00-4	4-Bromofluorobenzene	100%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW6D-ROX-071014-DUP		
Lab Sample ID:	MC32041-2	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F74794.D	1	07/23/14	WK	07/11/14	OP38921	MSF3295
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.90	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.61	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	ULJ
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	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	ug/l	ULJ
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	ULJ
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~~ UA	5.4	0.19	ug/l	JB UA
117-84-0	Di-n-octyl phthalate	ND	5.4	0.31	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW6D-ROX-071014-DUP		
Lab Sample ID:	MC32041-2	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.2

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	UJ
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	42%		15-110%
4165-62-2	Phenol-d5	29%		15-110%
118-79-6	2,4,6-Tribromophenol	95%		15-110%
4165-60-0	Nitrobenzene-d5	73%		30-130%
321-60-8	2-Fluorobiphenyl	75%		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:	MW6D-ROX-071014-DUP		
Lab Sample ID:	MC32041-2	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R39483.D	1	07/24/14	WK	07/11/14	OP38922	MSR1454
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.075	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	ND	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	74%		30-130%
321-60-8	2-Fluorobiphenyl	69%		30-130%
1718-51-0	Terphenyl-d14	79%		30-130%

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

Report of Analysis

Client Sample ID:	MW6D-ROX-071014-DUP		
Lab Sample ID:	MC32041-2	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39583.D	1	07/16/14	NK	07/15/14	OP38972	GBK1285
Run #2							

	Initial Volume	Final Volume
Run #1	36.3 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	139%		36-173%
460-00-4	Bromofluorobenzene (S)	137%		36-173%

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

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

Report of Analysis

Client Sample ID:	MW6C-ROX-071014		
Lab Sample ID:	MC32041-3	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33077.D	1	07/21/14	AMY	n/a	n/a	MSV1221
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	U J
107-02-8	Acrolein	ND	25	6.0	ug/l	U J
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	U J
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	U J
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	U J
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-071014		
Lab Sample ID:	MC32041-3	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.3

VOA Special List

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

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

Report of Analysis

Client Sample ID:	MW6C-ROX-071014		
Lab Sample ID:	MC32041-3	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	123%		70-130%
2037-26-5	Toluene-D8	96%		70-130%
460-00-4	4-Bromofluorobenzene	100%		70-130%

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

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6C-ROX-071014		
Lab Sample ID:	MC32041-3	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F74795.D	1	07/23/14	WK	07/11/14	OP38921	MSF3295
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	CCV
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	CCV
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	CCV
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	~~0.32~~ 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:	MW6C-ROX-071014		
Lab Sample ID:	MC32041-3	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	U
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	41%		15-110%
4165-62-2	Phenol-d5	28%		15-110%
118-79-6	2,4,6-Tribromophenol	90%		15-110%
4165-60-0	Nitrobenzene-d5	73%		30-130%
321-60-8	2-Fluorobiphenyl	75%		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	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6C-ROX-071014		
Lab Sample ID:	MC32041-3	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R39484.D	1	07/24/14	WK	07/11/14	OP38922	MSR1454
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.055	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	0.034	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	0.035	0.11	0.030	ug/l	J
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	0.037	0.11	0.026	ug/l	J
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	0.035	0.11	0.034	ug/l	J
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	74%		30-130%
321-60-8	2-Fluorobiphenyl	69%		30-130%
1718-51-0	Terphenyl-d14	76%		30-130%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6C-ROX-071014		
Lab Sample ID:	MC32041-3	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39584.D	1	07/16/14	NK	07/15/14	OP38972	GBK1285
Run #2							

	Initial Volume	Final Volume
Run #1	35.5 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0060	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	132%		36-173%
460-00-4	Bromofluorobenzene (S)	127%		36-173%

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

Report of Analysis

Client Sample ID:	MW6B-ROX-071014		
Lab Sample ID:	MC32041-4	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33078.D	1	07/21/14	AMY	n/a	n/a	MSV1221
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	U
107-02-8	Acrolein	ND	25	6.0	ug/l	U
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	U
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	U
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	U
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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Report of Analysis

Client Sample ID:	MW6B-ROX-071014		
Lab Sample ID:	MC32041-4	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	UJ
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	5.4	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	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	UJ
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6B-ROX-071014		
Lab Sample ID:	MC32041-4	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	127%		70-130%
2037-26-5	Toluene-D8	95%		70-130%
460-00-4	4-Bromofluorobenzene	101%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW6B-ROX-071014		
Lab Sample ID:	MC32041-4	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F74796.D	1	07/23/14	WK	07/11/14	OP38921	MSF3295
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	UJ
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	UJ
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	UJ
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.6	0.19	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

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

Report of Analysis

Client Sample ID:	MW6B-ROX-071014		
Lab Sample ID:	MC32041-4	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	U5
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	40%		15-110%
4165-62-2	Phenol-d5	27%		15-110%
118-79-6	2,4,6-Tribromophenol	90%		15-110%
4165-60-0	Nitrobenzene-d5	72%		30-130%
321-60-8	2-Fluorobiphenyl	75%		30-130%
1718-51-0	Terphenyl-d14	80%		30-130%

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

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6B-ROX-071014		
Lab Sample ID:	MC32041-4	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R39485.D	1	07/24/14	WK	07/11/14	OP38922	MSR1454
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.055	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	ND	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	75%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	73%		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:	MW6B-ROX-071014		
Lab Sample ID:	MC32041-4	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39585.D	1	07/16/14	NK	07/15/14	OP38972	GBK1285
Run #2							

	Initial Volume	Final Volume
Run #1	37.1 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	123%		36-173%
460-00-4	Bromofluorobenzene (S)	120%		36-173%

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:	MW6A-ROX-071014-EB		
Lab Sample ID:	MC32041-5	Date Sampled:	07/10/14
Matrix:	AQ - Equipment Blank	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33061.D	1	07/21/14	AMY	n/a	n/a	MSV1221
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

Report of Analysis

Client Sample ID:	MW6A-ROX-071014-EB		
Lab Sample ID:	MC32041-5	Date Sampled:	07/10/14
Matrix:	AQ - Equipment Blank	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	MW6A-ROX-071014-EB		
Lab Sample ID:	MC32041-5	Date Sampled:	07/10/14
Matrix:	AQ - Equipment Blank	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	119%		70-130%
2037-26-5	Toluene-D8	96%		70-130%
460-00-4	4-Bromofluorobenzene	100%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW6A-ROX-071014-EB		
Lab Sample ID:	MC32041-5	Date Sampled:	07/10/14
Matrix:	AQ - Equipment Blank	Date Received:	07/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F74797.D	1	07/23/14	WK	07/11/14	OP38921	MSF3295
Run #2							

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

ABN Special List

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

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

Report of Analysis

Client Sample ID:	MW6A-ROX-071014-EB		
Lab Sample ID:	MC32041-5	Date Sampled:	07/10/14
Matrix:	AQ - Equipment Blank	Date Received:	07/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

ABN Special List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	30%		15-110%
4165-62-2	Phenol-d5	20%		15-110%
118-79-6	2,4,6-Tribromophenol	77%		15-110%
4165-60-0	Nitrobenzene-d5	56%		30-130%
321-60-8	2-Fluorobiphenyl	59%		30-130%
1718-51-0	Terphenyl-d14	80%		30-130%

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

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

Report of Analysis

Client Sample ID:	MW6A-ROX-071014-EB		
Lab Sample ID:	MC32041-5	Date Sampled:	07/10/14
Matrix:	AQ - Equipment Blank	Date Received:	07/11/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R39486.D	1	07/24/14	WK	07/11/14	OP38922	MSR1454
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.073	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.052	ug/l	
120-12-7	Anthracene	ND	0.11	0.097	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.053	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.030	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.053	0.033	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.028	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.041	ug/l	
218-01-9	Chrysene	ND	0.11	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.034	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.043	ug/l	
86-73-7	Fluorene	ND	0.11	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.032	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.078	ug/l	
85-01-8	Phenanthrene	ND	0.053	0.013	ug/l	
129-00-0	Pyrene	ND	0.11	0.040	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	58%		30-130%
321-60-8	2-Fluorobiphenyl	54%		30-130%
1718-51-0	Terphenyl-d14	73%		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-071014-EB		
Lab Sample ID:	MC32041-5	Date Sampled:	07/10/14
Matrix:	AQ - Equipment Blank	Date Received:	07/11/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL.		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39586.D	1	07/16/14	NK	07/15/14	OP38972	GBK1285
Run #2							

	Initial Volume	Final Volume
Run #1	35.9 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0060	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0059	ug/l	

CAS No.	Surrogate Recoverics	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	132%		36-173%
460-00-4	Bromofluorobenzene (S)	131%		36-173%

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

Report of Analysis

Client Sample ID:	MW6A-ROX-071014		
Lab Sample ID:	MC32041-6	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33079.D	1	07/21/14	AMY	n/a	n/a	MSV1221
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

Report of Analysis

Client Sample ID:	MW6A-ROX-071014		
Lab Sample ID:	MC32041-6	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	UJ
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	14.8	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	UJ
	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:	MW6A-ROX-071014		
Lab Sample ID:	MC32041-6	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	123%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	103%		70-130%

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

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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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-071014		
Lab Sample ID:	MC32041-6	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F74798.D	1	07/23/14	WK	07/11/14	OP38921	MSF3295
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.90	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.61	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	UJ
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	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	ug/l	UJ
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	UJ
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	~~0.26~~	5.4	0.19	ug/l	JB
117-84-0	Di-n-octyl phthalate	ND	5.4	0.31	ug/l	

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

Report of Analysis

Client Sample ID:	MW6A-ROX-071014		
Lab Sample ID:	MC32041-6	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.6

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	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	u5
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	41%		15-110%
4165-62-2	Phenol-d5	28%		15-110%
118-79-6	2,4,6-Tribromophenol	95%		15-110%
4165-60-0	Nitrobenzene-d5	73%		30-130%
321-60-8	2-Fluorobiphenyl	75%		30-130%
1718-51-0	Terphenyl-d14	72%		30-130%

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

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-071014		
Lab Sample ID:	MC32041-6	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R39487.D	1	07/24/14	WK	07/11/14	OP38922	MSR1454
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.075	ug/l	
208-96-8	Acenaphthylene	0.075	0.11	0.054	ug/l	J
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	0.13	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	0.046	0.054	0.014	ug/l	J
129-00-0	Pyrene	ND	0.11	0.042	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	76%		30-130%
321-60-8	2-Fluorobiphenyl	69%		30-130%
1718-51-0	Terphenyl-d14	69%		30-130%

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

Report of Analysis

Client Sample ID:	MW6A-ROX-071014		
Lab Sample ID:	MC32041-6	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39587.D	1	07/16/14	NK	07/15/14	OP38972	GBK1285
Run #2							

	Initial Volume	Final Volume
Run #1	35.7 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0060	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	130%		36-173%
460-00-4	Bromofluorobenzene (S)	117%		36-173%

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

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

Report of Analysis

Client Sample ID:	MW16-ROX-071014		
Lab Sample ID:	MC32041-7	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33080.D	1	07/21/14	AMY	n/a	n/a	MSV1221
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

Report of Analysis

Client Sample ID:	MW16-ROX-071014		
Lab Sample ID:	MC32041-7	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	MW16-ROX-071014		
Lab Sample ID:	MC32041-7	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	126%		70-130%
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	102%		70-130%

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

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

Report of Analysis

4.7

Client Sample ID:	MW16-ROX-071014		
Lab Sample ID:	MC32041-7	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F74799.D	1	07/23/14	WK	07/11/14	OP38921	MSF3295
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.33	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.89	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.60	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	UJ
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.24	ug/l	
	3&4-Methylphenol	ND	11	0.50	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.57	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.4	0.32	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.40	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.51	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.57	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.4	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.60	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.38	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.36	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.27	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.49	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.29	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.28	ug/l	
84-74-2	Di-n-butyl phthalate	~~0.21~~ U	5.4	0.19	ug/l	JB U
117-84-0	Di-n-octyl phthalate	ND	5.4	0.30	ug/l	

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

Report of Analysis

Client Sample ID:	MW16-ROX-071014		
Lab Sample ID:	MC32041-7	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.7

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	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	U
67-72-1	Hexachloroethane	ND	5.4	0.32	ug/l	
78-59-1	Isophorone	ND	5.4	0.48	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.43	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.42	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.43	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.55	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	41%		15-110%
4165-62-2	Phenol-d5	26%		15-110%
118-79-6	2,4,6-Tribromophenol	90%		15-110%
4165-60-0	Nitrobenzene-d5	74%		30-130%
321-60-8	2-Fluorobiphenyl	75%		30-130%
1718-51-0	Terphenyl-d14	82%		30-130%

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

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

Report of Analysis

Client Sample ID:	MW16-ROX-071014		
Lab Sample ID:	MC32041-7	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R39488.D	1	07/24/14	WK	07/11/14	OP38922	MSR1454
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.074	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.053	ug/l	
120-12-7	Anthracene	ND	0.11	0.099	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.034	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.080	ug/l	
85-01-8	Phenanthrene	ND	0.054	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.041	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	78%		30-130%
321-60-8	2-Fluorobiphenyl	66%		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:	MW16-ROX-071014		
Lab Sample ID:	MC32041-7	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/11/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39588.D	1	07/16/14	NK	07/15/14	OP38972	GBK1285
Run #2							

	Initial Volume	Final Volume
Run #1	35.6 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0060	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	126%		36-173%
460-00-4	Bromofluorobenzene (S)	117%		36-173%

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

Report of Analysis

Client Sample ID:	TB-071014-HCL		
Lab Sample ID:	MC32041-8	Date Sampled:	07/10/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33060.D	1	07/21/14	AMY	n/a	n/a	MSV1221
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

Report of Analysis

Client Sample ID:	TB-071014-HCL		
Lab Sample ID:	MC32041-8	Date Sampled:	07/10/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.8

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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	TB-071014-HCL		
Lab Sample ID:	MC32041-8	Date Sampled:	07/10/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	120%		70-130%
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	102%		70-130%

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

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

Report of Analysis

Client Sample ID:	TB-071014-ST		
Lab Sample ID:	MC32041-9	Date Sampled:	07/10/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/11/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39589.D	1	07/16/14	NK	07/15/14	OP38972	GBK1285
Run #2							

	Initial Volume	Final Volume
Run #1	35.9 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0060	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	112%		36-173%
460-00-4	Bromofluorobenzene (S)	105%		36-173%

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

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

New England ACCUTEST LABORATORIES

Custody Documents and Other Forms

Includes the following where applicable:

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

LAB (LOCATION)

☐ SENCO (_____)
☐ CALSCIENCE
☑ OTHER Accutest Cabot 495 Technology Ctr W Marlborough, MA 01752 (508-481-6200)
☐ SPL ☐ Lab Vendor # (_____)

Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

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

Print Bill To Contact Name: Bob Brinton

PO #

INCIDENT # (ENV SERVICES): 0 7 2 1 8 6 4 0

SAP #: 3 4 0 0 6 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 07/10/14

PAGE: 1 of 1

URS CORPORATION

1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110

Elizabeth Kunkel, Wendy Pennington, Bob Brinton, Lindsay Rathbone

314-429-0100 | 314-429-0462

ROXANA

900 South Central Ave; ROXANA

Roxana Quarterly GW / 21602970.03000

B. Koca, C. Williams, L. Cheadle

LAB USE ONLY: MC32041

☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON ELEC-ENG

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES ☐ LEVEL 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C° Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
- Please include "J" values on Reports.
- Please provide sample receipt upon login.

☑ SHELL CONTRACT RATE APPLIES
☐ STATE MANAGEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEVEL DISK

REQUESTED ANALYSIS

FIELD NOTES: TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT	VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270L1	PID (ppm)	Container PID Readings or Laboratory Notes
-1	MW6D-Rox-071014	07/10/14	1015	Water	2			2	2	6	X	X	X	X		
-2	MW6D-Rox-071014-Dup	07/10/14	1015								X	X	X	X		
-3	MW6C-Rox-071014-	07/10/14	1110								X	X	X	X		
-4	MW6B-Rox-071014	07/10/14	1200								X	X	X	X		
-5	MW6A-Rox-071014-EB	07/10/14	1220								X	X	X	X		
-6	MW6A-Rox-071014	07/10/14	1300								X	X	X	X		
-7	MW16-Rox-071014	07/10/14	1555								X	X	X	X		19AA, 4C1,
-8	TB-071014-HCL	07/10/14	00:00							2	X					
-9	TB-071014-ST	07/10/14	00:00						2	2		X				

Relinquished by (Signature)	Received by (Signature)	Date	Time
[signature]	FED EX	07 10 14	1800
FEDX	[signature]	7-11-14	1115

0.4 - 1.2°C

5.1

5

MC32041: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC32041 Client: URS Immediate Client Services Action Required: No

Date / Time Received: 7/11/2014 Delivery Method: Client Service Action Required at Login: No

Project: 900 SOUTH CENTRAL No. Coolers: 2 Airbill #'s:

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

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

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

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

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

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

Comments

5.1

MC32041: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC32041

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC32041-1 Collected: 10-JUL-14 10:15 By: BKCW Received: 11-JUL-14 By: MW6D-ROX-071014						
MC32041-1	SW846 8011	16-JUL-14 20:09	NK	15-JUL-14	MT	V8011SL
MC32041-1	SW846 8260C	21-JUL-14 19:02	AMY			V8260SL+
MC32041-1	SW846 8270D	23-JUL-14 15:17	WK	11-JUL-14	MD	AB8270SL+
MC32041-1	SW846 8270D BY SIM	24-JUL-14 00:33	WK	11-JUL-14	MD	B8270SIMSL
MC32041-2 Collected: 10-JUL-14 10:15 By: BKCW Received: 11-JUL-14 By: MW6D-ROX-071014-DUP						
MC32041-2	SW846 8011	16-JUL-14 20:28	NK	15-JUL-14	MT	V8011SL
MC32041-2	SW846 8260C	21-JUL-14 19:29	AMY			V8260SL+
MC32041-2	SW846 8270D	23-JUL-14 15:41	WK	11-JUL-14	MD	AB8270SL+
MC32041-2	SW846 8270D BY SIM	24-JUL-14 00:58	WK	11-JUL-14	MD	B8270SIMSL
MC32041-3 Collected: 10-JUL-14 11:10 By: BKCW Received: 11-JUL-14 By: MW6C-ROX-071014						
MC32041-3	SW846 8011	16-JUL-14 20:47	NK	15-JUL-14	MT	V8011SL
MC32041-3	SW846 8260C	21-JUL-14 19:54	AMY			V8260SL+
MC32041-3	SW846 8270D	23-JUL-14 16:05	WK	11-JUL-14	MD	AB8270SL+
MC32041-3	SW846 8270D BY SIM	24-JUL-14 01:23	WK	11-JUL-14	MD	B8270SIMSL
MC32041-4 Collected: 10-JUL-14 12:00 By: BKCW Received: 11-JUL-14 By: MW6B-ROX-071014						
MC32041-4	SW846 8011	16-JUL-14 21:07	NK	15-JUL-14	MT	V8011SL
MC32041-4	SW846 8260C	21-JUL-14 20:21	AMY			V8260SL+
MC32041-4	SW846 8270D	23-JUL-14 16:28	WK	11-JUL-14	MD	AB8270SL+
MC32041-4	SW846 8270D BY SIM	24-JUL-14 01:49	WK	11-JUL-14	MD	B8270SIMSL
MC32041-5 Collected: 10-JUL-14 12:20 By: BKCW Received: 11-JUL-14 By: MW6A-ROX-071014-EB						
MC32041-5	SW846 8011	16-JUL-14 21:26	NK	15-JUL-14	MT	V8011SL
MC32041-5	SW846 8260C	21-JUL-14 12:23	AMY			V8260SL+
MC32041-5	SW846 8270D	23-JUL-14 16:52	WK	11-JUL-14	MD	AB8270SL+
MC32041-5	SW846 8270D BY SIM	24-JUL-14 02:14	WK	11-JUL-14	MD	B8270SIMSL

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC32041

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC32041-6 Collected: 10-JUL-14 13:00 By: BKCW Received: 11-JUL-14 By: MW6A-ROX-071014						
MC32041-6	SW846 8011	16-JUL-14 21:45	NK	15-JUL-14	MT	V8011SL
MC32041-6	SW846 8260C	21-JUL-14 20:47	AMY			V8260SL+
MC32041-6	SW846 8270D	23-JUL-14 17:16	WK	11-JUL-14	MD	AB8270SL+
MC32041-6	SW846 8270D BY SIM	24-JUL-14 02:39	WK	11-JUL-14	MD	B8270SIMSL
MC32041-7 Collected: 10-JUL-14 15:55 By: BKCW Received: 11-JUL-14 By: MW16-ROX-071014						
MC32041-7	SW846 8011	16-JUL-14 22:05	NK	15-JUL-14	MT	V8011SL
MC32041-7	SW846 8260C	21-JUL-14 21:14	AMY			V8260SL+
MC32041-7	SW846 8270D	23-JUL-14 17:40	WK	11-JUL-14	MD	AB8270SL+
MC32041-7	SW846 8270D BY SIM	24-JUL-14 03:04	WK	11-JUL-14	MD	B8270SIMSL
MC32041-8 Collected: 10-JUL-14 00:00 By: BKCW Received: 11-JUL-14 By: TB-071014-HCL						
MC32041-8	SW846 8260C	21-JUL-14 11:56	AMY			V8260SL+
MC32041-9 Collected: 10-JUL-14 00:00 By: BKCW Received: 11-JUL-14 By: TB-071014-ST						
MC32041-9	SW846 8011	16-JUL-14 22:24	NK	15-JUL-14	MT	V8011SL

Accutest Internal Chain of Custody

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Received: 07/11/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC32041-1.2	Walk In Ref #22	Marc Tahtamoni	07/11/14 20:03	Retrieve from Storage
MC32041-1.4	VOC Ref #4	Amy Min Yang	07/21/14 11:51	Retrieve from Storage
MC32041-1.4	Amy Min Yang	GCMSV	07/21/14 11:51	Load on Instrument
MC32041-1.4	GCMSV	Amy Min Yang	07/22/14 15:17	Unload from Instrument
MC32041-1.4	Amy Min Yang	VOC Ref #4	07/22/14 15:17	Return to Storage
MC32041-1.6	VOC Ref #4	Marc Tahtamoni	07/15/14 14:35	Retrieve from Storage
MC32041-2.2	Walk In Ref #22	Marc Tahtamoni	07/11/14 20:03	Retrieve from Storage
MC32041-2.3	VOC Ref #4	Amy Min Yang	07/21/14 11:51	Retrieve from Storage
MC32041-2.3	Amy Min Yang	GCMSV	07/21/14 11:51	Load on Instrument
MC32041-2.3	GCMSV	Amy Min Yang	07/22/14 15:17	Unload from Instrument
MC32041-2.3	Amy Min Yang	VOC Ref #4	07/22/14 15:17	Return to Storage
MC32041-2.6	VOC Ref #4	Marc Tahtamoni	07/15/14 14:35	Retrieve from Storage
MC32041-3.1	Walk In Ref #22	Marc Tahtamoni	07/11/14 20:03	Retrieve from Storage
MC32041-3.4	VOC Ref #4	Amy Min Yang	07/21/14 11:51	Retrieve from Storage
MC32041-3.4	Amy Min Yang	GCMSV	07/21/14 11:51	Load on Instrument
MC32041-3.4	GCMSV	Amy Min Yang	07/22/14 15:17	Unload from Instrument
MC32041-3.4	Amy Min Yang	VOC Ref #4	07/22/14 15:17	Return to Storage
MC32041-3.6	VOC Ref #4	Marc Tahtamoni	07/15/14 14:35	Retrieve from Storage
MC32041-4.2	Walk In Ref #22	Marc Tahtamoni	07/11/14 20:03	Retrieve from Storage
MC32041-4.4	VOC Ref #4	Amy Min Yang	07/21/14 11:51	Retrieve from Storage
MC32041-4.4	Amy Min Yang	GCMSV	07/21/14 11:51	Load on Instrument
MC32041-4.4	GCMSV	Amy Min Yang	07/22/14 15:17	Unload from Instrument
MC32041-4.4	Amy Min Yang	VOC Ref #4	07/22/14 15:17	Return to Storage
MC32041-4.5	VOC Ref #4	Marc Tahtamoni	07/15/14 14:35	Retrieve from Storage
MC32041-5.1	Walk In Ref #22	Marc Tahtamoni	07/11/14 20:03	Retrieve from Storage
MC32041-5.3	VOC Ref #4	Amy Min Yang	07/21/14 10:28	Retrieve from Storage
MC32041-5.3	Amy Min Yang	GCMSV	07/21/14 10:28	Load on Instrument
MC32041-5.3	GCMSV	Amy Min Yang	07/22/14 15:17	Unload from Instrument
MC32041-5.3	Amy Min Yang	VOC Ref #4	07/22/14 15:17	Return to Storage
MC32041-5.5	VOC Ref #4	Marc Tahtamoni	07/15/14 14:35	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Received: 07/11/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC32041-6.1	Walk In Ref #22	Marc Tahtamoni	07/11/14 20:03	Retrieve from Storage
MC32041-6.4	VOC Ref #4	Amy Min Yang	07/21/14 11:51	Retrieve from Storage
MC32041-6.4	Amy Min Yang	GCMSV	07/21/14 11:51	Load on Instrument
MC32041-6.4	GCMSV	Amy Min Yang	07/22/14 15:17	Unload from Instrument
MC32041-6.4	Amy Min Yang	VOC Ref #4	07/22/14 15:17	Return to Storage
MC32041-6.6	VOC Ref #4	Marc Tahtamoni	07/15/14 14:35	Retrieve from Storage
MC32041-7.1	Walk In Ref #22	Marc Tahtamoni	07/11/14 20:03	Retrieve from Storage
MC32041-7.4	VOC Ref #4	Amy Min Yang	07/21/14 11:51	Retrieve from Storage
MC32041-7.4	Amy Min Yang	GCMSV	07/21/14 11:51	Load on Instrument
MC32041-7.4	GCMSV	Amy Min Yang	07/22/14 15:17	Unload from Instrument
MC32041-7.4	Amy Min Yang	VOC Ref #4	07/22/14 15:17	Return to Storage
MC32041-7.5	VOC Ref #4	Marc Tahtamoni	07/15/14 14:35	Retrieve from Storage
MC32041-8.1	VOC Ref #4	Amy Min Yang	07/21/14 10:28	Retrieve from Storage
MC32041-8.1	Amy Min Yang	GCMSV	07/21/14 10:28	Load on Instrument
MC32041-8.1	GCMSV	Amy Min Yang	07/22/14 15:17	Unload from Instrument
MC32041-8.1	Amy Min Yang	VOC Ref #4	07/22/14 15:17	Return to Storage
MC32041-9.2	VOC Ref #4	Marc Tahtamoni	07/15/14 14:35	Retrieve from Storage

New England ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1221-MB	V33057.D	1	07/21/14	AMY	n/a	n/a	MSV1221

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

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7, MC32041-8

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1221-MB	V33057.D	1	07/21/14	AMY	n/a	n/a	MSV1221

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

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7, MC32041-8

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

6.1.1

Method Blank Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1221-MB	V33057.D	1	07/21/14	AMY	n/a	n/a	MSV1221

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

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7, MC32041-8

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	113%	70-130%
2037-26-5	Toluene-D8	93%	70-130%
460-00-4	4-Bromofluorobenzene	101%	70-130%

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

6.1.1

Blank Spike Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1221-BS	V33055.D	1	07/21/14	AMY	n/a	n/a	MSV1221

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

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7, MC32041-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	31.2	62* a	70-130
107-02-8	Acrolein	250	262	105	70-130
107-13-1	Acrylonitrile	50	55.5	111	70-130
71-43-2	Benzene	50	53.1	106	70-130
108-86-1	Bromobenzene	50	50.6	101	70-130
74-97-5	Bromochloromethane	50	50.2	100	70-130
75-27-4	Bromodichloromethane	50	55.1	110	70-130
75-25-2	Bromoform	50	50.9	102	70-130
74-83-9	Bromomethane	50	80.5	161* a	70-130
78-93-3	2-Butanone (MEK)	50	38.5	77	70-130
104-51-8	n-Butylbenzene	50	56.0	112	70-130
135-98-8	sec-Butylbenzene	50	58.3	117	70-130
98-06-6	tert-Butylbenzene	50	55.7	111	70-130
75-15-0	Carbon disulfide	50	44.8	90	70-130
56-23-5	Carbon tetrachloride	50	62.8	126	70-130
108-90-7	Chlorobenzene	50	51.0	102	70-130
75-00-3	Chloroethane	50	82.9	166* b	70-130
110-75-8	2-Chloroethyl vinyl ether	50	39.0	78	70-130
67-66-3	Chloroform	50	54.5	109	70-130
74-87-3	Chloromethane	50	83.4	167* a	70-130
95-49-8	o-Chlorotoluene	50	54.9	110	70-130
106-43-4	p-Chlorotoluene	50	55.5	111	70-130
124-48-1	Dibromochloromethane	50	49.1	98	70-130
95-50-1	1,2-Dichlorobenzene	50	52.7	105	70-130
541-73-1	1,3-Dichlorobenzene	50	52.5	105	70-130
106-46-7	1,4-Dichlorobenzene	50	51.4	103	70-130
75-71-8	Dichlorodifluoromethane	50	52.9	106	70-130
75-34-3	1,1-Dichloroethane	50	60.0	120	70-130
107-06-2	1,2-Dichloroethane	50	56.9	114	70-130
75-35-4	1,1-Dichloroethene	50	56.3	113	70-130
156-59-2	cis-1,2-Dichloroethene	50	53.0	106	70-130
156-60-5	trans-1,2-Dichloroethene	50	58.8	118	70-130
78-87-5	1,2-Dichloropropane	50	50.7	101	70-130
142-28-9	1,3-Dichloropropane	50	50.5	101	70-130
594-20-7	2,2-Dichloropropane	50	64.7	129	70-130
563-58-6	1,1-Dichloropropene	50	56.3	113	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1221-BS	V33055.D	1	07/21/14	AMY	n/a	n/a	MSV1221

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

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7, MC32041-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	54.1	108	70-130
10061-02-6	trans-1,3-Dichloropropene	50	59.1	118	70-130
123-91-1	1,4-Dioxane	250	250	100	70-130
97-63-2	Ethyl methacrylate	50	41.5	83	77-137
100-41-4	Ethylbenzene	50	54.8	110	70-130
87-68-3	Hexachlorobutadiene	50	48.1	96	70-130
591-78-6	2-Hexanone	50	36.5	73	70-130
98-82-8	Isopropylbenzene	50	59.7	119	70-130
99-87-6	p-Isopropyltoluene	50	58.1	116	70-130
1634-04-4	Methyl Tert Butyl Ether	50	59.1	118	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	47.3	95	70-130
74-95-3	Methylene bromide	50	49.7	99	70-130
75-09-2	Methylene chloride	50	57.2	114	70-130
91-20-3	Naphthalene	50	41.7	83	70-130
103-65-1	n-Propylbenzene	50	56.9	114	70-130
100-42-5	Styrene	50	50.9	102	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	55.8	112	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	53.3	107	70-130
127-18-4	Tetrachloroethene	50	50.7	101	70-130
108-88-3	Toluene	50	50.0	100	70-130
87-61-6	1,2,3-Trichlorobenzene	50	45.1	90	70-130
120-82-1	1,2,4-Trichlorobenzene	50	46.4	93	70-130
71-55-6	1,1,1-Trichloroethane	50	58.0	116	70-130
79-00-5	1,1,2-Trichloroethane	50	48.8	98	70-130
79-01-6	Trichloroethene	50	48.4	97	70-130
75-69-4	Trichlorofluoromethane	50	70.9	142* [a]	70-130
96-18-4	1,2,3-Trichloropropane	50	55.3	111	70-130
95-63-6	1,2,4-Trimethylbenzene	50	55.7	111	70-130
108-67-8	1,3,5-Trimethylbenzene	50	55.7	111	70-130
108-05-4	Vinyl Acetate	50	55.9	112	70-130
75-01-4	Vinyl chloride	50	77.9	156* [b]	70-130
	m,p-Xylene	100	107	107	70-130
95-47-6	o-Xylene	50	54.7	109	70-130
1330-20-7	Xylene (total)	150	162	108	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1221-BS	V33055.D	1	07/21/14	AMY	n/a	n/a	MSV1221

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

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7, MC32041-8

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	70-130%
2037-26-5	Toluene-D8	92%	70-130%
460-00-4	4-Bromofluorobenzene	94%	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.

6.2.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC31999-1MS	V33065.D	1	07/21/14	AMY	n/a	n/a	MSV1221
MC31999-1MSD	V33066.D	1	07/21/14	AMY	n/a	n/a	MSV1221
MC31999-1	V33062.D	1	07/21/14	AMY	n/a	n/a	MSV1221

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

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7, MC32041-8

CAS No.	Compound	MC31999-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	34.6	69* [a]	50	37.4	75	8	70-130/30
107-02-8	Acrolein	ND		250	271	108	250	282	113	4	70-130/30
107-13-1	Acrylonitrile	ND		50	59.6	119	50	59.0	118	1	70-130/30
71-43-2	Benzene	ND		50	53.6	107	50	52.7	105	2	70-130/30
108-86-1	Bromobenzene	ND		50	48.7	97	50	48.7	97	0	70-130/30
74-97-5	Bromochloromethane	ND		50	50.2	100	50	50.1	100	0	70-130/30
75-27-4	Bromodichloromethane	ND		50	56.6	113	50	54.7	109	3	70-130/30
75-25-2	Bromoform	ND		50	54.1	108	50	51.8	104	4	70-130/30
74-83-9	Bromomethane	ND		50	88.6	177* [a]	50	85.1	170* [a]	4	70-130/30
78-93-3	2-Butanone (MEK)	ND		50	37.0	74	50	37.3	75	1	70-130/30
104-51-8	n-Butylbenzene	ND		50	52.4	105	50	51.2	102	2	70-130/30
135-98-8	sec-Butylbenzene	ND		50	54.5	109	50	53.5	107	2	70-130/30
98-06-6	tert-Butylbenzene	ND		50	51.2	102	50	50.4	101	2	70-130/30
75-15-0	Carbon disulfide	ND		50	46.2	92	50	45.5	91	2	70-130/30
56-23-5	Carbon tetrachloride	ND		50	67.0	134* [a]	50	63.1	126	6	70-130/30
108-90-7	Chlorobenzene	ND		50	51.3	103	50	49.9	100	3	70-130/30
75-00-3	Chloroethane	ND		50	94.7	189* [b]	50	91.5	183* [b]	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	55.5	111	50	54.0	108	3	70-130/30
74-87-3	Chloromethane	ND		50	87.3	175* [a]	50	82.6	165* [a]	6	70-130/30
95-49-8	o-Chlorotoluene	ND		50	53.1	106	50	52.1	104	2	70-130/30
106-43-4	p-Chlorotoluene	ND		50	54.1	108	50	53.4	107	1	70-130/30
124-48-1	Dibromochloromethane	ND		50	51.1	102	50	49.3	99	4	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		50	51.3	103	50	49.9	100	3	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		50	50.7	101	50	49.4	99	3	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		50	49.8	100	50	48.8	98	2	70-130/30
75-71-8	Dichlorodifluoromethane	ND		50	55.7	111	50	56.9	114	2	70-130/30
75-34-3	1,1-Dichloroethane	ND		50	60.6	121	50	60.5	121	0	70-130/30
107-06-2	1,2-Dichloroethane	ND		50	59.3	119	50	57.3	115	3	70-130/30
75-35-4	1,1-Dichloroethene	ND		50	57.6	115	50	57.0	114	1	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50	51.1	102	50	52.0	104	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50	59.9	120	50	59.5	119	1	70-130/30
78-87-5	1,2-Dichloropropane	ND		50	50.9	102	50	49.8	100	2	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	49.6	99	50	49.3	99	1	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	64.8	130	50	62.3	125	4	70-130/30
563-58-6	1,1-Dichloropropene	ND		50	56.5	113	50	55.0	110	3	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC31999-1MS	V33065.D	1	07/21/14	AMY	n/a	n/a	MSV1221
MC31999-1MSD	V33066.D	1	07/21/14	AMY	n/a	n/a	MSV1221
MC31999-1	V33062.D	1	07/21/14	AMY	n/a	n/a	MSV1221

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

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7, MC32041-8

CAS No.	Compound	MC31999-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		50	48.9	98	50	48.9	98	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		50	58.5	117	50	57.6	115	2	70-130/30
123-91-1	1,4-Dioxane	ND		250	250	100	250	243	97	3	70-130/30
97-63-2	Ethyl methacrylate	ND		50	40.6	81	50	40.8	82	0	72-139/30
100-41-4	Ethylbenzene	ND		50	54.7	109	50	52.9	106	3	70-130/30
87-68-3	Hexachlorobutadiene	ND		50	43.0	86	50	43.0	86	0	70-130/30
591-78-6	2-Hexanone	ND		50	38.8	78	50	37.9	76	2	70-130/30
98-82-8	Isopropylbenzene	ND		50	55.3	111	50	55.7	111	1	70-130/30
99-87-6	p-Isopropyltoluene	ND		50	53.8	108	50	53.2	106	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	3.5		50	60.8	115	50	61.8	117	2	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	48.1	96	50	46.3	93	4	70-130/30
74-95-3	Methylene bromide	ND		50	51.4	103	50	49.4	99	4	70-130/30
75-09-2	Methylene chloride	ND		50	58.8	118	50	58.1	116	1	70-130/30
91-20-3	Naphthalene	ND		50	36.8	74	50	39.3	79	7	70-130/30
103-65-1	n-Propylbenzene	ND		50	54.1	108	50	53.3	107	1	70-130/30
100-42-5	Styrene	ND		50	51.6	103	50	49.9	100	3	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	56.1	112	50	54.2	108	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	53.3	107	50	52.2	104	2	70-130/30
127-18-4	Tetrachloroethene	ND		50	49.7	99	50	48.3	97	3	70-130/30
108-88-3	Toluene	ND		50	49.8	100	50	48.1	96	3	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	38.6	77	50	40.9	82	6	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	40.5	81	50	41.9	84	3	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		50	57.8	116	50	55.2	110	5	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50	49.4	99	50	47.8	96	3	70-130/30
79-01-6	Trichloroethene	ND		50	48.7	97	50	47.6	95	2	70-130/30
75-69-4	Trichlorofluoromethane	ND		50	88.1	176* [a]	50	80.8	162* [a]	9	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		50	55.3	111	50	54.3	109	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		50	52.8	106	50	52.0	104	2	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		50	53.2	106	50	52.0	104	2	70-130/30
108-05-4	Vinyl Acetate	ND		50	56.4	113	50	56.1	112	1	70-130/30
75-01-4	Vinyl chloride	ND		50	84.4	169* [b]	50	82.7	165* [b]	2	70-130/30
	m,p-Xylene	ND		100	108	108	100	104	104	4	70-130/30
95-47-6	o-Xylene	ND		50	53.9	108	50	52.7	105	2	70-130/30
1330-20-7	Xylene (total)	ND		150	162	108	150	157	105	3	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC31999-1MS	V33065.D	1	07/21/14	AMY	n/a	n/a	MSV1221
MC31999-1MSD	V33066.D	1	07/21/14	AMY	n/a	n/a	MSV1221
MC31999-1	V33062.D	1	07/21/14	AMY	n/a	n/a	MSV1221

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

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7, MC32041-8

CAS No.	Surrogate Recoveries	MS	MSD	MC31999-1	Limits
1868-53-7	Dibromofluoromethane	101%	100%	123%	70-130%
2037-26-5	Toluene-D8	93%	91%	93%	70-130%
460-00-4	4-Bromofluorobenzene	93%	95%	101%	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.

* = Outside of Control Limits.

6.3.1

Volatile Internal Standard Area Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSV1221-CC1177	Injection Date:	07/21/14
Lab File ID:	V33055.D	Injection Time:	09:46
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	401863	6.54	508277	7.72	184048	11.07	244887	13.28	79484	3.49
Upper Limit [a]	803726	7.04	1016554	8.22	368096	11.57	489774	13.78	158968	3.99
Lower Limit [b]	200932	6.04	254139	7.22	92024	10.57	122444	12.78	39742	2.99

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1221-BS	401863	6.54	508277	7.72	184048	11.07	244887	13.28	79484	3.49
MSV1221-MB	261400	6.54	352622	7.72	137832	11.07	153595	13.28	66613	3.49
ZZZZZZ	251792	6.54	345190	7.73	136035	11.07	146350	13.28	56539	3.50
ZZZZZZ	224181	6.54	307907	7.73	126393	11.07	137932	13.28	54585	3.49
MC32041-8	247145	6.55	342825	7.73	137598	11.07	145735	13.28	54548	3.50
MC32041-5	232857	6.55	320962	7.73	132249	11.07	141046	13.28	54085	3.50
MC31999-1	245453	6.55	340370	7.73	133722	11.07	142451	13.28	59640	3.50
ZZZZZZ	239403	6.55	421084	7.73	142954	11.07	150830	13.28	53260	3.50
MC31999-1MS	382051	6.54	468165	7.73	171760	11.07	240391	13.28	80781	3.50
MC31999-1MSD	423651	6.54	520451	7.73	187320	11.07	253886	13.28	89238	3.50
MC31990-2MS	628980	6.54	786539	7.73	270930	11.07	386051	13.29	130817	3.50
MC31990-2MSD	532245	6.55	674442	7.73	238491	11.07	322234	13.29	114781	3.50
ZZZZZZ	353028	6.55	496011	7.73	178385	11.07	192723	13.29	85884	3.51
MC31990-2	324944	6.55	446696	7.73	169610	11.07	180998	13.29	81707	3.50
ZZZZZZ	292005	6.55	399118	7.73	150485	11.07	161632	13.29	78470	3.50
ZZZZZZ	267761	6.55	361190	7.73	141603	11.07	150939	13.29	71105	3.50
ZZZZZZ	316441	6.55	397464	7.73	152322	11.07	158016	13.29	87209	3.50
ZZZZZZ	242532	6.54	337194	7.73	136864	11.07	147838	13.29	64160	3.49
MC32041-1	247791	6.55	345214	7.73	135933	11.07	146403	13.29	66260	3.50
MC32041-2	231514	6.54	323287	7.73	130269	11.07	140531	13.29	59277	3.49
MC32041-3	213270	6.54	300029	7.73	122023	11.07	131468	13.29	55721	3.49
MC32041-4	232827	6.55	329910	7.73	132578	11.07	142506	13.29	58381	3.50
MC32041-6	248706	6.55	343424	7.73	133658	11.07	146520	13.28	64230	3.50
MC32041-7	227439	6.54	313942	7.73	122940	11.07	131023	13.28	54322	3.49

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

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

6.4.1

Volatile Surrogate Recovery Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC32041-1	V33075.D	122	94	100
MC32041-2	V33076.D	125	95	100
MC32041-3	V33077.D	123	96	100
MC32041-4	V33078.D	127	95	101
MC32041-5	V33061.D	119	96	100
MC32041-6	V33079.D	123	93	103
MC32041-7	V33080.D	126	94	102
MC32041-8	V33060.D	120	94	102
MC31999-1MS	V33065.D	101	93	93
MC31999-1MSD	V33066.D	100	91	95
MSV1221-BS	V33055.D	98	92	94
MSV1221-MB	V33057.D	113	93	101

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

6.5.1

New England ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38921-MB	X03878.D	1	07/23/14	WK	07/11/14	OP38921	MSX128

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

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7

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	0.24	5.0	0.17	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

Method Blank Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38921-MB	X03878.D	1	07/23/14	WK	07/11/14	OP38921	MSX128

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

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7

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	41%	15-110%
4165-62-2	Phenol-d5	28%	15-110%
118-79-6	2,4,6-Tribromophenol	74%	15-110%
4165-60-0	Nitrobenzene-d5	78%	30-130%
321-60-8	2-Fluorobiphenyl	72%	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	

Method Blank Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38922-MB	R39473.D	1	07/23/14	WK	07/11/14	OP38922	MSR1454

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

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7

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	0.075	0.20	0.074	ug/l	J
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	43%	15-110%
4165-62-2	Phenol-d5	31%	15-110%
118-79-6	2,4,6-Tribromophenol	87%	15-110%
4165-60-0	Nitrobenzene-d5	69%	30-130%
321-60-8	2-Fluorobiphenyl	61%	30-130%
1718-51-0	Terphenyl-d14	76%	30-130%

7.1.2

7

Blank Spike Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38921-BS	X03879.D	1	07/23/14	WK	07/11/14	OP38921	MSX128

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

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	16.1	32	30-130
95-57-8	2-Chlorophenol	50	43.1	86	30-130
59-50-7	4-Chloro-3-methyl phenol	50	44.4	89	30-130
120-83-2	2,4-Dichlorophenol	50	45.5	91	30-130
105-67-9	2,4-Dimethylphenol	50	42.3	85	30-130
51-28-5	2,4-Dinitrophenol	50	14.1	28* a	30-130
534-52-1	4,6-Dinitro-o-cresol	50	22.4	45	30-130
95-48-7	2-Methylphenol	50	38.3	77	30-130
	3&4-Methylphenol	100	69.2	69	30-130
88-75-5	2-Nitrophenol	50	46.0	92	30-130
100-02-7	4-Nitrophenol	50	17.9	36	30-130
87-86-5	Pentachlorophenol	50	38.2	76	30-130
108-95-2	Phenol	50	21.5	43	30-130
95-95-4	2,4,5-Trichlorophenol	50	48.3	97	30-130
88-06-2	2,4,6-Trichlorophenol	50	47.6	95	30-130
62-53-3	Aniline	50	33.3	67	40-140
101-55-3	4-Bromophenyl phenyl ether	50	51.3	103	40-140
85-68-7	Butyl benzyl phthalate	50	48.7	97	40-140
100-51-6	Benzyl Alcohol	50	33.6	67	40-140
91-58-7	2-Chloronaphthalene	50	45.0	90	40-140
106-47-8	4-Chloroaniline	50	41.9	84	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	44.7	89	40-140
111-44-4	bis(2-Chloroethyl)ether	50	45.5	91	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	43.9	88	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	47.5	95	40-140
122-66-7	1,2-Diphenylhydrazine	50	47.6	95	40-140
121-14-2	2,4-Dinitrotoluene	50	50.9	102	40-140
606-20-2	2,6-Dinitrotoluene	50	50.9	102	40-140
91-94-1	3,3'-Dichlorobenzidine	50	46.9	94	40-140
132-64-9	Dibenzofuran	50	42.2	84	40-140
84-74-2	Di-n-butyl phthalate	50	45.0	90	40-140
117-84-0	Di-n-octyl phthalate	50	55.7	111	40-140
84-66-2	Diethyl phthalate	50	49.1	98	40-140
131-11-3	Dimethyl phthalate	50	49.2	98	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	52.7	105	40-140
118-74-1	Hexachlorobenzene	50	50.0	100	40-140

* = Outside of Control Limits.

7.2.1

Blank Spike Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38921-BS	X03879.D	1	07/23/14	WK	07/11/14	OP38921	MSX128

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

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	18.8	38* a	40-140
67-72-1	Hexachloroethane	50	33.6	67	40-140
78-59-1	Isophorone	50	41.7	83	40-140
88-74-4	2-Nitroaniline	50	50.1	100	40-140
99-09-2	3-Nitroaniline	50	45.4	91	40-140
100-01-6	4-Nitroaniline	50	43.9	88	40-140
98-95-3	Nitrobenzene	50	45.9	92	40-140
62-75-9	n-Nitrosodimethylamine	50	23.1	46	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	46.7	93	40-140
86-30-6	N-Nitrosodiphenylamine	50	44.2	88	40-140
110-86-1	Pyridine	50	21.3	43	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	49%	15-110%
4165-62-2	Phenol-d5	33%	15-110%
118-79-6	2,4,6-Tribromophenol	91%	15-110%
4165-60-0	Nitrobenzene-d5	87%	30-130%
321-60-8	2-Fluorobiphenyl	82%	30-130%
1718-51-0	Terphenyl-d14	88%	30-130%

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

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38922-BS	R39474.D	1	07/23/14	WK	07/11/14	OP38922	MSR1454

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

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	41.7	83	40-140
208-96-8	Acenaphthylene	50	37.1	74	40-140
120-12-7	Anthracene	50	42.9	86	40-140
56-55-3	Benzo(a)anthracene	50	47.1	94	40-140
50-32-8	Benzo(a)pyrene	50	48.2	96	40-140
205-99-2	Benzo(b)fluoranthene	50	50.0	100	40-140
191-24-2	Benzo(g,h,i)perylene	50	51.4	103	40-140
207-08-9	Benzo(k)fluoranthene	50	49.8	100	40-140
218-01-9	Chrysene	50	43.6	87	40-140
53-70-3	Dibenzo(a,h)anthracene	50	52.3	105	40-140
206-44-0	Fluoranthene	50	42.8	86	40-140
86-73-7	Fluorene	50	48.6	97	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	53.2	106	40-140
90-12-0	1-Methylnaphthalene	50	43.2	86	40-140
91-57-6	2-Methylnaphthalene	50	42.4	85	40-140
85-01-8	Phenanthrene	50	42.4	85	40-140
129-00-0	Pyrene	50	41.7	83	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	47%	15-110%
4165-62-2	Phenol-d5	37%	15-110%
118-79-6	2,4,6-Tribromophenol	88%	15-110%
4165-60-0	Nitrobenzene-d5	77%	30-130%
321-60-8	2-Fluorobiphenyl	66%	30-130%
1718-51-0	Terphenyl-d14	76%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38921-MS	X03880.D	1	07/23/14	WK	07/11/14	OP38921	MSX128
OP38921-MSD	X03881.D	1	07/23/14	WK	07/11/14	OP38921	MSX128
MC31999-1	X03882.D	1	07/23/14	WK	07/11/14	OP38921	MSX128

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

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7

7.3.1

CAS No.	Compound	MC31999-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		55.6	23.1	42	55.6	22.4	40	3	30-130/20
95-57-8	2-Chlorophenol	ND		55.6	45.1	81	55.6	45.8	82	2	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		55.6	48.5	87	55.6	45.6	82	6	30-130/20
120-83-2	2,4-Dichlorophenol	ND		55.6	48.5	87	55.6	47.2	85	3	30-130/20
105-67-9	2,4-Dimethylphenol	ND		55.6	48.0	86	55.6	46.8	84	3	30-130/20
51-28-5	2,4-Dinitrophenol	ND		55.6	25.3	46	55.6	27.1	49	7	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		55.6	35.7	64	55.6	35.9	65	1	30-130/20
95-48-7	2-Methylphenol	ND		55.6	40.9	74	55.6	40.5	73	1	30-130/20
	3&4-Methylphenol	ND		111	72.7	65	111	74.3	67	2	30-130/20
88-75-5	2-Nitrophenol	ND		55.6	48.4	87	55.6	47.6	86	2	30-130/20
100-02-7	4-Nitrophenol	ND		55.6	21.2	38	55.6	22.0	40	4	30-130/20
87-86-5	Pentachlorophenol	ND		55.6	46.4	84	55.6	44.3	80	5	30-130/20
108-95-2	Phenol	ND		55.6	22.5	41	55.6	23.0	41	2	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		55.6	54.5	98	55.6	49.6	89	9	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		55.6	51.3	92	55.6	49.7	89	3	30-130/20
62-53-3	Aniline	ND		55.6	35.5	64	55.6	32.3	58	9	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		55.6	57.5	104	55.6	54.8	99	5	40-140/20
85-68-7	Butyl benzyl phthalate	ND		55.6	53.5	96	55.6	49.8	90	7	40-140/20
100-51-6	Benzyl Alcohol	ND		55.6	33.8	61	55.6	35.7	64	5	40-140/20
91-58-7	2-Chloronaphthalene	ND		55.6	50.3	91	55.6	49.3	89	2	40-140/20
106-47-8	4-Chloroaniline	ND		55.6	47.4	85	55.6	40.9	74	15	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		55.6	47.2	85	55.6	45.6	82	3	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		55.6	47.7	86	55.6	46.5	84	3	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		55.6	46.9	84	55.6	46.1	83	2	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		55.6	54.2	98	55.6	50.1	90	8	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		55.6	53.4	96	55.6	46.7	84	13	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		55.6	57.2	103	55.6	52.1	94	9	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		55.6	55.9	101	55.6	52.9	95	6	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		55.6	44.1	79	55.6	32.9	59	29* [a]	40-140/20
132-64-9	Dibenzofuran	ND		55.6	47.1	85	55.6	44.0	79	7	40-140/20
84-74-2	Di-n-butyl phthalate	1.6	JB	55.6	50.7	88	55.6	49.2	86	3	40-140/20
117-84-0	Di-n-octyl phthalate	ND		55.6	62.3	112	55.6	59.2	107	5	40-140/20
84-66-2	Diethyl phthalate	ND		55.6	54.7	98	55.6	50.6	91	8	40-140/20
131-11-3	Dimethyl phthalate	ND		55.6	55.5	100	55.6	51.6	93	7	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		55.6	58.2	105	55.6	54.8	99	6	40-140/20
118-74-1	Hexachlorobenzene	ND		55.6	57.5	104	55.6	53.7	97	7	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38921-MS	X03880.D	1	07/23/14	WK	07/11/14	OP38921	MSX128
OP38921-MSD	X03881.D	1	07/23/14	WK	07/11/14	OP38921	MSX128
MC31999-1	X03882.D	1	07/23/14	WK	07/11/14	OP38921	MSX128

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

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7

CAS No.	Compound	MC31999-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		55.6	23.3	42	55.6	24.1	43	3	40-140/20
67-72-1	Hexachloroethane	ND		55.6	46.4	84	55.6	47.4	85	2	40-140/20
78-59-1	Isophorone	ND		55.6	44.6	80	55.6	42.5	77	5	40-140/20
88-74-4	2-Nitroaniline	ND		55.6	56.3	101	55.6	51.8	93	8	40-140/20
99-09-2	3-Nitroaniline	ND		55.6	51.5	93	55.6	47.2	85	9	40-140/20
100-01-6	4-Nitroaniline	ND		55.6	48.2	87	55.6	44.2	80	9	40-140/20
98-95-3	Nitrobenzene	ND		55.6	48.5	87	55.6	47.0	85	3	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		55.6	26.6	48	55.6	27.1	49	2	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		55.6	49.3	89	55.6	47.8	86	3	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		55.6	49.9	90	55.6	47.4	85	5	40-140/20
110-86-1	Pyridine	ND		55.6	24.2	44	55.6	22.5	41	7	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC31999-1	Limits
367-12-4	2-Fluorophenol	45%	46%	48%	15-110%
4165-62-2	Phenol-d5	32%	32%	32%	15-110%
118-79-6	2,4,6-Tribromophenol	91%	84%	89%	15-110%
4165-60-0	Nitrobenzene-d5	83%	80%	86%	30-130%
321-60-8	2-Fluorobiphenyl	77%	76%	80%	30-130%
1718-51-0	Terphenyl-d14	87%	79%	88%	30-130%

(a) High RPD due to possible matrix interference and/or sample heterogeneity.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38922-MS	R39475.D	1	07/23/14	WK	07/11/14	OP38922	MSR1454
OP38922-MSD	R39476.D	1	07/23/14	WK	07/11/14	OP38922	MSR1454
MC31999-1	R39477.D	1	07/23/14	WK	07/11/14	OP38922	MSR1454

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

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7

7.3.2

CAS No.	Compound	MC31999-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		55.6	45.9	83	55.6	43.2	78	6	40-140/20
208-96-8	Acenaphthylene	ND		55.6	40.9	74	55.6	38.4	69	6	40-140/20
120-12-7	Anthracene	ND		55.6	47.9	86	55.6	44.3	80	8	40-140/20
56-55-3	Benzo(a)anthracene	ND		55.6	51.4	93	55.6	48.4	87	6	40-140/20
50-32-8	Benzo(a)pyrene	ND		55.6	51.9	93	55.6	48.9	88	6	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		55.6	53.9	97	55.6	49.7	89	8	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		55.6	59.4	107	55.6	53.7	97	10	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		55.6	55.1	99	55.6	50.0	90	10	40-140/20
218-01-9	Chrysene	ND		55.6	48.3	87	55.6	44.9	81	7	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		55.6	60.4	109	55.6	54.8	99	10	40-140/20
206-44-0	Fluoranthene	ND		55.6	45.5	82	55.6	44.6	80	2	40-140/20
86-73-7	Fluorene	ND		55.6	54.2	98	55.6	49.3	89	9	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		55.6	60.3	109	55.6	54.7	98	10	40-140/20
90-12-0	1-Methylnaphthalene	0.085	J	55.6	49.3	89	55.6	46.7	84	5	40-140/20
91-57-6	2-Methylnaphthalene	0.12	JB	55.6	48.3	87	55.6	46.1	83	5	40-140/20
85-01-8	Phenanthrene	ND		55.6	47.3	85	55.6	43.7	79	8	40-140/20
129-00-0	Pyrene	ND		55.6	44.8	81	55.6	43.6	78	3	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC31999-1	Limits
4165-60-0	Nitrobenzene-d5	72%	71%	77%	30-130%
321-60-8	2-Fluorobiphenyl	62%	61%	69%	30-130%
1718-51-0	Terphenyl-d14	72%	70%	75%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSF3295-CC3270	Injection Date:	07/23/14
Lab File ID:	F74792.D	Injection Time:	14:53
Instrument ID:	GCMSF	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	199308	3.35	676153	4.38	477871	5.88	903230	7.14	1167947	9.48	1101409	10.99
Upper Limit [a]	398616	3.85	1352306	4.88	955742	6.38	1806460	7.64	2335894	9.98	2202818	11.49
Lower Limit [b]	99654	2.85	338077	3.88	238936	5.38	451615	6.64	583974	8.98	550705	10.49
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
MC32041-1	245008	3.35	811914	4.38	559997	5.88	1059685	7.13	1239373	9.47	1291276	10.99
MC32041-2	208161	3.35	713811	4.38	505367	5.88	962456	7.13	1169206	9.47	1189285	10.98
MC32041-3	207423	3.35	694439	4.38	492153	5.88	937161	7.13	1172586	9.47	1221818	10.99
MC32041-4	220627	3.35	752943	4.38	539095	5.88	1032519	7.13	1267358	9.47	1292246	10.99
MC32041-5	205930	3.35	703846	4.38	498242	5.88	968735	7.13	1174905	9.47	1196265	10.98
MC32041-6	199661	3.35	692637	4.38	495535	5.88	965092	7.13	1249828	9.48	1321102	10.99
MC32041-7	223232	3.35	750517	4.38	520605	5.88	998497	7.13	1217765	9.47	1232469	10.98
ZZZZZZ	220420	3.35	761153	4.38	531746	5.88	1015977	7.13	1348448	9.48	1349088	10.99
ZZZZZZ	263008	3.35	891689	4.38	579319	5.88	1049460	7.13	1213115	9.48	1235071	10.99
ZZZZZZ	257561	3.35	845483	4.38	571954	5.88	1033095	7.13	1137362	9.47	1117497	10.98
ZZZZZZ	265026	3.35	875512	4.38	586202	5.88	1053223	7.13	1149556	9.47	1125923	10.98
ZZZZZZ	257372	3.35	856873	4.38	579725	5.88	1033988	7.13	1124056	9.47	1084502	10.98
ZZZZZZ	249383	3.35	828106	4.38	555956	5.88	1006167	7.13	1092575	9.47	1071256	10.98
ZZZZZZ	274862	3.35	880506	4.38	581990	5.88	1029595	7.13	1114558	9.47	1145785	10.98
ZZZZZZ	232747	3.35	770941	4.38	515390	5.88	923102	7.13	1011696	9.47	1017844	10.98
ZZZZZZ	240789	3.35	804842	4.38	531373	5.88	961971	7.13	1043840	9.47	1035336	10.98
ZZZZZZ	233267	3.35	785891	4.38	509326	5.88	924860	7.13	997725	9.47	997893	10.98
ZZZZZZ	237861	3.35	786172	4.38	516480	5.87	923920	7.13	977240	9.47	977608	10.98
ZZZZZZ	213437	3.35	714069	4.38	475883	5.88	856293	7.13	945533	9.47	948417	10.98
ZZZZZZ	222729	3.35	741291	4.38	493023	5.87	886145	7.13	985673	9.47	979876	10.98
OP39018-MB	185985	3.35	621010	4.38	418868	5.88	817568	7.13	971431	9.47	1027443	10.98
OP39018-BS	183695	3.35	638229	4.38	435921	5.88	789235	7.13	1069546	9.47	1003094	10.98
OP39018-MS [c]	190286	3.35	671106	4.38	465374	5.88	895210	7.13	1340054	9.48	1507705	11.00
OP39018-MSD [c]	209048	3.35	717817	4.38	504777	5.88	957358	7.13	1371724	9.47	1578890	11.00
MC32193-2	223240	3.35	754787	4.38	511412	5.87	970556	7.13	1377180	9.48	1577099	11.00
ZZZZZZ	234800	3.35	788507	4.38	544720	5.88	1017749	7.13	1365903	9.47	1595125	11.00

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

Semivolatile Internal Standard Area Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSF3295-CC3270	Injection Date:	07/23/14
Lab File ID:	F74792.D	Injection Time:	14:53
Instrument ID:	GCMSF	Method:	SW846 8270D

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Elevated RL due to dilution required for matrix interference.

7.4.1

7

Semivolatile Internal Standard Area Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSR1454-CC1401	Injection Date:	07/23/14
Lab File ID:	R39472.D	Injection Time:	20:20
Instrument ID:	GCMSR	Method:	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	111885	5.13	471555	6.23	373778	7.78	840982	9.05	1100940	11.59	1876857	13.26
Upper Limit [a]	223770	5.63	943110	6.73	747556	8.28	1681964	9.55	2201880	12.09	3753714	13.76
Lower Limit [b]	55943	4.63	235778	5.73	186889	7.28	420491	8.55	550470	11.09	938429	12.76
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP38922-MB	203969	5.13	831907	6.23	613540	7.78	1248589	9.05	1444848	11.58	2385159	13.26
OP38922-BS	149354	5.13	640201	6.23	507660	7.78	1118192	9.06	1364150	11.59	2276167	13.27
OP38922-MS	102952	5.13	448036	6.23	361574	7.78	820212	9.05	1073671	11.59	1871400	13.26
OP38922-MSD	164665	5.13	704208	6.23	543535	7.78	1162857	9.06	1376968	11.59	2297612	13.27
MC31999-1	137591	5.13	584304	6.23	446522	7.78	957589	9.05	1201513	11.58	2071725	13.26
ZZZZZZ	264417[c]	5.13	1032893[c]	6.23	721229	7.78	1397477	9.05	1528025	11.59	2514567	13.26
ZZZZZZ	214642	5.13	854757	6.23	609266	7.78	1198616	9.05	1324511	11.58	2164446	13.26
ZZZZZZ	220582	5.13	860991	6.23	611802	7.77	1226248	9.05	1385934	11.58	2296432	13.26
ZZZZZZ	159177	5.13	650534	6.23	489753	7.78	1050886	9.05	1269183	11.58	2165721	13.26
MC32041-1	170550	5.13	685708	6.23	491266	7.78	1023927	9.05	1256031	11.58	2131126	13.26
MC32041-2	160227	5.13	647203	6.23	467923	7.77	960385	9.05	1133550	11.58	1909492	13.26
MC32041-3	151414	5.13	622988	6.23	453799	7.77	939250	9.05	1115040	11.58	1863303	13.26
MC32041-4	153505	5.13	629353	6.23	451817	7.77	940738	9.05	1144722	11.58	1952727	13.26
MC32041-5	168629	5.13	685842	6.23	513717	7.77	1069140	9.05	1261158	11.58	2141830	13.26
MC32041-6	137938	5.13	562926	6.23	407765	7.78	867391	9.05	1035982	11.59	1776443	13.27
MC32041-7	155663	5.13	629599	6.23	475581	7.77	1011741	9.05	1232154	11.58	2104986	13.26

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.Sample results confirmed by reanalysis.

7.4.2

Semivolatile Internal Standard Area Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSX128-CC106	Injection Date:	07/23/14
Lab File ID:	X03856.D	Injection Time:	07:52
Instrument ID:	GCMSX	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	288726	3.61	1086265	4.65	590468	6.17	934953	7.45	763927	9.90	626735	11.50
Upper Limit [a]	577452	4.11	2172530	5.15	1180936	6.67	1869906	7.95	1527854	10.40	1253470	12.00
Lower Limit [b]	144363	3.11	543133	4.15	295234	5.67	467477	6.95	381964	9.40	313368	11.00
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP39049-MB	342567	3.61	1286522	4.65	704429	6.17	1083321	7.45	838821	9.90	657950	11.51
OP39049-BS	341521	3.61	1307837	4.65	704827	6.17	1082163	7.45	826063	9.90	706012	11.50
ZZZZZZ	346754	3.61	1302854	4.65	696262	6.17	1043727	7.45	760262	9.89	660460	11.50
ZZZZZZ	421114	3.61	1565082	4.65	783797	6.17	1113815	7.45	774016	9.90	626772	11.50
ZZZZZZ	363683	3.61	1331467	4.65	702634	6.17	1016912	7.45	732400	9.90	677547	11.50
ZZZZZZ	402153	3.61	1503744	4.65	801100	6.17	1191386	7.45	841647	9.90	717594	11.50
ZZZZZZ	414790	3.61	1524267	4.65	815827	6.17	1164203	7.45	793848	9.90	682768	11.50
ZZZZZZ	364406	3.61	1326016	4.66	670166	6.18	968032	7.48	703345	9.95	329857	11.56
ZZZZZZ	304210	3.61	1091518	4.66	610223	6.18	939614	7.46	667477	9.93	482746	11.54
OP39068-MB	320944	3.61	1211592	4.65	654332	6.17	974664	7.45	700372	9.90	557491	11.50
OP39068-BS	341032	3.61	1272191	4.66	664286	6.17	991387	7.45	757620	9.90	656765	11.51
MC31912-11	404131	3.61	1508914	4.65	795818	6.17	1134936	7.45	769168	9.90	653002	11.51
ZZZZZZ	288015	3.61	1053416	4.65	567765	6.17	851431	7.46	613595	9.92	514920	11.53
ZZZZZZ	326906	3.61	1203848	4.65	641074	6.17	899501	7.45	619501	9.90	542189	11.51
ZZZZZZ	297153	3.61	1115393	4.65	591339	6.17	874907	7.45	691778	9.90	564880	11.51
ZZZZZZ	357971	3.61	1360364	4.65	744115	6.17	1078946	7.45	732379	9.90	617831	11.51
ZZZZZZ	323736	3.61	1185044	4.65	613596	6.17	913714	7.45	652889	9.92	574461	11.53
OP38921-MB	358380	3.61	1335687	4.65	720023	6.17	1099567	7.45	861200	9.90	738847	11.51
OP38921-BS	405544	3.61	1512423	4.66	800420	6.18	1245543	7.46	1001453	9.91	836638	11.51
OP38921-MS	341989	3.61	1258212	4.66	675188	6.18	1053166	7.46	859950	9.91	702124	11.51
OP38921-MSD	401881	3.61	1501540	4.66	776521	6.18	1182420	7.45	979189	9.91	792303	11.51
MC31999-1	362228	3.61	1365593	4.65	742579	6.17	1107693	7.45	901617	9.90	765021	11.51
ZZZZZZ	363500	3.61	1347057	4.65	741168	6.17	1142957	7.45	906541	9.90	772685	11.51
ZZZZZZ	324610	3.61	1190647	4.65	654115	6.17	1007812	7.45	800117	9.90	667205	11.50
ZZZZZZ	356707	3.61	1325349	4.65	719700	6.17	1094677	7.45	881887	9.90	737719	11.50
ZZZZZZ	363441	3.61	1346762	4.65	715448	6.17	1085320	7.45	853114	9.90	727295	11.50

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.

7.4.3

Semivolatile Internal Standard Area Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSX128-CC106	Injection Date:	07/23/14
Lab File ID:	X03856.D	Injection Time:	07:52
Instrument ID:	GCMSX	Method:	SW846 8270D

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

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

7.4.3

Semivolatile Surrogate Recovery Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC32041-1	F74793.D	40	26	84	68	73	78
MC32041-2	F74794.D	42	29	95	73	75	87
MC32041-3	F74795.D	41	28	90	73	75	83
MC32041-4	F74796.D	40	27	90	72	75	80
MC32041-5	F74797.D	30	20	77	56	59	80
MC32041-6	F74798.D	41	28	95	73	75	72
MC32041-7	F74799.D	41	26	90	74	75	82
OP38921-BS	X03879.D	49	33	91	87	82	88
OP38921-MB	X03878.D	41	28	74	78	72	85
OP38921-MS	X03880.D	45	32	91	83	77	87
OP38921-MSD	X03881.D	46	32	84	80	76	79

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: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC32041-1	R39482.D	69	65	70
MC32041-2	R39483.D	74	69	79
MC32041-3	R39484.D	74	69	76
MC32041-4	R39485.D	75	68	73
MC32041-5	R39486.D	58	54	73
MC32041-6	R39487.D	76	69	69
MC32041-7	R39488.D	78	66	74
OP38922-BS	R39474.D	77	66	76
OP38922-MB	R39473.D	69	61	76
OP38922-MS	R39475.D	72	62	72
OP38922-MSD	R39476.D	71	61	70

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

7.5.2

New England ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

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: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38972-MB	BK39569A.D	1	07/16/14	NK	07/15/14	OP38972	GBK1285

The QC reported here applies to the following samples: Method: SW846 8011

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7, MC32041-9

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	158%	36-173%
460-00-4	Bromofluorobenzene (S)	148%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38972-BS	BK39570A.D	1	07/16/14	NK	07/15/14	OP38972	GBK1285

The QC reported here applies to the following samples: Method: SW846 8011

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7, MC32041-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.090	127	60-140
106-93-4	1,2-Dibromoethane	0.071	0.088	124	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	139%	36-173%
460-00-4	Bromofluorobenzene (S)	124%	36-173%

8.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38972-MS	BK39571A.D	1	07/16/14	NK	07/15/14	OP38972	GBK1285
OP38972-MSD	BK39572A.D	1	07/16/14	NK	07/15/14	OP38972	GBK1285
MC32000-12	BK39573A.D	1	07/16/14	NK	07/15/14	OP38972	GBK1285

The QC reported here applies to the following samples: Method: SW846 8011

MC32041-1, MC32041-2, MC32041-3, MC32041-4, MC32041-5, MC32041-6, MC32041-7, MC32041-9

CAS No.	Compound	MC32000-12 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.0679	0.079	116	0.0681	0.074	109	7	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.0679	0.094	138	0.0681	0.089	131	5	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC32000-12	Limits
460-00-4	Bromofluorobenzene (S)	141%	117%	134%	36-173%
460-00-4	Bromofluorobenzene (S)	134%	108%	131%	36-173%

8.3.1

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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]
MC32041-1	BK39582.D	113	102
MC32041-2	BK39583.D	139	137
MC32041-3	BK39584.D	132	127
MC32041-4	BK39585.D	123	120
MC32041-5	BK39586.D	132	131
MC32041-6	BK39587.D	130	117
MC32041-7	BK39588.D	126	117
MC32041-9	BK39589.D	112	105
OP38972-BS	BK39570A.D	139	124
OP38972-MB	BK39569A.D	158	148
OP38972-MS	BK39571A.D	141	134
OP38972-MSD	BK39572A.D	117	108

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	GBK1285-CC1283	Injection Date:	07/16/14
Lab File ID:	BK39568.D	Injection Time:	15:24
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.38	4.41

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP38971-MB	BK39569.D	07/16/14	15:59	4.38	4.41
OP38972-MB	BK39569A.D	07/16/14	15:59	4.38	4.41
OP38972-BS	BK39570A.D	07/16/14	16:18	4.39	4.41
OP38971-BS	BK39570.D	07/16/14	16:18	4.39	4.41
OP38972-MS	BK39571A.D	07/16/14	16:37	4.39	4.41
OP38971-MS	BK39571.D	07/16/14	16:37	4.39	4.41
OP38971-MSD	BK39572.D	07/16/14	16:57	4.39	4.41
OP38972-MSD	BK39572A.D	07/16/14	16:57	4.39	4.41
MC32064-4	BK39573.D	07/16/14	17:16	4.39	4.41
MC32000-12	BK39573A.D	07/16/14	17:16	4.39	4.41
ZZZZZZ	BK39574.D	07/16/14	17:35	4.39	4.41
ZZZZZZ	BK39575.D	07/16/14	17:54	4.39	4.41
ZZZZZZ	BK39576.D	07/16/14	18:13	4.39	4.41
ZZZZZZ	BK39577.D	07/16/14	18:33	4.39	4.41
ZZZZZZ	BK39578.D	07/16/14	18:52	4.39	4.41

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: MC32041
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	GBK1285-CC1283	Injection Date:	07/16/14
Lab File ID:	BK39579.D	Injection Time:	19:11
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.39	4.41

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BK39580.D	07/16/14	19:30	4.39	4.41
ZZZZZZ	BK39581.D	07/16/14	19:50	4.39	4.42
MC32041-1	BK39582.D	07/16/14	20:09	4.39	4.42
MC32041-2	BK39583.D	07/16/14	20:28	4.39	4.41
MC32041-3	BK39584.D	07/16/14	20:47	4.39	4.42
MC32041-4	BK39585.D	07/16/14	21:07	4.39	4.41
MC32041-5	BK39586.D	07/16/14	21:26	4.39	4.41
MC32041-6	BK39587.D	07/16/14	21:45	4.39	4.41
MC32041-7	BK39588.D	07/16/14	22:05	4.39	4.41
MC32041-9	BK39589.D	07/16/14	22:24	4.39	4.42

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 – 3rd Quarter 2014 Data Review

Laboratory SDG: MC32070

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 7/29/2014

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

Sample Identification	Sample Identification
P54-ROX-071114	MW24-ROX-071114
MW3-ROX-071114-EB	MW3-ROX-071114
ROST4C-ROX-071114	TB-071114-HCL
TB-071114-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, and phenanthrene was 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, initial calibration verification for dichlorodifluoromethane exceeded 30 percent difference (%D). Also, the continuing calibration standard for chloroethane exceeded 40 percent difference (%D).

The cooler receipt form indicated that one of one cooler was received by the laboratory at a temperature of 0.8ºC, which is outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
MW3-ROX-071114-EB	PAHs	Phenanthrene	0.030 µg/L
OP38939-MB	SVOCs	Di-n-butyl phthalate	0.26 µg/L
OP38940-MB	PAHs	Phenanthrene	0.038 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
P54-ROX-071114	SVOCs	Di-n-butyl phthalate	-	**U**
P54-ROX-071114	PAHs	Phenanthrene	-	**U**
MW3-ROX-071114	SVOCs	Di-n-butyl phthalate	-	**U**
MW3-ROX-071114	PAHs	Phenanthrene	-	**U**
ROST4C-ROX-071114	SVOCs	Di-n-butyl phthalate	-	**U**
ROST4C-ROX-071114	PAHs	Phenanthrene	0.12 µg/L	**U**

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV1223-BS	VOCs	Bromomethane	**149**	70-130
MSV1223-BS	VOCs	Chloroethane	**158**	70-130
MSV1223-BS	VOCs	Chloromethane	**150**	70-130
MSV1223-BS	VOCs	Trichlorofluoromethane	**131**	70-130
MSV1223-BS	VOCs	Vinyl chloride	**143**	70-130
OP38939-BS	SVOCs	4-Nitrophenol	**26**	30-130
OP38939-BS	SVOCs	Hexachlorocyclopentadiene	**25**	40-140
OP38939-BS	SVOCs	Pyridine	**39**	40-140

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. MW3-ROX-071114-EB and the trip blank are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
P54-ROX-071114	SVOCs	4-Nitrophenol	**UJ**
P54-ROX-071114	SVOCs	Hexachlorocyclopentadiene	**UJ**
P54-ROX-071114	SVOCs	Pyridine	**UJ**
MW24-ROX-071114	SVOCs	4-Nitrophenol	**UJ**
MW24-ROX-071114	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW24-ROX-071114	SVOCs	Pyridine	**UJ**
MW3-ROX-071114	SVOCs	4-Nitrophenol	**UJ**
MW3-ROX-071114	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW3-ROX-071114	SVOCs	Pyridine	**UJ**
ROST4C-ROX-071114	SVOCs	4-Nitrophenol	**UJ**
ROST4C-ROX-071114	SVOCs	Hexachlorocyclopentadiene	**UJ**
ROST4C-ROX-071114	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?

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

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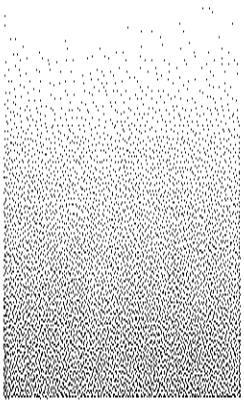
07/28/14





Technical Report for

Shell Oil

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana,

Accutest Job Number: MC32070

Sampling Date: 07/10/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: **90**

Reviewed on 7/29/14

Reza Pand
Lab Director

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

Client Service contact: Matthew Morrell 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

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Sample Summary

Shell Oil

Job No: MC32070

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC32070-1	07/10/14	09:50	BKCW	07/12/14	AQ	Ground Water	P54-ROX-071114
MC32070-2	07/10/14	10:55	BKCW	07/12/14	AQ	Ground Water	MW24-ROX-071114
MC32070-3	07/10/14	11:05	BKCW	07/12/14	AQ	Equipment Blank	MW3-ROX-071114-EB
MC32070-4	07/10/14	13:30	BKCW	07/12/14	AQ	Ground Water	MW3-ROX-071114
MC32070-5	07/10/14	14:30	BKCW	07/12/14	AQ	Ground Water	ROST4C-ROX-071114
MC32070-6	07/10/14	00:00	BKCW	07/12/14	AQ	Trip Blank Water	TB-071114-HCL
MC32070-7	07/10/14	00:00	BKCW	07/12/14	AQ	Trip Blank Water	TB-071114-ST

ACCUTEST LABORATORIES

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	Job No	MC32070
Site:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central	Report Date	7/28/2014 3:09:42 PM

5 Sample(s) and 2 Trip Blank(s) were collected on 07/10/2014 and were received at Accutest on 07/12/2014 properly preserved, at 0.8 Deg. C and intact. These Samples received an Accutest job number of MC32070. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Sample 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: MSV1223

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32001-5RMS, MC32001-5RMSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Initial calibration verification MSV1177-ICV1177 for dichlorodifluoromethane exceed 30% Difference (response bias high). Associated samples are non-detect for this compound.
- Blank Spike Recovery(s) for Bromomethane, Chloroethane, Chloromethane, Trichlorofluoromethane are outside control limits. Blank Spike meets program technical requirements.
- MC32001-5RMS/MSD Recovery(s) for 2-Chloroethyl vinyl ether, Acrolein, Acrylonitrile, Bromomethane, Chloroethane, Chloromethane, Methyl Tert Butyl Ether, Trichlorofluoromethane, Vinyl Acetate are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Continuing calibration check standard MSV1223-CC1177 for chloroethane exceed 40% Difference (response bias high) Associated samples are non-detect for these compounds.
- RPD(s) for MSD for 2-Chloroethyl vinyl ether are outside control limits for sample MC32001-5RMSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- MSV1223-BS, MC32001-5RMS, MC32001-5RMSD for Vinyl chloride: Outside control limits. Associated samples are non-detect for this compound.

Extractables by GCMS By Method SW846 8270D

Matrix AQ Batch ID: OP38939

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32000-3MS, MC32000-3MSD were used as the QC samples indicated.
- Sample(s) MC32070-1, MC32070-4, MC32070-5 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- OP38939-BS/MS/MSD Recovery(s) for 4-Nitrophenol, Hexachlorocyclopentadiene, Pyridine are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Duplicate Recovery(s) for n-Nitrosodimethylamine 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: OP38940

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32000-7MS, MC32000-7MSD were used as the QC samples indicated.
- Sample(s) MC32070-1, MC32070-3, MC32070-4, MC32070-5 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: OP38973

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32000-13MS, MC32000-13MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC32070).

Summary of Hits

Job Number: MC32070
Account: Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Collected: 07/10/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC32070-1	P54-ROX-071114					
Di-n-butyl phthalate		0.28 JB	5.4	0.19	ug/l	SW846 8270D
1-Methylnaphthalene		0.11 J	0.22	0.054	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		0.13 J	0.22	0.081	ug/l	SW846 8270D BY SIM
Phenanthrene		0.051 JB	0.054	0.014	ug/l	SW846 8270D BY SIM
MC32070-2	MW24-ROX-071114					
No hits reported in this sample.						
MC32070-3	MW3-ROX-071114-EB					
Phenanthrene		0.030 JB	0.050	0.013	ug/l	SW846 8270D BY SIM
MC32070-4	MW3-ROX-071114					
Benzene		0.62	0.50	0.32	ug/l	SW846 8260C
Di-n-butyl phthalate		0.28 JB	5.4	0.19	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		1.3 J	2.2	0.36	ug/l	SW846 8270D
Chrysene		0.028 J	0.10	0.024	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		0.067 J	0.20	0.050	ug/l	SW846 8270D BY SIM
Phenanthrene		0.030 JB	0.050	0.013	ug/l	SW846 8270D BY SIM
MC32070-5	ROST4C-ROX-071114					
Benzene		75.1	0.50	0.32	ug/l	SW846 8260C
Ethylbenzene		59.4	1.0	0.38	ug/l	SW846 8260C
Isopropylbenzene		0.37 J	5.0	0.35	ug/l	SW846 8260C
Naphthalene		10.4	5.0	0.69	ug/l	SW846 8260C
Toluene		42.1	1.0	0.33	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		0.82 J	5.0	0.32	ug/l	SW846 8260C
m,p-Xylene		57.4	1.0	0.93	ug/l	SW846 8260C
o-Xylene		81.5	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		139	1.0	0.36	ug/l	SW846 8260C
Di-n-butyl phthalate		0.31 JB	5.3	0.18	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.70 J	2.1	0.35	ug/l	SW846 8270D
1-Methylnaphthalene		0.21	0.20	0.050	ug/l	SW846 8270D BY SIM
Phenanthrene		0.12 B	0.050	0.013	ug/l	SW846 8270D BY SIM
MC32070-6	TB-071114-HCL					
No hits reported in this sample.						

Summary of Hits

Job Number: MC32070
Account: Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Collected: 07/10/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC32070-7	TB-071114-ST					

No hits reported in this sample.

New England ACCUTEST LABORATORIES

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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P54-ROX-071114		
Lab Sample ID:	MC32070-1	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33144.D	1	07/23/14	AMY	n/a	n/a	MSV1223
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

Report of Analysis

Client Sample ID:	P54-ROX-071114		
Lab Sample ID:	MC32070-1	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	P54-ROX-071114		
Lab Sample ID:	MC32070-1	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	130%		70-130%
2037-26-5	Toluene-D8	95%		70-130%
460-00-4	4-Bromofluorobenzene	101%		70-130%

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

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

Report of Analysis

Client Sample ID:	P54-ROX-071114		
Lab Sample ID:	MC32070-1	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F74866.D	1	07/25/14	WK	07/14/14	OP38939	MSF3297
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.90	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.61	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.58	ug/l	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	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	~~0.28~~ J	5.4	0.19	ug/l	JB
117-84-0	Di-n-octyl phthalate	ND	5.4	0.31	ug/l	

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

Report of Analysis

Client Sample ID:	P54-ROX-071114		
Lab Sample ID:	MC32070-1	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.37	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.36	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	UCT
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	UCT

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	36%		15-110%
4165-62-2	Phenol-d5	22%		15-110%
118-79-6	2,4,6-Tribromophenol	90%		15-110%
4165-60-0	Nitrobenzene-d5	61%		30-130%
321-60-8	2-Fluorobiphenyl	69%		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:	P54-ROX-071114		
Lab Sample ID:	MC32070-1	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90880.D	1	07/25/14	WK	07/14/14	OP38940	MSI3382
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.075	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	0.11	0.22	0.054	ug/l	J
91-57-6	2-Methylnaphthalene	0.13	0.22	0.081	ug/l	J
85-01-8	Phenanthrene	~~0.051~~ 4	0.054	0.014	ug/l	JB 4
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	59%		30-130%
321-60-8	2-Fluorobiphenyl	64%		30-130%
1718-51-0	Terphenyl-d14	81%		30-130%

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

Report of Analysis

Client Sample ID:	P54-ROX-071114		
Lab Sample ID:	MC32070-1	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39596.D	1	07/17/14	NK	07/15/14	OP38973	GBK1285
Run #2							

	Initial Volume	Final Volume
Run #1	36.1 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	80%		36-173%
460-00-4	Bromofluorobenzene (S)	74%		36-173%

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

Report of Analysis

Client Sample ID:	MW24-ROX-071114		
Lab Sample ID:	MC32070-2	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33145.D	1	07/23/14	AMY	n/a	n/a	MSV1223
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

Report of Analysis

Client Sample ID:	MW24-ROX-071114		
Lab Sample ID:	MC32070-2	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	MW24-ROX-071114		
Lab Sample ID:	MC32070-2	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	129%		70-130%
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	100%		70-130%

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

ND = Not detected MDL = Method Detection Limit
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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:	MW24-ROX-071114		
Lab Sample ID:	MC32070-2	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F74867.D	1	07/25/14	WK	07/14/14	OP38939	MSF3297
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.6	ug/l	
95-57-8	2-Chlorophenol	ND	5.3	0.33	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.87	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.42	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.59	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.0	ug/l	
95-48-7	2-Methylphenol	ND	11	0.24	ug/l	
	3&4-Methylphenol	ND	11	0.49	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.0	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.56	ug/l	UJ
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.3	0.32	ug/l	
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:	MW24-ROX-071114		
Lab Sample ID:	MC32070-2	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.2 4

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	LCS
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	LCS

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	37%		15-110%
4165-62-2	Phenol-d5	22%		15-110%
118-79-6	2,4,6-Tribromophenol	80%		15-110%
4165-60-0	Nitrobenzene-d5	64%		30-130%
321-60-8	2-Fluorobiphenyl	70%		30-130%
1718-51-0	Terphenyl-d14	81%		30-130%

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

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

Report of Analysis

Client Sample ID:	MW24-ROX-071114		
Lab Sample ID:	MC32070-2	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90881.D	1	07/25/14	WK	07/14/14	OP38940	MSI3382
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.073	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.052	ug/l	
120-12-7	Anthracene	ND	0.11	0.097	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.053	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.030	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.053	0.033	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.028	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.041	ug/l	
218-01-9	Chrysene	ND	0.11	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.034	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.043	ug/l	
86-73-7	Fluorene	ND	0.11	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.032	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.078	ug/l	
85-01-8	Phenanthrene	ND	0.053	0.013	ug/l	
129-00-0	Pyrene	ND	0.11	0.040	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	61%		30-130%
321-60-8	2-Fluorobiphenyl	67%		30-130%
1718-51-0	Terphenyl-d14	73%		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:	MW24-ROX-071114		
Lab Sample ID:	MC32070-2	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39597.D	1	07/17/14	NK	07/15/14	OP38973	GBK1285
Run #2							

	Initial Volume	Final Volume
Run #1	37.1 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	109%		36-173%
460-00-4	Bromofluorobenzene (S)	110%		36-173%

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

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

Report of Analysis

Client Sample ID:	MW3-ROX-071114-EB		
Lab Sample ID:	MC32070-3	Date Sampled:	07/10/14
Matrix:	AQ - Equipment Blank	Date Received:	07/12/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33143.D	1	07/23/14	AMY	n/a	n/a	MSV1223
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

Report of Analysis

Client Sample ID:	MW3-ROX-071114-EB		
Lab Sample ID:	MC32070-3	Date Sampled:	07/10/14
Matrix:	AQ - Equipment Blank	Date Received:	07/12/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	MW3-ROX-071114-EB		
Lab Sample ID:	MC32070-3	Date Sampled:	07/10/14
Matrix:	AQ - Equipment Blank	Date Received:	07/12/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	126%		70-130%
2037-26-5	Toluene-D8	95%		70-130%
460-00-4	4-Bromofluorobenzene	103%		70-130%

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

ND = Not detected MDL = Method Detection Limit
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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-071114-EB		
Lab Sample ID:	MC32070-3	Date Sampled:	07/10/14
Matrix:	AQ - Equipment Blank	Date Received:	07/12/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F74868.D	1	07/25/14	WK	07/14/14	OP38939	MSF3297
Run #2							

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

ABN Special List

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

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Report of Analysis

Client Sample ID:	MW3-ROX-071114-EB		
Lab Sample ID:	MC32070-3	Date Sampled:	07/10/14
Matrix:	AQ - Equipment Blank	Date Received:	07/12/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

ABN Special List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	41%		15-110%
4165-62-2	Phenol-d5	25%		15-110%
118-79-6	2,4,6-Tribromophenol	84%		15-110%
4165-60-0	Nitrobenzene-d5	70%		30-130%
321-60-8	2-Fluorobiphenyl	77%		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	

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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-071114-EB		
Lab Sample ID:	MC32070-3	Date Sampled:	07/10/14
Matrix:	AQ - Equipment Blank	Date Received:	07/12/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90885.D	1	07/28/14	MR	07/14/14	OP38940	MSI3383
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.032	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	ug/l	
85-01-8	Phenanthrene	0.030	0.050	0.013	ug/l	JB
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	70%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	77%		30-130%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW3-ROX-071114-EB		
Lab Sample ID:	MC32070-3	Date Sampled:	07/10/14
Matrix:	AQ - Equipment Blank	Date Received:	07/12/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39598.D	1	07/17/14	NK	07/15/14	OP38973	GBK1285
Run #2							

	Initial Volume	Final Volume
Run #1	36.9 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	103%		36-173%
460-00-4	Bromofluorobenzene (S)	106%		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

Report of Analysis

Client Sample ID:	MW3-ROX-071114		
Lab Sample ID:	MC32070-4	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33146.D	1	07/23/14	AMY	n/a	n/a	MSV1223
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	0.62	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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Report of Analysis

Client Sample ID:	MW3-ROX-071114		
Lab Sample ID:	MC32070-4	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	MW3-ROX-071114		
Lab Sample ID:	MC32070-4	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	102%		70-130%

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

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E = Indicates value exceeds calibration range
J = Indicates 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-071114		
Lab Sample ID:	MC32070-4	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F74869.D	1	07/25/14	WK	07/14/14	OP38939	MSF3297
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.90	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.61	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.58	ug/l	U.J
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	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	~~0.28~~ U	5.4	0.19	ug/l	JB U
117-84-0	Di-n-octyl phthalate	ND	5.4	0.31	ug/l	

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

Report of Analysis

Client Sample ID:	MW3-ROX-071114		
Lab Sample ID:	MC32070-4	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.37	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	1.3	2.2	0.36	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	ud
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	ud

CAS No.	Surrogate Recoverics	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	40%		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	65%		30-130%
321-60-8	2-Fluorobiphenyl	71%		30-130%
1718-51-0	Terphenyl-d14	80%		30-130%

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

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J = Indicates an estimated value
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Report of Analysis

Client Sample ID:	MW3-ROX-071114		
Lab Sample ID:	MC32070-4	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90886.D	1	07/28/14	MR	07/14/14	OP38940	MSI3383
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	0.028	0.10	0.024	ug/l	J
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.032	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	0.067	0.20	0.050	ug/l	J
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	ug/l	
85-01-8	Phenanthrene	0.030	0.050	0.013	ug/l	JB
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	66%		30-130%
321-60-8	2-Fluorobiphenyl	66%		30-130%
1718-51-0	Terphenyl-d14	74%		30-130%

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Report of Analysis

Client Sample ID:	MW3-ROX-071114		
Lab Sample ID:	MC32070-4	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39599.D	1	07/17/14	NK	07/15/14	OP38973	GBK1285
Run #2							

	Initial Volume	Final Volume
Run #1	35.9 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0060	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	122%		36-173%
460-00-4	Bromofluorobenzene (S)	114%		36-173%

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

Report of Analysis

Client Sample ID:	ROST4C-ROX-071114		
Lab Sample ID:	MC32070-5	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33147.D	1	07/23/14	AMY	n/a	n/a	MSV1223
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	75.1	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	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

Report of Analysis

Client Sample ID:	ROST4C-ROX-071114		
Lab Sample ID:	MC32070-5	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	59.4	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	0.37	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	10.4	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	42.1	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	0.82	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	57.4	1.0	0.93	ug/l	
95-47-6	o-Xylene	81.5	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	139	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:	ROST4C-ROX-071114		
Lab Sample ID:	MC32070-5	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	118%		70-130%
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	111%		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

4.5 A

Client Sample ID:	ROST4C-ROX-071114		
Lab Sample ID:	MC32070-5	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F74870.D	1	07/25/14	WK	07/14/14	OP38939	MSF3297
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.6	ug/l	
95-57-8	2-Chlorophenol	ND	5.3	0.33	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.87	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.42	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.59	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.0	ug/l	
95-48-7	2-Methylphenol	ND	11	0.24	ug/l	
	3&4-Methylphenol	ND	11	0.49	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.0	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.56	ug/l	UCT
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.3	0.32	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.39	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.18	ug/l	
62-53-3	Aniline	ND	11	0.67	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.50	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.56	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.4	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.33	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.59	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.30	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.37	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.35	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.25	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.48	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.28	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	~~0.31~~	5.3	0.18	ug/l	JB
117-84-0	Di-n-octyl phthalate	ND	5.3	0.30	ug/l	

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Report of Analysis

Client Sample ID:	ROST4C-ROX-071114		
Lab Sample ID:	MC32070-5	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.70	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	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	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	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	41%		15-110%
4165-62-2	Phenol-d5	23%		15-110%
118-79-6	2,4,6-Tribromophenol	88%		15-110%
4165-60-0	Nitrobenzene-d5	69%		30-130%
321-60-8	2-Fluorobiphenyl	75%		30-130%
1718-51-0	Terphenyl-d14	83%		30-130%

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

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

Report of Analysis

Client Sample ID:	ROST4C-ROX-071114		
Lab Sample ID:	MC32070-5	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90887.D	1	07/28/14	MR	07/14/14	OP38940	MSI3383
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.032	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	0.21	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	ug/l	
85-01-8	Phenanthrene	~~0.12~~ 0.060 J	0.20	0.013	ug/l	B J
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	69%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	75%		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:	ROST4C-ROX-071114		
Lab Sample ID:	MC32070-5	Date Sampled:	07/10/14
Matrix:	AQ - Ground Water	Date Received:	07/12/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39600.D	1	07/17/14	NK	07/15/14	OP38973	GBK1285
Run #2							

	Initial Volume	Final Volume
Run #1	36.6 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	117%		36-173%
460-00-4	Bromofluorobenzene (S)	110%		36-173%

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

Report of Analysis

Client Sample ID:	TB-071114-HCL		
Lab Sample ID:	MC32070-6	Date Sampled:	07/10/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/12/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33141.D	1	07/23/14	AMY	n/a	n/a	MSV1223
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

Report of Analysis

Client Sample ID:	TB-071114-HCL		
Lab Sample ID:	MC32070-6	Date Sampled:	07/10/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/12/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	TB-071114-HCL		
Lab Sample ID:	MC32070-6	Date Sampled:	07/10/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/12/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	121%		70-130%
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	102%		70-130%

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

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

Report of Analysis

Client Sample ID:	TB-071114-ST		
Lab Sample ID:	MC32070-7	Date Sampled:	07/10/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/12/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39602.D	1	07/17/14	NK	07/15/14	OP38973	GBK1285
Run #2							

	Initial Volume	Final Volume
Run #1	36.7 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	114%		36-173%
460-00-4	Bromofluorobenzene (S)	111%		36-173%

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

New England ACCUTEST LABORATORIES

Custody Documents and Other Forms

Includes the following where applicable:

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

LAB (LOCATION)

☐ VENDOR (_____)
☐ CALSCIENCE
☑ OTHER Accutest Labs, 495 Technology Cir W (Marlborough, MA 01752 (508 481-6200)
☐ Lab Vendor # (_____)
☐ SPL (_____)

Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

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

Print Bill To Contact Name: Bob Bitman

PO #

INCIDENT # (ENV SERVICES): 0 7 2 1 0 8 4 0

SAP #: 3 4 0 0 0 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 07/11/14

PAGE: 1 of 1

URS CORPORATION

1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110

Elizabeth Kunkel, Wendy Pennington, Bob Bitman, Lindsay Rathbow

314-429-0100 | 314-429-0462 | bob.bitman@urs.com, elizabeth.kunkel@urs.com, wendy.pennington@urs.com, lindsay.rathbow@urs.com

900 South Central Ave, ROXANA | IL

Roxana Quarterly GW / 21562973 03003

C. Williams, L. Cheadle, R. Koca

LAB USE ONLY: MC32070

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

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☐ LEVEL 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C° Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Reports
* Please provide sample receipt upon login.

☑ UNITS CONTRACT RATE APPLIES
☐ STAGE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEAD DESK

REQUESTED ANALYSIS

FIELD NOTES:
TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	PRESERVATIVE HNO3	PRESERVATIVE H2SO4	PRESERVATIVE NONE	PRESERVATIVE OTHER	NO. OF CONT.	VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	P54-Rox-071114	07/10/14	0950	water	2			2	2	6	X	X	X	X	0	
-2	MW24-Rox-071114	07/10/14	1055								X	X	X	X		
-3	MW3-Rox-071114-EB	07/10/14	1105								X	X	X	X		
-4	MW3-Rox-071114	07/10/14	1330								X	X	X	X		
-5	Rost46-Rox-071114	07/10/14	1430								X	X	X	X		
-6	TB-071114-HCL	07/10/14	00:00							2	X					
-7	TB-071114-ST	07/10/14	00:00						2	2		X				19C, 4D3

Relinquished by (Signature)	Received by (Signature)	Date	Time
[signature]	FED EX 8047 3735 5899	7/11/14	1700
Fed Ex	[signature]	7/12/14	10:00

Cooler Receipt

Nr - 0.8 c

5.1

5

MC32070: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC32070 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 7/12/2014 **Delivery Method:** **Client Service Action Required at Login:** No

Project: 900 SOUTH CENTRAL **No. Coolers:** 1 **Airbill #'s:**

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

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

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

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

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

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

Comments

MC32070: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC32070

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC32070-1 Collected: 10-JUL-14 09:50 By: BKCW Received: 12-JUL-14 By: P54-ROX-071114						
MC32070-1	SW846 8011	17-JUL-14 00:40	NK	15-JUL-14	MT	V8011SL
MC32070-1	SW846 8260C	23-JUL-14 17:45	AMY			V8260SL+
MC32070-1	SW846 8270D	25-JUL-14 01:42	WK	14-JUL-14	BJ	AB8270SL+
MC32070-1	SW846 8270D BY SIM	25-JUL-14 20:46	WK	14-JUL-14	BJ	B8270SIMSL
MC32070-2 Collected: 10-JUL-14 10:55 By: BKCW Received: 12-JUL-14 By: MW24-ROX-071114						
MC32070-2	SW846 8011	17-JUL-14 00:59	NK	15-JUL-14	MT	V8011SL
MC32070-2	SW846 8260C	23-JUL-14 18:10	AMY			V8260SL+
MC32070-2	SW846 8270D	25-JUL-14 02:05	WK	14-JUL-14	BJ	AB8270SL+
MC32070-2	SW846 8270D BY SIM	25-JUL-14 21:08	WK	14-JUL-14	BJ	B8270SIMSL
MC32070-3 Collected: 10-JUL-14 11:05 By: BKCW Received: 12-JUL-14 By: MW3-ROX-071114-EB						
MC32070-3	SW846 8011	17-JUL-14 01:19	NK	15-JUL-14	MT	V8011SL
MC32070-3	SW846 8260C	23-JUL-14 17:19	AMY			V8260SL+
MC32070-3	SW846 8270D	25-JUL-14 02:28	WK	14-JUL-14	BJ	AB8270SL+
MC32070-3	SW846 8270D BY SIM	28-JUL-14 08:46	MR	14-JUL-14	BJ	B8270SIMSL
MC32070-4 Collected: 10-JUL-14 13:30 By: BKCW Received: 12-JUL-14 By: MW3-ROX-071114						
MC32070-4	SW846 8011	17-JUL-14 01:38	NK	15-JUL-14	MT	V8011SL
MC32070-4	SW846 8260C	23-JUL-14 18:36	AMY			V8260SL+
MC32070-4	SW846 8270D	25-JUL-14 02:51	WK	14-JUL-14	BJ	AB8270SL+
MC32070-4	SW846 8270D BY SIM	28-JUL-14 09:08	MR	14-JUL-14	BJ	B8270SIMSL
MC32070-5 Collected: 10-JUL-14 14:30 By: BKCW Received: 12-JUL-14 By: ROST4C-ROX-071114						
MC32070-5	SW846 8011	17-JUL-14 01:57	NK	15-JUL-14	MT	V8011SL
MC32070-5	SW846 8260C	23-JUL-14 19:02	AMY			V8260SL+
MC32070-5	SW846 8270D	25-JUL-14 03:14	WK	14-JUL-14	BJ	AB8270SL+
MC32070-5	SW846 8270D BY SIM	28-JUL-14 09:31	MR	14-JUL-14	BJ	B8270SIMSL

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC32070

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC32070-6 Collected: 10-JUL-14 00:00 By: BKCW Received: 12-JUL-14 By: TB-071114-HCL						
MC32070-6	SW846 8260C	23-JUL-14 16:26	AMY			V8260SL+
MC32070-7 Collected: 10-JUL-14 00:00 By: BKCW Received: 12-JUL-14 By: TB-071114-ST						
MC32070-7	SW846 8011	17-JUL-14 02:36	NK	15-JUL-14	MT	V8011SL

Accutest Internal Chain of Custody

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Received: 07/12/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC32070-1.2	Walk In Ref #22	Alireza Zeighami	07/14/14 07:30	Retrieve from Storage
MC32070-1.2	Alireza Zeighami		07/14/14 16:42	Depleted
MC32070-1.3	VOC Ref #4	Marc Tahtamoni	07/15/14 14:35	Retrieve from Storage
MC32070-1.6	VOC Ref #4	Amy Min Yang	07/23/14 13:45	Retrieve from Storage
MC32070-1.6	Amy Min Yang	GCMSV	07/23/14 13:45	Load on Instrument
MC32070-1.6	GCMSV	Amy Min Yang	07/24/14 16:08	Unload from Instrument
MC32070-1.6	Amy Min Yang	VOC Ref #4	07/24/14 16:08	Return to Storage
MC32070-2.1	Walk In Ref #22	Alireza Zeighami	07/14/14 07:30	Retrieve from Storage
MC32070-2.1	Alireza Zeighami		07/14/14 16:42	Depleted
MC32070-2.4	VOC Ref #4	Marc Tahtamoni	07/15/14 14:35	Retrieve from Storage
MC32070-2.5	VOC Ref #4	Amy Min Yang	07/23/14 13:45	Retrieve from Storage
MC32070-2.5	Amy Min Yang	GCMSV	07/23/14 13:45	Load on Instrument
MC32070-2.5	GCMSV	Amy Min Yang	07/24/14 16:08	Unload from Instrument
MC32070-2.5	Amy Min Yang	VOC Ref #4	07/24/14 16:08	Return to Storage
MC32070-3.1	Walk In Ref #22	Alireza Zeighami	07/14/14 07:30	Retrieve from Storage
MC32070-3.1	Alireza Zeighami		07/14/14 16:42	Depleted
MC32070-3.3	VOC Ref #4	Marc Tahtamoni	07/15/14 14:35	Retrieve from Storage
MC32070-3.5	VOC Ref #4	Amy Min Yang	07/23/14 13:45	Retrieve from Storage
MC32070-3.5	Amy Min Yang	GCMSV	07/23/14 13:45	Load on Instrument
MC32070-3.5	GCMSV	Amy Min Yang	07/24/14 16:08	Unload from Instrument
MC32070-3.5	Amy Min Yang	VOC Ref #4	07/24/14 16:08	Return to Storage
MC32070-4.1	Walk In Ref #22	Alireza Zeighami	07/14/14 07:30	Retrieve from Storage
MC32070-4.1	Alireza Zeighami		07/14/14 16:42	Depleted
MC32070-4.4	VOC Ref #4	Marc Tahtamoni	07/15/14 14:35	Retrieve from Storage
MC32070-4.6	VOC Ref #4	Amy Min Yang	07/23/14 13:45	Retrieve from Storage
MC32070-4.6	Amy Min Yang	GCMSV	07/23/14 13:45	Load on Instrument
MC32070-4.6	GCMSV	Amy Min Yang	07/24/14 16:08	Unload from Instrument
MC32070-4.6	Amy Min Yang	VOC Ref #4	07/24/14 16:08	Return to Storage
MC32070-5.2	Walk In Ref #22	Alireza Zeighami	07/14/14 07:30	Retrieve from Storage
MC32070-5.2	Alireza Zeighami		07/14/14 16:42	Depleted
MC32070-5.4	VOC Ref #4	Marc Tahtamoni	07/15/14 14:35	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Received: 07/12/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC32070-5.6	VOC Ref #4	Amy Min Yang	07/23/14 13:45	Retrieve from Storage
MC32070-5.6	Amy Min Yang	GCMSV	07/23/14 13:45	Load on Instrument
MC32070-5.6	GCMSV	Amy Min Yang	07/24/14 16:08	Unload from Instrument
MC32070-5.6	Amy Min Yang	VOC Ref #4	07/24/14 16:08	Return to Storage
MC32070-6.1	VOC Ref #4	Amy Min Yang	07/23/14 13:45	Retrieve from Storage
MC32070-6.1	Amy Min Yang	GCMSV	07/23/14 13:45	Load on Instrument
MC32070-6.1	GCMSV	Amy Min Yang	07/24/14 16:08	Unload from Instrument
MC32070-6.1	Amy Min Yang	VOC Ref #4	07/24/14 16:08	Return to Storage
MC32070-7.1	VOC Ref #4	Marc Tahtamoni	07/15/14 14:35	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: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1223-MB	V33132.D	1	07/23/14	AMY	n/a	n/a	MSV1223

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

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5, MC32070-6

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1223-MB	V33132.D	1	07/23/14	AMY	n/a	n/a	MSV1223

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

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5, MC32070-6

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

6.1.1

Method Blank Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1223-MB	V33132.D	1	07/23/14	AMY	n/a	n/a	MSV1223

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

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5, MC32070-6

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	124%	70-130%
2037-26-5	Toluene-D8	94%	70-130%
460-00-4	4-Bromofluorobenzene	102%	70-130%

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

Blank Spike Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1223-BS	V33129.D	1	07/23/14	AMY	n/a	n/a	MSV1223

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

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5, MC32070-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	36.1	72	70-130
107-02-8	Acrolein	250	268	107	70-130
107-13-1	Acrylonitrile	50	64.5	129	70-130
71-43-2	Benzene	50	52.3	105	70-130
108-86-1	Bromobenzene	50	51.3	103	70-130
74-97-5	Bromochloromethane	50	52.6	105	70-130
75-27-4	Bromodichloromethane	50	59.3	119	70-130
75-25-2	Bromoform	50	57.2	114	70-130
74-83-9	Bromomethane	50	74.4	149* [a]	70-130
78-93-3	2-Butanone (MEK)	50	43.3	87	70-130
104-51-8	n-Butylbenzene	50	55.8	112	70-130
135-98-8	sec-Butylbenzene	50	56.8	114	70-130
98-06-6	tert-Butylbenzene	50	54.0	108	70-130
75-15-0	Carbon disulfide	50	43.5	87	70-130
56-23-5	Carbon tetrachloride	50	62.5	125	70-130
108-90-7	Chlorobenzene	50	51.1	102	70-130
75-00-3	Chloroethane	50	78.9	158* [a]	70-130
110-75-8	2-Chloroethyl vinyl ether	50	38.6	77	70-130
67-66-3	Chloroform	50	56.9	114	70-130
74-87-3	Chloromethane	50	74.8	150* [a]	70-130
95-49-8	o-Chlorotoluene	50	54.3	109	70-130
106-43-4	p-Chlorotoluene	50	56.2	112	70-130
124-48-1	Dibromochloromethane	50	53.1	106	70-130
95-50-1	1,2-Dichlorobenzene	50	54.2	108	70-130
541-73-1	1,3-Dichlorobenzene	50	52.9	106	70-130
106-46-7	1,4-Dichlorobenzene	50	52.4	105	70-130
75-71-8	Dichlorodifluoromethane	50	39.3	79	70-130
75-34-3	1,1-Dichloroethane	50	60.6	121	70-130
107-06-2	1,2-Dichloroethane	50	61.6	123	70-130
75-35-4	1,1-Dichloroethene	50	53.6	107	70-130
156-59-2	cis-1,2-Dichloroethene	50	53.4	107	70-130
156-60-5	trans-1,2-Dichloroethene	50	57.9	116	70-130
78-87-5	1,2-Dichloropropane	50	52.3	105	70-130
142-28-9	1,3-Dichloropropane	50	52.5	105	70-130
594-20-7	2,2-Dichloropropane	50	63.2	126	70-130
563-58-6	1,1-Dichloropropene	50	54.0	108	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1223-BS	V33129.D	1	07/23/14	AMY	n/a	n/a	MSV1223

6.2.1

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

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5, MC32070-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	55.6	111	70-130
10061-02-6	trans-1,3-Dichloropropene	50	62.2	124	70-130
123-91-1	1,4-Dioxane	250	215	86	70-130
97-63-2	Ethyl methacrylate	50	45.0	90	77-137
100-41-4	Ethylbenzene	50	53.9	108	70-130
87-68-3	Hexachlorobutadiene	50	46.4	93	70-130
591-78-6	2-Hexanone	50	44.6	89	70-130
98-82-8	Isopropylbenzene	50	57.0	114	70-130
99-87-6	p-Isopropyltoluene	50	56.6	113	70-130
1634-04-4	Methyl Tert Butyl Ether	50	61.1	122	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	55.6	111	70-130
74-95-3	Methylene bromide	50	53.9	108	70-130
75-09-2	Methylene chloride	50	58.5	117	70-130
91-20-3	Naphthalene	50	42.1	84	70-130
103-65-1	n-Propylbenzene	50	55.4	111	70-130
100-42-5	Styrene	50	51.8	104	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	57.4	115	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	58.9	118	70-130
127-18-4	Tetrachloroethene	50	47.7	95	70-130
108-88-3	Toluene	50	49.3	99	70-130
87-61-6	1,2,3-Trichlorobenzene	50	44.7	89	70-130
120-82-1	1,2,4-Trichlorobenzene	50	46.0	92	70-130
71-55-6	1,1,1-Trichloroethane	50	56.6	113	70-130
79-00-5	1,1,2-Trichloroethane	50	52.4	105	70-130
79-01-6	Trichloroethene	50	48.6	97	70-130
75-69-4	Trichlorofluoromethane	50	65.7	131* [a]	70-130
96-18-4	1,2,3-Trichloropropane	50	60.3	121	70-130
95-63-6	1,2,4-Trimethylbenzene	50	54.4	109	70-130
108-67-8	1,3,5-Trimethylbenzene	50	54.2	108	70-130
108-05-4	Vinyl Acetate	50	63.0	126	70-130
75-01-4	Vinyl chloride	50	71.4	143* [b]	70-130
	m,p-Xylene	100	106	106	70-130
95-47-6	o-Xylene	50	53.7	107	70-130
1330-20-7	Xylene (total)	150	160	107	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1223-BS	V33129.D	1	07/23/14	AMY	n/a	n/a	MSV1223

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

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5, MC32070-6

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	70-130%
2037-26-5	Toluene-D8	93%	70-130%
460-00-4	4-Bromofluorobenzene	95%	70-130%

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

6.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32001-5RMS	V33137.D	5	07/23/14	AMY	n/a	n/a	MSV1223
MC32001-5RMSD	V33138.D	5	07/23/14	AMY	n/a	n/a	MSV1223
MC32001-5R	V33134.D	1	07/23/14	AMY	n/a	n/a	MSV1223

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

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5, MC32070-6

CAS No.	Compound	MC32001-5R ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	4.1		250	212	83	250	214	84	1	70-130/30
107-02-8	Acrolein	ND		1250	1670	134* [a]	1250	1670	134* [a]	0	70-130/30
107-13-1	Acrylonitrile	ND		250	358	143* [a]	250	359	144* [a]	0	70-130/30
71-43-2	Benzene	ND		250	272	109	250	268	107	1	70-130/30
108-86-1	Bromobenzene	ND		250	255	102	250	260	104	2	70-130/30
74-97-5	Bromochloromethane	ND		250	276	110	250	266	106	4	70-130/30
75-27-4	Bromodichloromethane	ND		250	298	119	250	293	117	2	70-130/30
75-25-2	Bromoform	ND		250	294	118	250	294	118	0	70-130/30
74-83-9	Bromomethane	ND		250	403	161* [a]	250	412	165* [a]	2	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	235	94	250	234	94	0	70-130/30
104-51-8	n-Butylbenzene	ND		250	270	108	250	271	108	0	70-130/30
135-98-8	sec-Butylbenzene	ND		250	276	110	250	277	111	0	70-130/30
98-06-6	tert-Butylbenzene	ND		250	262	105	250	258	103	2	70-130/30
75-15-0	Carbon disulfide	ND		250	233	93	250	231	92	1	70-130/30
56-23-5	Carbon tetrachloride	ND		250	302	121	250	301	120	0	70-130/30
108-90-7	Chlorobenzene	ND		250	262	105	250	259	104	1	70-130/30
75-00-3	Chloroethane	ND		250	413	165* [a]	250	423	169* [a]	2	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	80.6	32* [a]	250	42.5	17* [a]	62* [b]	70-130/30
67-66-3	Chloroform	ND		250	291	116	250	280	112	4	70-130/30
74-87-3	Chloromethane	ND		250	419	168* [a]	250	424	170* [a]	1	70-130/30
95-49-8	o-Chlorotoluene	ND		250	268	107	250	268	107	0	70-130/30
106-43-4	p-Chlorotoluene	ND		250	277	111	250	277	111	0	70-130/30
124-48-1	Dibromochloromethane	ND		250	275	110	250	266	106	3	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	270	108	250	271	108	0	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	266	106	250	266	106	0	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	267	107	250	267	107	0	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	272	109	250	255	102	6	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	322	129	250	312	125	3	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	311	124	250	302	121	3	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	298	119	250	295	118	1	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	280	112	250	273	109	3	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	313	125	250	304	122	3	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	266	106	250	265	106	0	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	276	110	250	274	110	1	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	310	124	250	306	122	1	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	283	113	250	277	111	2	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32001-5RMS	V33137.D	5	07/23/14	AMY	n/a	n/a	MSV1223
MC32001-5RMSD	V33138.D	5	07/23/14	AMY	n/a	n/a	MSV1223
MC32001-5R	V33134.D	1	07/23/14	AMY	n/a	n/a	MSV1223

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

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5, MC32070-6

CAS No.	Compound	MC32001-5R ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	281	112	250	275	110	2	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	324	130	250	321	128	1	70-130/30
123-91-1	1,4-Dioxane	ND		1250	1480	118	1250	1420	114	4	70-130/30
97-63-2	Ethyl methacrylate	ND		250	249	100	250	251	100	1	72-139/30
100-41-4	Ethylbenzene	ND		250	275	110	250	269	108	2	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	221	88	250	222	89	0	70-130/30
591-78-6	2-Hexanone	ND		250	247	99	250	251	100	2	70-130/30
98-82-8	Isopropylbenzene	ND		250	278	111	250	279	112	0	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	272	109	250	272	109	0	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	329	132* [a]	250	340	136* [a]	3	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	297	119	250	301	120	1	70-130/30
74-95-3	Methylene bromide	ND		250	276	110	250	271	108	2	70-130/30
75-09-2	Methylene chloride	ND		250	308	123	250	310	124	1	70-130/30
91-20-3	Naphthalene	ND		250	229	92	250	244	98	6	70-130/30
103-65-1	n-Propylbenzene	ND		250	271	108	250	274	110	1	70-130/30
100-42-5	Styrene	ND		250	265	106	250	265	106	0	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	283	113	250	282	113	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	305	122	250	309	124	1	70-130/30
127-18-4	Tetrachloroethene	ND		250	242	97	250	242	97	0	70-130/30
108-88-3	Toluene	ND		250	250	100	250	248	99	1	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	224	90	250	243	97	8	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	234	94	250	240	96	3	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	276	110	250	269	108	3	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	270	108	250	273	109	1	70-130/30
79-01-6	Trichloroethene	ND		250	248	99	250	243	97	2	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	376	150* [a]	250	367	147* [a]	2	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	314	126	250	318	127	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	267	107	250	268	107	0	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	266	106	250	265	106	0	70-130/30
108-05-4	Vinyl Acetate	ND		250	337	135* [a]	250	331	132* [a]	2	70-130/30
75-01-4	Vinyl chloride	ND		250	392	157* [c]	250	391	156* [c]	0	70-130/30
	m,p-Xylene	ND		500	537	107	500	531	106	1	70-130/30
95-47-6	o-Xylene	ND		250	273	109	250	270	108	1	70-130/30
1330-20-7	Xylene (total)	ND		750	810	108	750	801	107	1	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32001-5RMS	V33137.D	5	07/23/14	AMY	n/a	n/a	MSV1223
MC32001-5RMSD	V33138.D	5	07/23/14	AMY	n/a	n/a	MSV1223
MC32001-5R	V33134.D	1	07/23/14	AMY	n/a	n/a	MSV1223

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

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5, MC32070-6

CAS No.	Surrogate Recoveries	MS	MSD	MC32001-5RLimits	
1868-53-7	Dibromofluoromethane	102%	101%	127%	70-130%
2037-26-5	Toluene-D8	91%	92%	91%	70-130%
460-00-4	4-Bromofluorobenzene	93%	95%	102%	70-130%

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

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSV1223-CC1177	Injection Date:	07/23/14
Lab File ID:	V33124.D	Injection Time:	08:58
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	501691	6.56	642574	7.75	235213	11.08	347706	13.29	98279	3.52
Upper Limit [a]	1003382	7.06	1285148	8.25	470426	11.58	695412	13.79	196558	4.02
Lower Limit [b]	250846	6.06	321287	7.25	117607	10.58	173853	12.79	49140	3.02

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1223-BS	388545	6.56	492695	7.75	182983	11.08	249110	13.30	77743	3.51
MSV1223-MB	293950	6.57	411896	7.75	168409	11.09	179150	13.30	79334	3.51
ZZZZZZ	395277	6.57	558684	7.75	227601	11.09	239838	13.30	108038	3.52
MC32001-5R	411756	6.57	589263	7.75	237758	11.09	243697	13.30	131030	3.52
ZZZZZZ	491524	6.57	612925	7.75	241369	11.09	334171	13.30	127307	3.52
ZZZZZZ	506011	6.57	636184	7.75	247505	11.09	333564	13.30	143523	3.52
MC32001-5RMS	747990	6.58	960703	7.76	351928	11.09	487043	13.30	188454	3.53
MC32001-5RMSD	714190	6.58	897259	7.76	333481	11.09	457687	13.30	187579	3.53
ZZZZZZ	430343	6.58	593495	7.76	236751	11.09	260065	13.30	134447	3.52
MC32070-6	437933	6.58	611789	7.76	248804	11.09	270411	13.30	132440	3.53
ZZZZZZ	387980	6.57	542619	7.76	222540	11.09	244792	13.30	130896	3.52
MC32070-3	383302	6.58	548035	7.76	225296	11.09	245381	13.30	126938	3.53
MC32070-1	359726	6.58	510445	7.76	212278	11.09	228758	13.30	115701	3.52
MC32070-2	378582	6.58	535863	7.76	218216	11.09	236006	13.30	117389	3.52
MC32070-4	509714	6.58	587742	7.76	235300	11.09	252263	13.30	195422	3.53
MC32070-5	447573	6.57	648575	7.75	244834	11.09	275432	13.30	193666	3.52
ZZZZZZ	449195	6.58	664689	7.76	252661	11.09	329984	13.30	145702	3.52
ZZZZZZ	402572	6.57	590441	7.75	221854	11.09	263370	13.30	122076	3.52
ZZZZZZ	428265	6.57	626458	7.75	238835	11.09	276825	13.30	126608	3.52
ZZZZZZ	396344	6.57	598435	7.75	229526	11.09	275172	13.30	115594	3.52

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

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

6.4.1

Volatile Surrogate Recovery Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC32070-1	V33144.D	130	95	101
MC32070-2	V33145.D	129	94	100
MC32070-3	V33143.D	126	95	103
MC32070-4	V33146.D	101	93	102
MC32070-5	V33147.D	118	94	111
MC32070-6	V33141.D	121	93	102
MC32001-5RMS	V33137.D	102	91	93
MC32001-5RMSD	V33138.D	101	92	95
MSV1223-BS	V33129.D	103	93	95
MSV1223-MB	V33132.D	124	94	102

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

6.5.1

New England ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38939-MB	F74861.D	1	07/24/14	WK	07/14/14	OP38939	MSF3297

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

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	0.26	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: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38939-MB	F74861.D	1	07/24/14	WK	07/14/14	OP38939	MSF3297

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

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5

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	37%	15-110%
4165-62-2	Phenol-d5	21%	15-110%
118-79-6	2,4,6-Tribromophenol	82%	15-110%
4165-60-0	Nitrobenzene-d5	63%	30-130%
321-60-8	2-Fluorobiphenyl	68%	30-130%
1718-51-0	Terphenyl-d14	80%	30-130%

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

Method Blank Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38940-MB	I90875.D	1	07/25/14	WK	07/14/14	OP38940	MSI3382

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

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5

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	0.038	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	33%	15-110%
4165-62-2	Phenol-d5	22%	15-110%
118-79-6	2,4,6-Tribromophenol	68%	15-110%
4165-60-0	Nitrobenzene-d5	61%	30-130%
321-60-8	2-Fluorobiphenyl	65%	30-130%
1718-51-0	Terphenyl-d14	74%	30-130%

7.1.2

Blank Spike Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38939-BS	F74862.D	1	07/25/14	WK	07/14/14	OP38939	MSF3297

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

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	21.7	43	30-130
95-57-8	2-Chlorophenol	50	35.2	70	30-130
59-50-7	4-Chloro-3-methyl phenol	50	38.7	77	30-130
120-83-2	2,4-Dichlorophenol	50	43.4	87	30-130
105-67-9	2,4-Dimethylphenol	50	35.1	70	30-130
51-28-5	2,4-Dinitrophenol	50	27.1	54	30-130
534-52-1	4,6-Dinitro-o-cresol	50	35.3	71	30-130
95-48-7	2-Methylphenol	50	31.4	63	30-130
	3&4-Methylphenol	100	57.1	57	30-130
88-75-5	2-Nitrophenol	50	40.4	81	30-130
100-02-7	4-Nitrophenol	50	12.9	26* a	30-130
87-86-5	Pentachlorophenol	50	53.1	106	30-130
108-95-2	Phenol	50	17.0	34	30-130
95-95-4	2,4,5-Trichlorophenol	50	47.7	95	30-130
88-06-2	2,4,6-Trichlorophenol	50	44.8	90	30-130
62-53-3	Aniline	50	26.2	52	40-140
101-55-3	4-Bromophenyl phenyl ether	50	46.7	93	40-140
85-68-7	Butyl benzyl phthalate	50	43.6	87	40-140
100-51-6	Benzyl Alcohol	50	31.6	63	40-140
91-58-7	2-Chloronaphthalene	50	42.2	84	40-140
106-47-8	4-Chloroaniline	50	37.9	76	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	30.8	62	40-140
111-44-4	bis(2-Chloroethyl)ether	50	36.5	73	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	41.1	82	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	41.4	83	40-140
122-66-7	1,2-Diphenylhydrazine	50	40.0	80	40-140
121-14-2	2,4-Dinitrotoluene	50	44.0	88	40-140
606-20-2	2,6-Dinitrotoluene	50	39.6	79	40-140
91-94-1	3,3'-Dichlorobenzidine	50	32.7	65	40-140
132-64-9	Dibenzofuran	50	39.6	79	40-140
84-74-2	Di-n-butyl phthalate	50	44.1	88	40-140
117-84-0	Di-n-octyl phthalate	50	40.7	81	40-140
84-66-2	Diethyl phthalate	50	44.3	89	40-140
131-11-3	Dimethyl phthalate	50	45.7	91	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	44.1	88	40-140
118-74-1	Hexachlorobenzene	50	48.4	97	40-140

* = Outside of Control Limits.

7.2.1

7

Blank Spike Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38939-BS	F74862.D	1	07/25/14	WK	07/14/14	OP38939	MSF3297

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

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	12.3	25* a	40-140
67-72-1	Hexachloroethane	50	22.2	44	40-140
78-59-1	Isophorone	50	36.1	72	40-140
88-74-4	2-Nitroaniline	50	43.0	86	40-140
99-09-2	3-Nitroaniline	50	41.9	84	40-140
100-01-6	4-Nitroaniline	50	40.6	81	40-140
98-95-3	Nitrobenzene	50	36.3	73	40-140
62-75-9	n-Nitrosodimethylamine	50	21.3	43	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	39.3	79	40-140
86-30-6	N-Nitrosodiphenylamine	50	40.6	81	40-140
110-86-1	Pyridine	50	19.3	39* a	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	39%	15-110%
4165-62-2	Phenol-d5	27%	15-110%
118-79-6	2,4,6-Tribromophenol	94%	15-110%
4165-60-0	Nitrobenzene-d5	65%	30-130%
321-60-8	2-Fluorobiphenyl	68%	30-130%
1718-51-0	Terphenyl-d14	77%	30-130%

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

* = Outside of Control Limits.

7.2.1

7

Blank Spike Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38940-BS	I90876.D	1	07/25/14	WK	07/14/14	OP38940	MSI3382

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

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	36.3	73	40-140
208-96-8	Acenaphthylene	50	32.0	64	40-140
120-12-7	Anthracene	50	36.6	73	40-140
56-55-3	Benzo(a)anthracene	50	40.5	81	40-140
50-32-8	Benzo(a)pyrene	50	35.4	71	40-140
205-99-2	Benzo(b)fluoranthene	50	38.9	78	40-140
191-24-2	Benzo(g,h,i)perylene	50	40.4	81	40-140
207-08-9	Benzo(k)fluoranthene	50	35.3	71	40-140
218-01-9	Chrysene	50	38.4	77	40-140
53-70-3	Dibenzo(a,h)anthracene	50	39.3	79	40-140
206-44-0	Fluoranthene	50	36.0	72	40-140
86-73-7	Fluorene	50	38.7	77	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	39.6	79	40-140
90-12-0	1-Methylnaphthalene	50	34.6	69	40-140
91-57-6	2-Methylnaphthalene	50	34.7	69	40-140
85-01-8	Phenanthrene	50	38.0	76	40-140
129-00-0	Pyrene	50	35.0	70	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	35%	15-110%
4165-62-2	Phenol-d5	24%	15-110%
118-79-6	2,4,6-Tribromophenol	79%	15-110%
4165-60-0	Nitrobenzene-d5	62%	30-130%
321-60-8	2-Fluorobiphenyl	64%	30-130%
1718-51-0	Terphenyl-d14	74%	30-130%

* = Outside of Control Limits.

7.2.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38939-MS	F74863.D	1	07/25/14	WK	07/14/14	OP38939	MSF3297
OP38939-MSD	F74864.D	1	07/25/14	WK	07/14/14	OP38939	MSF3297
MC32000-3	F74865.D	1	07/25/14	WK	07/14/14	OP38939	MSF3297

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

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5

7.3.1

7

CAS No.	Compound	MC32000-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	19.9	40	50	20.1	40	1	30-130/20
95-57-8	2-Chlorophenol	ND		50	32.5	65	50	31.3	63	4	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	36.6	73	50	36.1	72	1	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	40.3	81	50	37.6	75	7	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	28.8	58	50	26.6	53	8	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	28.8	58	50	30.3	61	5	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	36.1	72	50	36.9	74	2	30-130/20
95-48-7	2-Methylphenol	ND		50	28.6	57	50	27.4	55	4	30-130/20
	3&4-Methylphenol	ND		100	53.4	53	100	51.9	52	3	30-130/20
88-75-5	2-Nitrophenol	ND		50	37.9	76	50	34.8	70	9	30-130/20
100-02-7	4-Nitrophenol	ND		50	12.7	25* [a]	50	12.9	26* [a]	2	30-130/20
87-86-5	Pentachlorophenol	ND		50	51.2	102	50	51.2	102	0	30-130/20
108-95-2	Phenol	ND		50	15.7	31	50	14.8	30	6	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	44.5	89	50	40.8	82	9	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	41.6	83	50	40.4	81	3	30-130/20
62-53-3	Aniline	ND		50	26.0	52	50	23.1	46	12	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	46.1	92	50	44.2	88	4	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	44.7	89	50	43.0	86	4	40-140/20
100-51-6	Benzyl Alcohol	ND		50	30.4	61	50	26.5	53	14	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	41.5	83	50	38.5	77	8	40-140/20
106-47-8	4-Chloroaniline	ND		50	37.9	76	50	33.6	67	12	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	29.2	58	50	24.8	50	16	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	34.3	69	50	30.6	61	11	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	39.9	80	50	36.6	73	9	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	40.2	80	50	38.8	78	4	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	40.8	82	50	40.0	80	2	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	43.2	86	50	42.9	86	1	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	37.8	76	50	37.1	74	2	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	32.9	66	50	33.8	68	3	40-140/20
132-64-9	Dibenzofuran	ND		50	38.1	76	50	36.1	72	5	40-140/20
84-74-2	Di-n-butyl phthalate	0.33	J	50	44.4	88	50	43.8	87	1	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	41.4	83	50	40.8	82	1	40-140/20
84-66-2	Diethyl phthalate	ND		50	43.9	88	50	43.5	87	1	40-140/20
131-11-3	Dimethyl phthalate	ND		50	44.1	88	50	43.2	86	2	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	44.1	88	50	43.4	87	2	40-140/20
118-74-1	Hexachlorobenzene	ND		50	47.2	94	50	46.1	92	2	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38939-MS	F74863.D	1	07/25/14	WK	07/14/14	OP38939	MSF3297
OP38939-MSD	F74864.D	1	07/25/14	WK	07/14/14	OP38939	MSF3297
MC32000-3	F74865.D	1	07/25/14	WK	07/14/14	OP38939	MSF3297

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

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5

CAS No.	Compound	MC32000-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	12.7	25* [a]	50	11.3	23* [a]	12	40-140/20
67-72-1	Hexachloroethane	ND		50	22.8	46	50	22.0	44	4	40-140/20
78-59-1	Isophorone	ND		50	35.1	70	50	31.5	63	11	40-140/20
88-74-4	2-Nitroaniline	ND		50	42.9	86	50	40.5	81	6	40-140/20
99-09-2	3-Nitroaniline	ND		50	42.7	85	50	41.2	82	4	40-140/20
100-01-6	4-Nitroaniline	ND		50	39.8	80	50	40.3	81	1	40-140/20
98-95-3	Nitrobenzene	ND		50	36.6	73	50	32.1	64	13	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	20.9	42	50	18.4	37* [b]	13	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	39.0	78	50	36.0	72	8	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	39.7	79	50	38.5	77	3	40-140/20
110-86-1	Pyridine	ND		50	19.5	39* [a]	50	17.2	34* [a]	13	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC32000-3	Limits
367-12-4	2-Fluorophenol	36%	36%	37%	15-110%
4165-62-2	Phenol-d5	24%	24%	22%	15-110%
118-79-6	2,4,6-Tribromophenol	86%	94%	80%	15-110%
4165-60-0	Nitrobenzene-d5	63%	61%	62%	30-130%
321-60-8	2-Fluorobiphenyl	63%	63%	65%	30-130%
1718-51-0	Terphenyl-d14	73%	79%	85%	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: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38940-MS	I90877.D	1	07/25/14	WK	07/14/14	OP38940	MSI3382
OP38940-MSD	I90878.D	1	07/25/14	WK	07/14/14	OP38940	MSI3382
MC32000-7	I90879.D	1	07/25/14	WK	07/14/14	OP38940	MSI3382

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

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5

7.3.2

CAS No.	Compound	MC32000-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	35.5	71	50	33.7	67	5	40-140/20
208-96-8	Acenaphthylene	ND		50	31.3	63	50	29.4	59	6	40-140/20
120-12-7	Anthracene	ND		50	36.4	73	50	36.3	73	0	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	40.8	82	50	40.3	81	1	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	35.5	71	50	34.9	70	2	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	37.7	75	50	39.1	78	4	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	40.8	82	50	39.9	80	2	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	37.0	74	50	34.9	70	6	40-140/20
218-01-9	Chrysene	ND		50	38.7	77	50	38.3	77	1	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	39.7	79	50	38.8	78	2	40-140/20
206-44-0	Fluoranthene	ND		50	35.9	72	50	35.7	71	1	40-140/20
86-73-7	Fluorene	ND		50	37.7	75	50	36.9	74	2	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	40.0	80	50	39.1	78	2	40-140/20
90-12-0	1-Methylnaphthalene	0.065	J	50	33.8	67	50	31.3	62	8	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	33.8	68	50	31.2	62	8	40-140/20
85-01-8	Phenanthrene	0.051		50	37.8	75	50	37.5	75	1	40-140/20
129-00-0	Pyrene	ND		50	34.8	70	50	34.8	70	0	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC32000-7	Limits
367-12-4	2-Fluorophenol	33%	32%	33%	15-110%
4165-62-2	Phenol-d5	22%	22%	22%	15-110%
118-79-6	2,4,6-Tribromophenol	77%	83%	73%	15-110%
4165-60-0	Nitrobenzene-d5	60%	59%	60%	30-130%
321-60-8	2-Fluorobiphenyl	60%	61%	63%	30-130%
1718-51-0	Terphenyl-d14	71%	77%	77%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSF3297-CC3270	Injection Date:	07/24/14
Lab File ID:	F74841.D	Injection Time:	16:05
Instrument ID:	GCMSF	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	209556	3.29	694029	4.32	469692	5.81	835048	7.07	1047606	9.40	962636	10.89
Upper Limit [a]	419112	3.79	1388058	4.82	939384	6.31	1670096	7.57	2095212	9.90	1925272	11.39
Lower Limit [b]	104778	2.79	347015	3.82	234846	5.31	417524	6.57	523803	8.90	481318	10.39

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
ZZZZZZ	247083	3.29	854542	4.32	576330	5.81	1066605	7.07	1177089	9.39	1124101	10.89
ZZZZZZ	214107	3.29	714152	4.32	481087	5.81	900541	7.06	1024398	9.39	1006989	10.89
ZZZZZZ	218402	3.29	749013	4.32	506162	5.81	942484	7.06	1083350	9.39	1054865	10.89
ZZZZZZ	211462	3.29	718067	4.32	500149	5.81	912196	7.07	1021818	9.39	1006370	10.89
ZZZZZZ	240154	3.29	826536	4.32	573954	5.82	1065584	7.07	1206054	9.40	1158729	10.89
ZZZZZZ	218483	3.29	777151	4.32	563647	5.82	1045596	7.07	1156236	9.39	1117772	10.89
ZZZZZZ	244884	3.29	859942	4.33	417162	5.86	643622	7.12	1443941	9.41	1509004	10.90
ZZZZZZ	245051	3.29	835762	4.32	584886	5.82	1047862	7.07	1180962	9.40	1232945	10.89
ZZZZZZ	213955	3.29	747786	4.32	504394	5.81	938705	7.07	1125155	9.40	1205728	10.89
OP39079-LB	212918	3.29	711466	4.32	478871	5.81	899219	7.06	1072283	9.39	1120390	10.89
OP39079-MB	212918	3.29	711466	4.32	478871	5.81	899219	7.06	1072283	9.39	1120390	10.89
OP39079-BS	209254	3.29	704240	4.32	479669	5.82	880515	7.07	1124859	9.40	1096898	10.89
ZZZZZZ	209958	3.29	694310	4.32	476277	5.81	887294	7.07	1097238	9.40	1163361	10.89
OP39057-MB	250778	3.29	813862	4.32	536930	5.81	969548	7.06	1095245	9.39	1054840	10.89
OP39057-BS	256627	3.29	853296	4.32	559027	5.81	936502	7.07	1124893	9.40	1020243	10.89
OP39057-MS	280260	3.29	931376	4.32	616339	5.82	1074356	7.07	1221223	9.40	1213659	10.90
OP39057-MSD	267426	3.29	872848	4.32	570042	5.82	967144	7.07	1114849	9.40	1131872	10.90
MC32247-1	278956	3.29	907801	4.32	597436	5.82	1040348	7.07	1098305	9.39	1210898	10.89
ZZZZZZ	261826	3.29	908465	4.33	455333	5.84	917009	7.09	1189167	9.40	1299878	10.90
ZZZZZZ	276531	3.29	898858	4.32	573956	5.81	1014073	7.06	1062278	9.40	1134282	10.89
OP38939-MB	240419	3.29	803248	4.32	545901	5.81	1007338	7.06	1226163	9.40	1361273	10.89
OP38939-BS	248416	3.29	818709	4.32	548453	5.82	975598	7.07	1235209	9.40	1329338	10.90
OP38939-MS	267143	3.29	871514	4.32	582537	5.82	1031889	7.07	1310731	9.40	1371717	10.89
OP38939-MSD	224939	3.29	769662	4.32	512943	5.81	916558	7.07	1188698	9.40	1246473	10.89
MC32000-3	203434	3.29	685819	4.32	468135	5.81	881870	7.06	1062458	9.40	1153555	10.89
MC32070-1	208943	3.29	722156	4.32	489565	5.81	908644	7.07	1119376	9.39	1168784	10.89
MC32070-2	196533	3.29	673354	4.32	456315	5.81	865882	7.06	1075019	9.40	1118623	10.89
MC32070-3	210469	3.29	717299	4.32	488825	5.81	922235	7.06	1112662	9.40	1178289	10.89
MC32070-4	204421	3.29	698745	4.32	478732	5.81	912297	7.06	1123525	9.40	1200863	10.89
MC32070-5	205423	3.29	690733	4.32	475170	5.81	893644	7.06	1068059	9.40	1129496	10.89

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10

7.4.1

Semivolatile Internal Standard Area Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSF3297-CC3270	Injection Date:	07/24/14
Lab File ID:	F74841.D	Injection Time:	16:05
Instrument ID:	GCMSF	Method:	SW846 8270D

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT	IS 3 AREA	IS 3 RT	IS 4 AREA	IS 4 RT	IS 5 AREA	IS 5 RT	IS 6 AREA	IS 6 RT

IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

7.4.1

Semivolatile Internal Standard Area Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSI3382-CC3320	Injection Date:	07/25/14
Lab File ID:	I90855.D	Injection Time:	10:26
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	410867	4.38	830733	5.44	424772	6.98	737131	8.40	449081	11.17	1240591	12.68
Upper Limit [a]	821734	4.88	1661466	5.94	849544	7.48	1474262	8.90	898162	11.67	2481182	13.18
Lower Limit [b]	205434	3.88	415367	4.94	212386	6.48	368566	7.90	224541	10.67	620296	12.18
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP39080-MB	390639	4.38	795208	5.44	407061	6.98	705805	8.40	419646	11.17	1177195	12.68
OP39080-BS	443052	4.38	901469	5.44	456736	6.98	789364	8.40	478104	11.17	1332176	12.68
ZZZZZZ	316411	4.38	646752	5.43	328981	6.98	556394	8.40	341355	11.17	977209	12.68
OP39060-MB	471151	4.38	974146	5.43	505010	6.98	872911	8.40	528918	11.17	1472434	12.68
OP39060-BS	398821	4.38	828664	5.44	428620	6.98	741820	8.40	447068	11.17	1235840	12.68
OP39060-MS	393505	4.38	823066	5.44	424580	6.98	729370	8.40	444656	11.17	1219970	12.68
OP39060-MSD	392224	4.38	816191	5.44	421223	6.98	733076	8.40	444623	11.17	1221701	12.68
MC32236-12	386080	4.38	797420	5.43	408532	6.98	718075	8.40	428502	11.17	1182990	12.68
ZZZZZZ	438767	4.38	907457	5.44	467932	6.98	807143	8.40	489215	11.17	1350564	12.68
ZZZZZZ	429363	4.38	889900	5.43	455881	6.98	792259	8.40	476246	11.17	1307689	12.68
ZZZZZZ	430164	4.38	878015	5.43	451435	6.98	786045	8.40	474500	11.17	1296911	12.68
ZZZZZZ	358286	4.38	734667	5.43	376194	6.98	658022	8.40	390600	11.17	1078415	12.68
ZZZZZZ	382040	4.38	782365	5.43	399207	6.98	700335	8.40	416025	11.17	1151859	12.68
ZZZZZZ	414251	4.38	850662	5.43	438390	6.98	756183	8.40	471488	11.17	1254896	12.68
ZZZZZZ	363391	4.38	752697	5.43	386751	6.98	673058	8.39	406469	11.17	1114186	12.68
ZZZZZZ	427783	4.37	874734	5.43	448879	6.98	781015	8.40	469894	11.17	1279405	12.68
ZZZZZZ	422168	4.38	864130	5.43	445453	6.98	777589	8.40	468244	11.17	1308312	12.68
ZZZZZZ	355064	4.38	704850	5.44	359995	6.99	607958	8.41	420077	11.17	1200792	12.68
ZZZZZZ	439752	4.38	881893	5.44	460827	6.99	769814	8.41	520856	11.17	1482294	12.68
OP38940-MB	382173	4.38	789279	5.43	403821	6.98	705109	8.39	414600	11.16	1157811	12.68
OP38940-BS	400262	4.38	833840	5.44	427148	6.98	740404	8.40	448162	11.17	1244552	12.68
OP38940-MS	463054	4.38	972644	5.44	497900	6.98	861949	8.40	523736	11.17	1442291	12.68
OP38940-MSD	400822	4.38	840174	5.44	427673	6.98	742799	8.40	450781	11.17	1246753	12.68
MC32000-7	365334	4.38	753989	5.43	385461	6.98	676198	8.40	404073	11.16	1113745	12.68
MC32070-1	419175	4.38	865448	5.43	442558	6.98	771259	8.39	463640	11.16	1273175	12.68
MC32070-2	380745	4.38	787713	5.43	400727	6.98	698550	8.40	419737	11.16	1159310	12.68

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

Semivolatile Internal Standard Area Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSI3382-CC3320	Injection Date:	07/25/14
Lab File ID:	I90855.D	Injection Time:	10:26
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

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

7.4.2

Semivolatile Internal Standard Area Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSI3383-CC3320	Injection Date:	07/28/14
Lab File ID:	I90884.D	Injection Time:	08:22
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	680355	4.36	1407590	5.41	750403	6.96	1285689	8.37	790065	11.14	2101925	12.65
Upper Limit [a]	1360710	4.86	2815180	5.91	1500806	7.46	2571378	8.87	1580130	11.64	4203850	13.15
Lower Limit [b]	340178	3.86	703795	4.91	375202	6.46	642845	7.87	395033	10.64	1050963	12.15
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
MC32070-3	723263	4.36	1495016	5.41	780439	6.96	1346857	8.37	818241	11.14	2199313	12.65
MC32070-4	705795	4.36	1468848	5.41	755778	6.96	1298679	8.38	793476	11.14	2157828	12.65
MC32070-5	703545	4.36	1486574	5.41	765716	6.96	1321322	8.37	813855	11.14	2180216	12.66
OP38980-MB	702126	4.36	1472463	5.41	764879	6.96	1314002	8.37	818449	11.14	2180519	12.65
OP38980-BS	688060	4.36	1460725	5.41	753569	6.96	1296030	8.38	806802	11.15	2122316	12.66
OP38980-MS	678303	4.35	1450186	5.41	753072	6.96	1291988	8.38	804237	11.15	2124961	12.66
OP38980-MSD	684269	4.36	1475893	5.41	764948	6.96	1311239	8.38	821423	11.15	2185749	12.66
MC32000-17	600372	4.36	1264502	5.41	661557	6.96	1138416	8.37	692573	11.14	1852131	12.65
ZZZZZZ	664020	4.36	1393852	5.41	733390	6.96	1255433	8.37	773397	11.14	2079327	12.65
ZZZZZZ	656037	4.36	1370237	5.41	704479	6.96	1206114	8.37	750514	11.14	2014630	12.66
ZZZZZZ	649875	4.36	1346489	5.41	699274	6.96	1206057	8.37	749601	11.14	2002239	12.65
ZZZZZZ	695356	4.37	1421944	5.41	736462	6.96	1255873	8.38	730312	11.14	1928967	12.66
OP39111-MB	631539	4.35	1325855	5.41	690169	6.95	1184831	8.37	718530	11.14	1933812	12.65
OP39111-BS	645398	4.36	1371599	5.41	706566	6.96	1219902	8.38	744300	11.15	1979600	12.66
OP39111-MS	637856	4.36	1365416	5.41	707096	6.96	1215544	8.38	752849	11.15	1988604	12.66
OP39111-MSD	611328	4.36	1294518	5.41	672567	6.96	1151628	8.38	706877	11.15	1877664	12.66

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

7.4.3

7

Semivolatile Surrogate Recovery Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC32070-1	F74866.D	36	22	90	61	69	90
MC32070-2	F74867.D	37	22	80	64	70	81
MC32070-3	F74868.D	41	25	84	70	77	84
MC32070-4	F74869.D	40	23	85	65	71	80
MC32070-5	F74870.D	41	23	88	69	75	83
OP38939-BS	F74862.D	39	27	94	65	68	77
OP38939-MB	F74861.D	37	21	82	63	68	80
OP38939-MS	F74863.D	36	24	86	63	63	73
OP38939-MSD	F74864.D	36	24	94	61	63	79

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

Semivolatile Surrogate Recovery Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC32070-1	I90880.D	59	64	81
MC32070-2	I90881.D	61	67	73
MC32070-3	I90885.D	70	68	77
MC32070-4	I90886.D	66	66	74
MC32070-5	I90887.D	69	68	75
OP38940-BS	I90876.D	62	64	74
OP38940-MB	I90875.D	61	65	74
OP38940-MS	I90877.D	60	60	71
OP38940-MSD	I90878.D	59	61	77

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

New England ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38973-MB	BK39591.D	1	07/16/14	NK	07/15/14	OP38973	GBK1285

The QC reported here applies to the following samples: Method: SW846 8011

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5, MC32070-7

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	111%	36-173%
460-00-4	Bromofluorobenzene (S)	110%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38973-BS	BK39592.D	1	07/16/14	NK	07/15/14	OP38973	GBK1285

The QC reported here applies to the following samples: Method: SW846 8011

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5, MC32070-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.080	113	60-140
106-93-4	1,2-Dibromoethane	0.071	0.078	110	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	103%	36-173%
460-00-4	Bromofluorobenzene (S)	97%	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38973-MS	BK39593.D	1	07/16/14	NK	07/15/14	OP38973	GBK1285
OP38973-MSD	BK39594.D	1	07/17/14	NK	07/15/14	OP38973	GBK1285
MC32000-13	BK39595.D	1	07/17/14	NK	07/15/14	OP38973	GBK1285

The QC reported here applies to the following samples: Method: SW846 8011

MC32070-1, MC32070-2, MC32070-3, MC32070-4, MC32070-5, MC32070-7

CAS No.	Compound	MC32000-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.078	110	0.071	0.075	106	4	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.077	108	0.071	0.075	106	3	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC32000-13 Limits	
460-00-4	Bromofluorobenzene (S)	113%	108%	89%	36-173%
460-00-4	Bromofluorobenzene (S)	105%	106%	89%	36-173%

8.3.1

8

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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]
MC32070-1	BK39596.D	80	74
MC32070-2	BK39597.D	109	110
MC32070-3	BK39598.D	103	106
MC32070-4	BK39599.D	122	114
MC32070-5	BK39600.D	117	110
MC32070-7	BK39602.D	114	111
OP38973-BS	BK39592.D	103	97
OP38973-MB	BK39591.D	111	110
OP38973-MS	BK39593.D	113	105
OP38973-MSD	BK39594.D	108	106

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	GBK1285-CC1283	Injection Date:	07/16/14
Lab File ID:	BK39590.D	Injection Time:	22:43
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.39	4.41

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP38973-MB	BK39591.D	07/16/14	23:03	4.39	4.41
OP38973-BS	BK39592.D	07/16/14	23:22	4.39	4.42
OP38973-MS	BK39593.D	07/16/14	23:42	4.39	4.42
OP38973-MSD	BK39594.D	07/17/14	00:01	4.39	4.41
MC32000-13	BK39595.D	07/17/14	00:20	4.39	4.41
MC32070-1	BK39596.D	07/17/14	00:40	4.39	4.42
MC32070-2	BK39597.D	07/17/14	00:59	4.39	4.41
MC32070-3	BK39598.D	07/17/14	01:19	4.39	4.41
MC32070-4	BK39599.D	07/17/14	01:38	4.39	4.41
MC32070-5	BK39600.D	07/17/14	01:57	4.39	4.41

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: MC32070
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	GBK1285-CC1283	Injection Date:	07/17/14
Lab File ID:	BK39601.D	Injection Time:	02:16
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.39	4.41

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC32070-7	BK39602.D	07/17/14	02:36	4.39	4.42
GBK1285-ECC1288	BK39603.D	07/17/14	02:55	4.39	4.41

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 – 3rd Quarter 2014 Data Review

Laboratory SDG: MC32120

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 7/30/2014

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

Sample Identification	Sample Identification
ROST3MW-ROX-071414	MW5-ROX-071414
MW2-ROX-071414	MW22-ROX-071414
TB-071414-HCL	TB-071414-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. VOC and SVOC LCS recoveries were outside evaluation criteria. VOC MS/MSD recoveries were outside evaluation criteria in sample ROST3MW-ROX-071414. Internal standard area recoveries were outside criteria in several samples. Samples MW2-ROX-071414 and MW22-ROX-071414 were diluted due to high levels of VOC target analytes. These issues are addressed further in the appropriate sections below. Additionally, initial calibration verification for dichlorodifluoromethane exceeded 30 percent difference (%D). Also, the continuing calibration standard for several analytes 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
OP38979-MB	SVOCs	Di-n-butyl phthalate	0.33 µg/L
OP38980-MB	PAHs	1-Methylnaphthalene	0.057 µg/L
OP38980-MB	PAHs	Phenanthrene	0.052 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
ROST3MW-ROX-071414	SVOCs	Di-n-butyl phthalate	-	**U**
ROST3MW-ROX-071414	PAHs	Phenanthrene	0.16 µg/L	**U**
MW5-ROX-071414	SVOCs	Di-n-butyl phthalate	-	**U**
MW5-ROX-071414	PAHs	Phenanthrene	0.088 µg/L	**U**
MW2-ROX-071414	SVOCs	Di-n-butyl phthalate	-	**U**
MW2-ROX-071414	PAHs	Phenanthrene	0.17 µg/L	**U**
MW22-ROX-071414	SVOCs	Di-n-butyl phthalate	-	**U**
MW22-ROX-071414	PAHs	Phenanthrene	0.18 µg/L	**U**

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV1225-BS	VOCs	Acrylonitrile	**133**	70-130
MSV1225-BS	VOCs	Bromomethane	**193**	70-130
MSV1225-BS	VOCs	Chloroethane	**210**	70-130
MSV1225-BS	VOCs	Chloromethane	**189**	70-130
MSV1225-BS	VOCs	1,1-Dichloroethene	**135**	70-130
MSV1225-BS	VOCs	trans-1,2-Dichloroethene	**131**	70-130
MSV1225-BS	VOCs	Methyl tert butyl ether	**132**	70-130
MSV1225-BS	VOCs	Methylene chloride	**131**	70-130
MSV1225-BS	VOCs	Trichlorofluoromethane	**168**	70-130
MSV1225-BS	VOCs	Vinyl acetate	**132**	70-130
MSV1225-BS	VOCs	Vinyl chloride	**174**	70-130
OP38979-BS	SVOCs	Hexachlorocyclopentadiene	**39**	40-140

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS MSV1225-BS was also associated with the trip blank. Blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
ROST3MW-ROX-071414	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW5-ROX-071414	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW2-ROX-071414	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW22-ROX-071414	SVOCs	Hexachlorocyclopentadiene	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

Yes, although not requested, sample ROST3MW-ROX-071414 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
ROST3MW-ROX-071414	VOCs	Acrylonitrile	**176/172**	2	70-130/30
ROST3MW-ROX-071414	VOCs	Benzene	**306/205**	**39**	70-130/30
ROST3MW-ROX-071414	VOCs	Bromomethane	**137/136**	0	70-130/30
ROST3MW-ROX-071414	VOCs	Chloroethane	**138/138**	0	70-130/30
ROST3MW-ROX-071414	VOCs	2-Chloroethyl vinyl ether	**7/0**	**200**	70-130/30
ROST3MW-ROX-071414	VOCs	Chloromethane	**133/131**	2	70-130/30
ROST3MW-ROX-071414	VOCs	1,1-Dichloroethene	**140/138**	2	70-130/30
ROST3MW-ROX-071414	VOCs	trans-1,2-Dichloroethene	**139/134**	4	70-130/30
ROST3MW-ROX-071414	VOCs	2,2-Dichloropropane	**138/136**	1	70-130/30
ROST3MW-ROX-071414	VOCs	Isopropylbenzene	**132**/129	2	70-130/30
ROST3MW-ROX-071414	VOCs	Methyl tert butyl ether	**156/153**	2	70-130/30
ROST3MW-ROX-071414	VOCs	Methylene chloride	**134**/130	3	70-130/30
ROST3MW-ROX-071414	VOCs	Vinyl chloride	**139/137**	1	70-130/30

LCS/LCSD recoveries were within evaluation criteria with the exception of analytes listed and qualified as appropriate in Section 5.0 of this data review. No further qualification of data was required.

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

No

Sample ID	Parameter	Analyte	IS Area Recovery	IS Criteria
MW2-ROX-071414	VOCs	Pentafluorobenzene	**1143587**	202016-808062
MW2-ROX-071414	VOCs	1,4-Difluorobenzene	**1377476**	257018-1028070
MW2-ROX-071414	VOCs	Chlorobenzene-d_5	**498634**	98769-395074
MW2-ROX-071414	VOCs	1,4-Dichlorobenzene-d_4	**799272**	127682-510726
MW2-ROX-071414	VOCs	Tert butyl alcohol-d_9	**468647**	43401-173602
MW22-ROX-071414	VOCs	Pentafluorobenzene	**1136706**	202016-808062
MW22-ROX-071414	VOCs	1,4-Difluorobenzene	**2013116**	257018-1028070

Sample ID	Parameter	Analyte	IS Area Recovery	IS Criteria
MW22-ROX-071414	VOCs	Chlorobenzene-d_5	**850560**	98769-395074
MW22-ROX-071414	VOCs	1,4-Dichlorobenzene-d_4	**1163371**	127682-510726
MW22-ROX-071414	VOCs	Tert butyl alcohol-d_9	**414495**	43401-173602
ROST3MW-ROX-071414 MS	VOCs	1,4-Difluorobenzene	**1031451**	257018-1028070
ROST3MW-ROX-071414 MS	VOCs	Tert butyl alcohol-d_9	**199822**	43401-173602
ROST3MW-ROX-071414 MSD	VOCs	Tert butyl alcohol-d_9	**192608**	43401-173602

Analytical data that required qualification based on internal standard data are included in the table below. Analytical data reported as non-detect and associated with IS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Field ID	Parameter	Analyte	Qualification
MW2-ROX-071414	VOCs	Benzene	**J**
MW2-ROX-071414	VOCs	n-Butylbenzene	**J**
MW2-ROX-071414	VOCs	sec-Butylbenzene	**J**
MW2-ROX-071414	VOCs	tert-Butylbenzene	**J**
MW2-ROX-071414	VOCs	Isopropylbenzene	**J**
MW2-ROX-071414	VOCs	p-Isopropyltoluene	**J**
MW2-ROX-071414	VOCs	Naphthalene	**J**
MW2-ROX-071414	VOCs	n-Propylbenzene	**J**
MW2-ROX-071414	VOCs	Toluene	**J**
MW2-ROX-071414	VOCs	1,2,4-Trimethylbenzene	**J**
MW2-ROX-071414	VOCs	1,3,5-Trimethylbenzene	**J**
MW22-ROX-071414	VOCs	2-Butanone (MEK)	**J**
MW22-ROX-071414	VOCs	n-Butylbenzene	**J**
MW22-ROX-071414	VOCs	sec-Butylbenzene	**J**
MW22-ROX-071414	VOCs	tert-Butylbenzene	**J**
MW22-ROX-071414	VOCs	Isopropylbenzene	**J**
MW22-ROX-071414	VOCs	p-Isopropyltoluene	**J**
MW22-ROX-071414	VOCs	Naphthalene	**J**
MW22-ROX-071414	VOCs	n-Propylbenzene	**J**
MW22-ROX-071414	VOCs	1,2,4-Trimethylbenzene	**J**
MW22-ROX-071414	VOCs	1,3,5-Trimethylbenzene	**J**

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

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

Not applicable; analytes were detected in samples that were diluted.

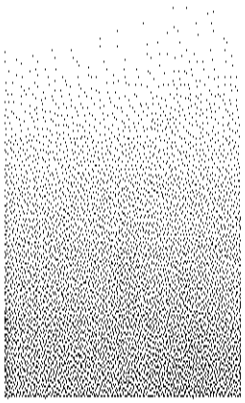
12.0 Additional Qualifications

Were additional qualifications applied?

No

New England ACCUTEST LABORATORIES

07/30/14





Technical Report for

Shell Oil

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana,

Accutest Job Number: MC32120

Sampling Date: 07/14/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: **85**

Reviewed on 7/30/14

Reza Pand
Lab Director

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

Client Service contact: Matthew Morrell 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

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Sample Summary

Shell Oil

Job No: MC32120

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC32120-1	07/14/14	09:30	CWLC	07/15/14	AQ	Ground Water	ROST3MW-ROX-071414
MC32120-2	07/14/14	10:35	CWLC	07/15/14	AQ	Ground Water	MW5-ROX-071414
MC32120-3	07/14/14	12:35	CWLC	07/15/14	AQ	Ground Water	MW2-ROX-071414
MC32120-4	07/14/14	13:45	CWLC	07/15/14	AQ	Ground Water	MW22-ROX-071414
MC32120-5	07/14/14	00:00	CWLC	07/15/14	AQ	Trip Blank Water	TB-071414-HCL
MC32120-6	07/14/14	00:00	CWLC	07/15/14	AQ	Trip Blank Water	TB-071414-ST

ACCUTEST LABORATORIES

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	Job No	MC32120
Site:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central	Report Date	7/29/2014 4:17:53 PM

4 Sample(s) and 2 Trip Blank(s) were collected on 07/14/2014 and were received at Accutest on 07/15/2014 properly preserved, at 2.2 Deg. C and intact. These Samples received an Accutest job number of MC32120. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Sample 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: MSH2253

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32345-12MS, MC32345-12MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix AQ	Batch ID: MSV1225

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32120-1MS, MC32120-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MSV1225-BS Recovery(s) for 1,1-Dichloroethene, Acrylonitrile, Methyl Tert Butyl Ether, Methylene chloride, trans-1,2-Dichloroethene are outside control limits. Blank Spike meets program technical requirements.
- MSV1225-BS Recovery(s) for Bromomethane, Chloroethane, Chloromethane, Trichlorofluoromethane, Vinyl Acetate, Vinyl chloride are outside control limits. Associated samples are non-detect for this compound.
- Matrix Spike Recovery(s) for 1,1-Dichloroethene, 2,2-Dichloropropane, 2-Chloroethyl vinyl ether, Acrylonitrile, Benzene, Isopropylbenzene, Methyl Tert Butyl Ether, Methylene chloride, trans-1,2-Dichloroethene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 1,1-Dichloroethene, 2,2-Dichloropropane, Acrylonitrile, Methyl Tert Butyl Ether, trans-1,2-Dichloroethene, 2-Chloroethyl vinyl ether, Benzene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2-Chloroethyl vinyl ether, Benzene are outside control limits for sample MC32120-1MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- MC32120-1 for Tert Butyl Alcohol-D9: Outside control limits. Target analytes not associated with this internal standard.
- Continuing calibration check standard MSV1225-CC1177 for 1,1-dichloroethene, methylene chloride, methyl tert butyl ether, acrylonitrile, trans-1,2-dichloroethene, vinyl acetate, 1,1-dichloroethane, 2,2-dichloropropane, carbon tetrachloride, trans-1,3-dichloropropene exceed 20% Difference (response bias high) Associated samples are non-detect for these compounds.
- MC32120-3,4 has internal standard outside control limits. Outside control limits due to possible matrix interference. Confirmed by reanalysis.
- Initial calibration verification MSV1177-ICV1177 for dichlorodifluoromethane exceed 30% Difference (response bias high). Associated samples are non-detect for this compound
- MC32120-1MS/MSD for Bromomethane, Chloroethane, Chloromethane, Vinyl chloride: Outside control limits. Associated samples are non-detect for this compound.
- Continuing calibration check standard MSV1225-CC1177 for chloromethane, vinyl chloride, bromomethane, chloroethane, trichlorofluoromethane exceed 40% Difference (response bias high) Associated samples are non-detect for these compounds.

Extractables by GCMS By Method SW846 8270D

Matrix AQ	Batch ID: OP38979

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32000-16MS, MC32000-16MSD were used as the QC samples indicated.
- Sample(s) MC32120-1, MC32120-2, MC32120-3, MC32120-4 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- Blank Spike Recovery(s) for Hexachlorocyclopentadiene are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Duplicate Recovery(s) for Benzoic Acid, 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: OP38980

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32000-17MS, MC32000-17MSD were used as the QC samples indicated.
- Sample(s) MC32120-1, MC32120-2, MC32120-3, MC32120-4 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: OP39069

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC32236-13MS, MC32236-13MSD were used as the QC samples indicated.
- All samples were extracted within the recommended method holding time.

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(MC32120).

Summary of Hits

Job Number: MC32120
Account: Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Collected: 07/14/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC32120-1	ROST3MW-ROX-071414					
Benzene		5.8	0.50	0.32	ug/l	SW846 8260C
Ethylbenzene		8.0	1.0	0.38	ug/l	SW846 8260C
Isopropylbenzene		0.53 J	5.0	0.35	ug/l	SW846 8260C
Naphthalene		4.5 J	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene		0.98 J	5.0	0.49	ug/l	SW846 8260C
Toluene		2.4	1.0	0.33	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		13.2	5.0	0.32	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		3.2 J	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene		37.1	1.0	0.93	ug/l	SW846 8260C
o-Xylene		4.1	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		41.2	1.0	0.36	ug/l	SW846 8260C
Di-n-butyl phthalate		~~0.40~~ JB U	5.4	0.19	ug/l	SW846 8270D
1-Methylnaphthalene		0.92	0.22	0.054	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		0.97	0.22	0.081	ug/l	SW846 8270D BY SIM
Phenanthrene		~~0.16~~ B U	~~0.054~~ 0.16	0.014	ug/l	SW846 8270D BY SIM
MC32120-2	MW5-ROX-071414					
Benzene		1.0	0.50	0.32	ug/l	SW846 8260C
sec-Butylbenzene		1.1 J	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene		4.6 J	5.0	0.39	ug/l	SW846 8260C
Isopropylbenzene		0.49 J	5.0	0.35	ug/l	SW846 8260C
Toluene		1.6	1.0	0.33	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		0.33 J	5.0	0.32	ug/l	SW846 8260C
m,p-Xylene		2.0	1.0	0.93	ug/l	SW846 8260C
o-Xylene		0.73 J	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		2.7	1.0	0.36	ug/l	SW846 8260C
Di-n-butyl phthalate		~~0.37~~ JB U	5.3	0.18	ug/l	SW846 8270D
Acenaphthene		0.075 J	0.11	0.073	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		0.52 B	0.21	0.053	ug/l	SW846 8270D BY SIM
Phenanthrene		~~0.088~~ B U	~~0.053~~ 0.088	0.013	ug/l	SW846 8270D BY SIM
MC32120-3	MW2-ROX-071414					
Benzene		10.2 J	0.50	0.32	ug/l	SW846 8260C
n-Butylbenzene		19.4 J	5.0	1.1	ug/l	SW846 8260C
sec-Butylbenzene		7.3 J	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene		1.3 J J	5.0	0.39	ug/l	SW846 8260C
Ethylbenzene		955	10	3.8	ug/l	SW846 8260C
Isopropylbenzene		96.6 J	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene		8.0 J	5.0	0.37	ug/l	SW846 8260C
Naphthalene		79.2 J	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene		112 J	5.0	0.49	ug/l	SW846 8260C

Summary of Hits

Job Number: MC32120
Account: Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Collected: 07/14/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Toluene		11.3	1.0	0.33	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		341	5.0	0.32	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		150	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene		764	10	9.3	ug/l	SW846 8260C
o-Xylene		84.5	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		804	10	3.6	ug/l	SW846 8260C
Di-n-butyl phthalate		~~0.45~~ JB	5.4	0.19	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.37 J	2.2	0.36	ug/l	SW846 8270D
Acenaphthene		0.084 J	0.11	0.075	ug/l	SW846 8270D BY SIM
Fluoranthene		0.12	0.11	0.044	ug/l	SW846 8270D BY SIM
Fluorene		0.14	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		10.0	0.22	0.054	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		21.5	0.22	0.081	ug/l	SW846 8270D BY SIM
Phenanthrene		~~0.17~~ B	~~0.054~~ 0.17	0.014	ug/l	SW846 8270D BY SIM
Pyrene		0.096 J	0.11	0.042	ug/l	SW846 8270D BY SIM
MC32120-4	MW22-ROX-071414					
Benzene		1760	50	32	ug/l	SW846 8260C
2-Butanone (MEK)		18.5	5.0	2.5	ug/l	SW846 8260C
n-Butylbenzene		34.9	5.0	1.1	ug/l	SW846 8260C
sec-Butylbenzene		13.0	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene		13.7	5.0	0.39	ug/l	SW846 8260C
Ethylbenzene		1930	100	38	ug/l	SW846 8260C
Isopropylbenzene		153	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene		8.5	5.0	0.37	ug/l	SW846 8260C
Naphthalene		282	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene		205	5.0	0.49	ug/l	SW846 8260C
Toluene		3140	100	33	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		353	5.0	0.32	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		262	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene		3780	100	93	ug/l	SW846 8260C
o-Xylene		1850	100	36	ug/l	SW846 8260C
Xylene (total)		5640	100	36	ug/l	SW846 8260C
2,4-Dimethylphenol		28.1	11	0.61	ug/l	SW846 8270D
2-Methylphenol		10.2 J	11	0.25	ug/l	SW846 8270D
3&4-Methylphenol		20.4	11	0.51	ug/l	SW846 8270D
Di-n-butyl phthalate		~~0.67~~ JB	5.4	0.19	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.45 J	2.2	0.36	ug/l	SW846 8270D
Acenaphthene		0.13	0.11	0.075	ug/l	SW846 8270D BY SIM
Fluorene		0.15	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		19.8	0.22	0.054	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		35.5	0.22	0.081	ug/l	SW846 8270D BY SIM
Phenanthrene		~~0.18~~ B	~~0.054~~ 0.18	0.014	ug/l	SW846 8270D BY SIM

Summary of Hits

Job Number: MC32120
Account: Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Collected: 07/14/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC32120-5	TB-071414-HCL					
No hits reported in this sample.						
MC32120-6	TB-071414-ST					
No hits reported in this sample.						

New England ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	ROST3MW-ROX-071414		
Lab Sample ID:	MC32120-1	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33192.D	1	07/24/14	AMY	n/a	n/a	MSV1225
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	5.8	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	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

Report of Analysis

Client Sample ID:	ROST3MW-ROX-071414		
Lab Sample ID:	MC32120-1	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	8.0	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	0.53	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	4.5	5.0	0.69	ug/l	J
103-65-1	n-Propylbenzene	0.98	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	2.4	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	13.2	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	3.2	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	37.1	1.0	0.93	ug/l	
95-47-6	o-Xylene	4.1	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	41.2	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	ROST3MW-ROX-071414		
Lab Sample ID:	MC32120-1	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL.		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	90%		70-130%
460-00-4	4-Bromofluorobenzene	104%		70-130%

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

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

Report of Analysis

Client Sample ID:	ROST3MW-ROX-071414		
Lab Sample ID:	MC32120-1	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X03982.D	1	07/28/14	WK	07/16/14	OP38979	MSX131
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.90	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.61	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	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	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	0.10	5.4	0.19	ug/l	JB
117-84-0	Di-n-octyl phthalate	ND	5.4	0.31	ug/l	

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

Report of Analysis

Client Sample ID:	ROST3MW-ROX-071414		
Lab Sample ID:	MC32120-1	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.37	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.36	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	CCV
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	41%		15-110%
4165-62-2	Phenol-d5	30%		15-110%
118-79-6	2,4,6-Tribromophenol	84%		15-110%
4165-60-0	Nitrobenzene-d5	75%		30-130%
321-60-8	2-Fluorobiphenyl	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	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-071414		
Lab Sample ID:	MC32120-1	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90893.D	1	07/28/14	MR	07/16/14	OP38980	MSI3383
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.075	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	0.92	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	0.97	0.22	0.081	ug/l	
85-01-8	Phenanthrene	~~0.16~~ u	~~0.054~~ 0.11	0.014	ug/l	B u
129-00-0	Pyrene	ND	0.11	0.042	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	65%		30-130%
321-60-8	2-Fluorobiphenyl	62%		30-130%
1718-51-0	Terphenyl-d14	70%		30-130%

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

Report of Analysis

Client Sample ID:	ROST3MW-ROX-071414		
Lab Sample ID:	MC32120-1	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39763.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290
Run #2							

	Initial Volume	Final Volume
Run #1	35.6 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0060	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	110%		36-173%
460-00-4	Bromofluorobenzene (S)	99%		36-173%

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

Report of Analysis

Client Sample ID:	MW5-ROX-071414		
Lab Sample ID:	MC32120-2	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33193.D	1	07/24/14	AMY	n/a	n/a	MSV1225
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	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	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	1.1	5.0	0.42	ug/l	J
98-06-6	tert-Butylbenzene	4.6	5.0	0.39	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

J = Indicates 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-071414		
Lab Sample ID:	MC32120-2	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	0.49	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	1.6	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.33	5.0	0.32	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	2.0	1.0	0.93	ug/l	
95-47-6	o-Xylene	0.73	1.0	0.36	ug/l	J
1330-20-7	Xylene (total)	2.7	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-071414		
Lab Sample ID:	MC32120-2	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	109%		70-130%

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

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Report of Analysis

Client Sample ID:	MW5-ROX-071414		
Lab Sample ID:	MC32120-2	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X03983.D	1	07/28/14	WK	07/16/14	OP38979	MSX131
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
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	~~0.37~~ U	5.3	0.18	ug/l	JB U
117-84-0	Di-n-octyl phthalate	ND	5.3	0.30	ug/l	

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Report of Analysis

Client Sample ID:	MW5-ROX-071414		
Lab Sample ID:	MC32120-2	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.3	0.21	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.36	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.35	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	UJ
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	41%		15-110%
4165-62-2	Phenol-d5	30%		15-110%
118-79-6	2,4,6-Tribromophenol	88%		15-110%
4165-60-0	Nitrobenzene-d5	77%		30-130%
321-60-8	2-Fluorobiphenyl	73%		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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Report of Analysis

Client Sample ID:	MW5-ROX-071414		
Lab Sample ID:	MC32120-2	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90894.D	1	07/28/14	MR	07/16/14	OP38980	MSI3383
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.075	0.11	0.073	ug/l	J
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	0.52	0.21	0.053	ug/l	B
91-57-6	2-Methylnaphthalene	ND	0.21	0.079	ug/l	
85-01-8	Phenanthrene	~~0.088~~ U	~~0.053~~ 0.021	0.013	ug/l	B 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	65%		30-130%
321-60-8	2-Fluorobiphenyl	64%		30-130%
1718-51-0	Terphenyl-d14	68%		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:	MW5-ROX-071414		
Lab Sample ID:	MC32120-2	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39764.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290
Run #2							

	Initial Volume	Final Volume
Run #1	36.2 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	118%		36-173%
460-00-4	Bromofluorobenzene (S)	111%		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

Report of Analysis

Client Sample ID:	MW2-ROX-071414		
Lab Sample ID:	MC32120-3	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33194.D	1	07/24/14	AMY	n/a	n/a	MSV1225
Run #2	H67795.D	10	07/28/14	AMY	n/a	n/a	MSH2253

	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	10.2	0.50	0.32	ug/l	J
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	19.4	5.0	1.1	ug/l	J
135-98-8	sec-Butylbenzene	7.3	5.0	0.42	ug/l	J
98-06-6	tert-Butylbenzene	1.3	5.0	0.39	ug/l	J J
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW2-ROX-071414		
Lab Sample ID:	MC32120-3	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	955 [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	96.6	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	8.0	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	79.2	5.0	0.69	ug/l	J
103-65-1	n-Propylbenzene	112	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	11.3	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	341	5.0	0.32	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	150	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	764 [a]	10	9.3	ug/l	
95-47-6	o-Xylene	84.5	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	804 [a]	10	3.6	ug/l	

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Report of Analysis

Client Sample ID:	MW2-ROX-071414		
Lab Sample ID:	MC32120-3	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	73%	106%	70-130%
2037-26-5	Toluene-D8	96%	106%	70-130%
460-00-4	4-Bromofluorobenzene	93%	110%	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-071414		
Lab Sample ID:	MC32120-3	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X03984.D	1	07/28/14	WK	07/16/14	OP38979	MSX131
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.90	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.61	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	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	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	~~0.45~~ 4	5.4	0.19	ug/l	JB 4
117-84-0	Di-n-octyl phthalate	ND	5.4	0.31	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW2-ROX-071414		
Lab Sample ID:	MC32120-3	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL;Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.3 A

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	0.37	2.2	0.36	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	U.5
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	47%		15-110%
4165-62-2	Phenol-d5	33%		15-110%
118-79-6	2,4,6-Tribromophenol	92%		15-110%
4165-60-0	Nitrobenzene-d5	80%		30-130%
321-60-8	2-Fluorobiphenyl	74%		30-130%
1718-51-0	Terphenyl-d14	89%		30-130%

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

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-071414		
Lab Sample ID:	MC32120-3	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90895.D	1	07/28/14	MR	07/16/14	OP38980	MSI3383
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.084	0.11	0.075	ug/l	J
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	0.12	0.11	0.044	ug/l	
86-73-7	Fluorene	0.14	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	10.0	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	21.5	0.22	0.081	ug/l	
85-01-8	Phenanthrene	~~0.17~~ 0.17	~~0.054~~ 0.054	0.014	ug/l	B
129-00-0	Pyrene	0.096	0.11	0.042	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	67%		30-130%
321-60-8	2-Fluorobiphenyl	67%		30-130%
1718-51-0	Terphenyl-d14	74%		30-130%

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

Report of Analysis

Client Sample ID:	MW2-ROX-071414		
Lab Sample ID:	MC32120-3	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39765.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290
Run #2							

	Initial Volume	Final Volume
Run #1	36.6 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	119%		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

Report of Analysis

Client Sample ID:	MW22-ROX-071414		
Lab Sample ID:	MC32120-4	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33195.D	1	07/24/14	AMY	n/a	n/a	MSV1225
Run #2	H67796.D	100	07/28/14	AMY	n/a	n/a	MSH2253

	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	1760 [a]	50	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)	18.5	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	34.9	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	13.0	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	13.7	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:	MW22-ROX-071414		
Lab Sample ID:	MC32120-4	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	1930 [a]	100	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	153	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	8.5	5.0	0.37	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	282	5.0	0.69	ug/l	J
103-65-1	n-Propylbenzene	205	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	3140 [a]	100	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	353	5.0	0.32	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	262	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	3780 [a]	100	93	ug/l	
95-47-6	o-Xylene	1850 [a]	100	36	ug/l	
1330-20-7	Xylene (total)	5640 [a]	100	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:	MW22-ROX-071414		
Lab Sample ID:	MC32120-4	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.4

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	79%	105%	70-130%
2037-26-5	Toluene-D8	83%	106%	70-130%
460-00-4	4-Bromofluorobenzene	104%	114%	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-071414		
Lab Sample ID:	MC32120-4	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X03985.D	1	07/28/14	WK	07/16/14	OP38979	MSX131
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.90	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	28.1	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	10.2	11	0.25	ug/l	J
	3&4-Methylphenol	20.4	11	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	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	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	~~0.57~~	5.4	0.19	ug/l	JB
117-84-0	Di-n-octyl phthalate	ND	5.4	0.31	ug/l	

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

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

Report of Analysis

Client Sample ID:	MW22-ROX-071414		
Lab Sample ID:	MC32120-4	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.4

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	0.45	2.2	0.36	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.4	0.33	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	34%		15-110%
4165-62-2	Phenol-d5	33%		15-110%
118-79-6	2,4,6-Tribromophenol	103%		15-110%
4165-60-0	Nitrobenzene-d5	86%		30-130%
321-60-8	2-Fluorobiphenyl	81%		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:	MW22-ROX-071414		
Lab Sample ID:	MC32120-4	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90896.D	1	07/28/14	MR	07/16/14	OP38980	MSI3383
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.13	0.11	0.075	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	0.15	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	19.8	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	35.5	0.22	0.081	ug/l	
85-01-8	Phenanthrene	~~0.18~~ 0.12	~~0.054~~ 0.11	0.014	ug/l	B J
129-00-0	Pyrene	ND	0.11	0.042	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	71%		30-130%
321-60-8	2-Fluorobiphenyl	69%		30-130%
1718-51-0	Terphenyl-d14	79%		30-130%

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

Report of Analysis

Client Sample ID:	MW22-ROX-071414		
Lab Sample ID:	MC32120-4	Date Sampled:	07/14/14
Matrix:	AQ - Ground Water	Date Received:	07/15/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39766.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290
Run #2							

	Initial Volume	Final Volume
Run #1	36.0 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	108%		36-173%
460-00-4	Bromofluorobenzene (S)	111%		36-173%

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

Report of Analysis

Client Sample ID:	TB-071414-HCL		
Lab Sample ID:	MC32120-5	Date Sampled:	07/14/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33187.D	1	07/24/14	AMY	n/a	n/a	MSV1225
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

Report of Analysis

Client Sample ID:	TB-071414-HCL		
Lab Sample ID:	MC32120-5	Date Sampled:	07/14/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	TB-071414-HCL		
Lab Sample ID:	MC32120-5	Date Sampled:	07/14/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	122%		70-130%
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	101%		70-130%

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

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

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

Report of Analysis

Client Sample ID:	TB-071414-ST		
Lab Sample ID:	MC32120-6	Date Sampled:	07/14/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/15/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39767.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290
Run #2							

	Initial Volume	Final Volume
Run #1	36.2 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	100%		36-173%
460-00-4	Bromofluorobenzene (S)	98%		36-173%

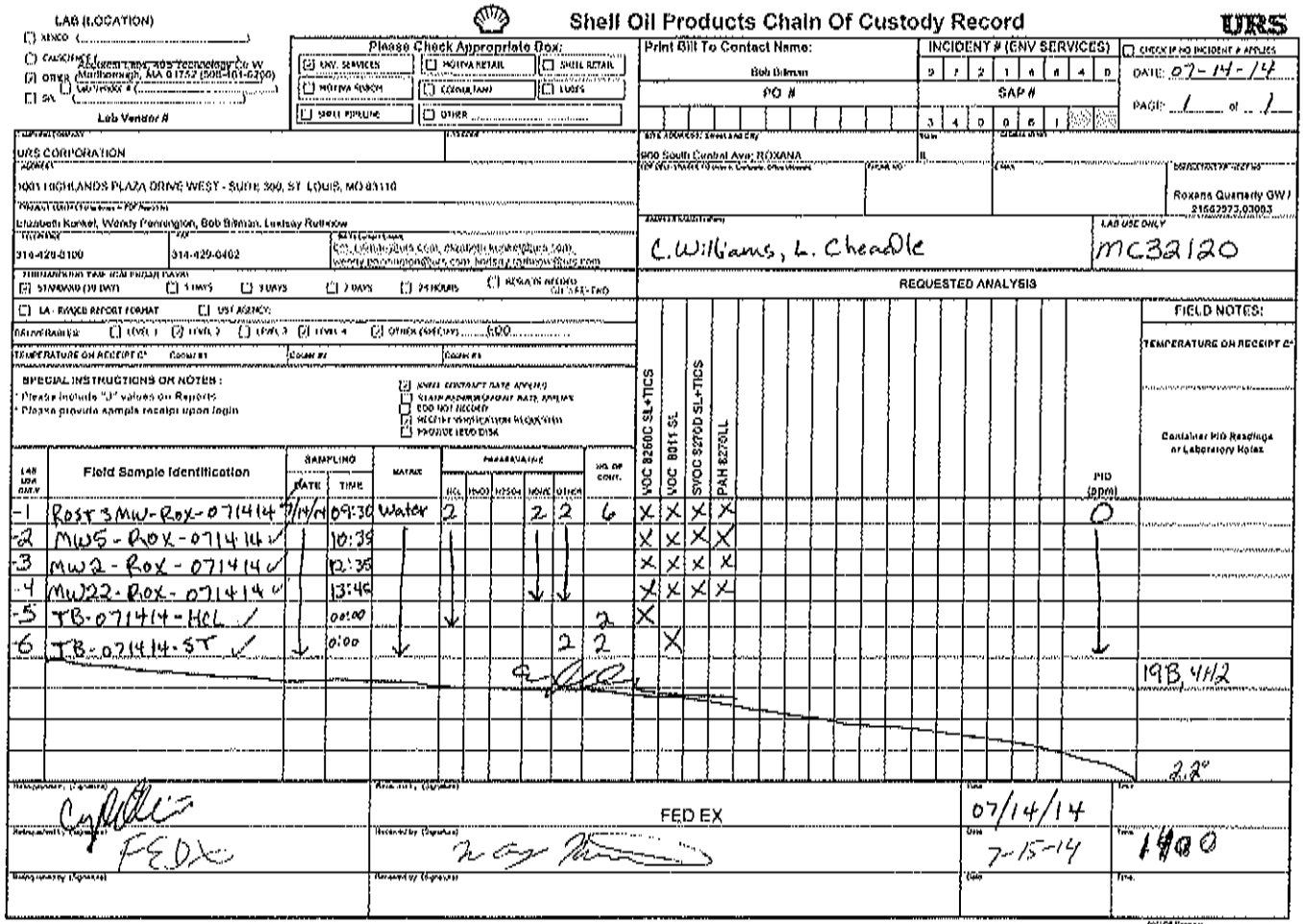
ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

New England ACCUTEST LABORATORIES

Custody Documents and Other Forms

Includes the following where applicable:

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



LAB (LOCATION)

☐ XENCO (.....)
☐ CASCADE (.....)
☑ OTHER Accutest Labs, 405 Technology Ct W Marlborough, MA 01752 (508-481-6200)
☐ SA ☐ LAB/TRACK # (.....)

Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:
☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SIGNOR ☐ COLOMBIANA ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER .....

Print Bill To Contact Name: Bob Bilman

PO #

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

SAP #: 3 4 0 0 6 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 07-14-14

PAGE: 1 of 1

URS CORPORATION

1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110

Elizabeth Kunkel, Wendy Pennington, Bob Bilman, Lindsay Rutledow

314-429-0100 | 314-429-0402

900 South Central Ave; ROXANA

Roxana Quarterly GW / 21562973.03003

C. Williams, L. Cheadle

LAB USE ONLY: MC32120

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

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☐ LEVEL 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C° Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Reports
* Please provide sample receipt upon login

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE EDD DISK

REQUESTED ANALYSIS

FIELD NOTES:
TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	ROST3MW-ROX-071414	7/14/14	09:30	Water	2			2	2	6	X	X	X	X	0	
-2	MW5-ROX-071414 ✓		10:35								X	X	X	X		
-3	MW2-ROX-071414 ✓		12:35								X	X	X	X		
-4	MW22-ROX-071414 ✓		13:45								X	X	X	X		
-5	TB-071414-HCL ✓		00:00							2	X					
-6	TB-071414-ST ✓		0:00						2	2		X				
																19B, 4H2
																2.2°

Relinquished by (Signature)	Received by (Signature)	Date	Time
[signature]	FED EX	07/14/14	
FEDX	[signature]	7-15-14	1400

MC32120: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC32120 Client: URS Immediate Client Services Action Required: No

Date / Time Received: 7/15/2014 Delivery Method: Client Service Action Required at Login: No

Project: 900 SOUTH CENTRAL No. Coolers: 1 Airbill #'s:

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

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

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

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

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

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

Comments

Accutest Laboratories
V:508.481.6200
495 Technology Center West, Bldg One
F: 508.481.7753
Marlborough, MA
www.accutest.com

5.1

MC32120: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC32120

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC32120-1 Collected: 14-JUL-14 09:30 By: CWLC Received: 15-JUL-14 By: ROST3MW-ROX-071414						
MC32120-1	SW846 8260C	24-JUL-14 14:51	AMY			V8260SL+
MC32120-1	SW846 8011	24-JUL-14 20:26	NK	22-JUL-14	MEW	V8011SL
MC32120-1	SW846 8270D BY SIM	28-JUL-14 11:51	MR	16-JUL-14	MT	B8270SIMSL
MC32120-1	SW846 8270D	28-JUL-14 16:34	WK	16-JUL-14	MT	AB8270SL+
MC32120-2 Collected: 14-JUL-14 10:35 By: CWLC Received: 15-JUL-14 By: MW5-ROX-071414						
MC32120-2	SW846 8260C	24-JUL-14 15:17	AMY			V8260SL+
MC32120-2	SW846 8011	24-JUL-14 20:46	NK	22-JUL-14	MEW	V8011SL
MC32120-2	SW846 8270D BY SIM	28-JUL-14 12:14	MR	16-JUL-14	MT	B8270SIMSL
MC32120-2	SW846 8270D	28-JUL-14 16:54	WK	16-JUL-14	MT	AB8270SL+
MC32120-3 Collected: 14-JUL-14 12:35 By: CWLC Received: 15-JUL-14 By: MW2-ROX-071414						
MC32120-3	SW846 8260C	24-JUL-14 15:43	AMY			V8260SL+
MC32120-3	SW846 8011	24-JUL-14 21:05	NK	22-JUL-14	MEW	V8011SL
MC32120-3	SW846 8270D BY SIM	28-JUL-14 12:37	MR	16-JUL-14	MT	B8270SIMSL
MC32120-3	SW846 8260C	28-JUL-14 16:03	AMY			V8260SL+
MC32120-3	SW846 8270D	28-JUL-14 17:15	WK	16-JUL-14	MT	AB8270SL+
MC32120-4 Collected: 14-JUL-14 13:45 By: CWLC Received: 15-JUL-14 By: MW22-ROX-071414						
MC32120-4	SW846 8260C	24-JUL-14 16:09	AMY			V8260SL+
MC32120-4	SW846 8011	24-JUL-14 21:25	NK	22-JUL-14	MEW	V8011SL
MC32120-4	SW846 8270D BY SIM	28-JUL-14 13:00	MR	16-JUL-14	MT	B8270SIMSL
MC32120-4	SW846 8260C	28-JUL-14 16:31	AMY			V8260SL+
MC32120-4	SW846 8270D	28-JUL-14 17:36	WK	16-JUL-14	MT	AB8270SL+
MC32120-5 Collected: 14-JUL-14 00:00 By: CWLC Received: 15-JUL-14 By: TB-071414-HCL						
MC32120-5	SW846 8260C	24-JUL-14 12:41	AMY			V8260SL+

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC32120

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC32120-6 Collected: 14-JUL-14 00:00 By: CWLC Received: 15-JUL-14 By: TB-071414-ST						
MC32120-6	SW846 8011	24-JUL-14 21:44	NK	22-JUL-14	MEW	V8011SL

Accutest Internal Chain of Custody

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Received: 07/15/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC32120-1.2	Walk In Ref #22	Alireza Zeighami	07/16/14 07:09	Retrieve from Storage
MC32120-1.2	Alireza Zeighami		07/16/14 14:56	Depleted
MC32120-1.3	VOC Ref #4	Amy Min Yang	07/24/14 11:37	Retrieve from Storage
MC32120-1.3	Amy Min Yang	GCMSV	07/24/14 11:37	Load on Instrument
MC32120-1.4	VOC Ref #4	Amy Min Yang	07/24/14 16:15	Retrieve from Storage
MC32120-1.4	Amy Min Yang	GCMSV	07/24/14 16:15	Load on Instrument
MC32120-1.6	VOC Ref #4	Marc Tahtamoni	07/22/14 14:29	Retrieve from Storage
MC32120-2.1	Walk In Ref #22	Alireza Zeighami	07/16/14 07:09	Retrieve from Storage
MC32120-2.1	Alireza Zeighami		07/16/14 14:56	Depleted
MC32120-2.4	VOC Ref #4	Amy Min Yang	07/24/14 11:37	Retrieve from Storage
MC32120-2.4	Amy Min Yang	GCMSV	07/24/14 11:37	Load on Instrument
MC32120-2.5	VOC Ref #4	Marc Tahtamoni	07/22/14 14:29	Retrieve from Storage
MC32120-3.2	Walk In Ref #22	Alireza Zeighami	07/16/14 07:09	Retrieve from Storage
MC32120-3.2	Alireza Zeighami		07/16/14 14:56	Depleted
MC32120-3.3	VOC Ref #4	Amy Min Yang	07/24/14 11:37	Retrieve from Storage
MC32120-3.3	Amy Min Yang	GCMSV	07/24/14 11:37	Load on Instrument
MC32120-3.4	VOC Ref #4	Amy Min Yang	07/28/14 12:47	Retrieve from Storage
MC32120-3.4	Amy Min Yang	GCMSH	07/28/14 12:47	Load on Instrument
MC32120-3.4	GCMSH	Amy Min Yang	07/29/14 11:03	Unload from Instrument
MC32120-3.4	Amy Min Yang	VOC Ref #4	07/29/14 11:03	Return to Storage
MC32120-3.5	VOC Ref #4	Marc Tahtamoni	07/22/14 14:29	Retrieve from Storage
MC32120-4.2	Walk In Ref #22	Alireza Zeighami	07/16/14 07:09	Retrieve from Storage
MC32120-4.2	Alireza Zeighami		07/16/14 14:56	Depleted
MC32120-4.3	VOC Ref #4	Amy Min Yang	07/24/14 11:37	Retrieve from Storage
MC32120-4.3	Amy Min Yang	GCMSV	07/24/14 11:37	Load on Instrument
MC32120-4.4	VOC Ref #4	Amy Min Yang	07/28/14 12:47	Retrieve from Storage
MC32120-4.4	Amy Min Yang	GCMSH	07/28/14 12:47	Load on Instrument
MC32120-4.4	GCMSH	Amy Min Yang	07/29/14 11:03	Unload from Instrument
MC32120-4.4	Amy Min Yang	VOC Ref #4	07/29/14 11:03	Return to Storage
MC32120-4.6	VOC Ref #4	Marc Tahtamoni	07/22/14 14:29	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Received: 07/15/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC32120-5.1	VOC Ref #4	Amy Min Yang	07/24/14 11:37	Retrieve from Storage
MC32120-5.1	Amy Min Yang	GCMSV	07/24/14 11:37	Load on Instrument
MC32120-6.2	VOC Ref #4	Marc Tahtamoni	07/22/14 14:29	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: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1225-MB	V33185.D	1	07/24/14	AMY	n/a	n/a	MSV1225

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

MC32120-1, MC32120-2, MC32120-3, MC32120-4, MC32120-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	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: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1225-MB	V33185.D	1	07/24/14	AMY	n/a	n/a	MSV1225

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

MC32120-1, MC32120-2, MC32120-3, MC32120-4, MC32120-5

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

6.1.1

Method Blank Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1225-MB	V33185.D	1	07/24/14	AMY	n/a	n/a	MSV1225

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

MC32120-1, MC32120-2, MC32120-3, MC32120-4, MC32120-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	114%	70-130%
2037-26-5	Toluene-D8	87%	70-130%
460-00-4	4-Bromofluorobenzene	102%	70-130%

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

Method Blank Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSH2253-MB	H67784.D	1	07/28/14	AMY	n/a	n/a	MSH2253

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

MC32120-3, MC32120-4

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	
	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	106%	70-130%
2037-26-5	Toluene-D8	107%	70-130%
460-00-4	4-Bromofluorobenzene	109%	70-130%

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

6.1.2

Blank Spike Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1225-BS	V33182.D	1	07/24/14	AMY	n/a	n/a	MSV1225

6.2.1

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

MC32120-1, MC32120-2, MC32120-3, MC32120-4, MC32120-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	43.4	87	70-130
107-02-8	Acrolein	250	302	121	70-130
107-13-1	Acrylonitrile	50	66.6	133* a	70-130
71-43-2	Benzene	50	54.4	109	70-130
108-86-1	Bromobenzene	50	50.2	100	70-130
74-97-5	Bromochloromethane	50	53.0	106	70-130
75-27-4	Bromodichloromethane	50	54.1	108	70-130
75-25-2	Bromoform	50	49.8	100	70-130
74-83-9	Bromomethane	50	96.7	193* b	70-130
78-93-3	2-Butanone (MEK)	50	40.4	81	70-130
104-51-8	n-Butylbenzene	50	54.7	109	70-130
135-98-8	sec-Butylbenzene	50	58.1	116	70-130
98-06-6	tert-Butylbenzene	50	51.8	104	70-130
75-15-0	Carbon disulfide	50	60.0	120	70-130
56-23-5	Carbon tetrachloride	50	61.1	122	70-130
108-90-7	Chlorobenzene	50	50.3	101	70-130
75-00-3	Chloroethane	50	105	210* b	70-130
110-75-8	2-Chloroethyl vinyl ether	50	40.9	82	70-130
67-66-3	Chloroform	50	54.5	109	70-130
74-87-3	Chloromethane	50	94.7	189* b	70-130
95-49-8	o-Chlorotoluene	50	55.1	110	70-130
106-43-4	p-Chlorotoluene	50	55.4	111	70-130
124-48-1	Dibromochloromethane	50	47.7	95	70-130
95-50-1	1,2-Dichlorobenzene	50	51.2	102	70-130
541-73-1	1,3-Dichlorobenzene	50	51.4	103	70-130
106-46-7	1,4-Dichlorobenzene	50	49.4	99	70-130
75-71-8	Dichlorodifluoromethane	50	55.8	112	70-130
75-34-3	1,1-Dichloroethane	50	64.4	129	70-130
107-06-2	1,2-Dichloroethane	50	57.1	114	70-130
75-35-4	1,1-Dichloroethene	50	67.4	135* a	70-130
156-59-2	cis-1,2-Dichloroethene	50	55.5	111	70-130
156-60-5	trans-1,2-Dichloroethene	50	65.4	131* a	70-130
78-87-5	1,2-Dichloropropane	50	50.6	101	70-130
142-28-9	1,3-Dichloropropane	50	50.2	100	70-130
594-20-7	2,2-Dichloropropane	50	64.4	129	70-130
563-58-6	1,1-Dichloropropene	50	55.5	111	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1225-BS	V33182.D	1	07/24/14	AMY	n/a	n/a	MSV1225

6.2.1

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

MC32120-1, MC32120-2, MC32120-3, MC32120-4, MC32120-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	54.9	110	70-130
10061-02-6	trans-1,3-Dichloropropene	50	61.0	122	70-130
123-91-1	1,4-Dioxane	250	273	109	70-130
97-63-2	Ethyl methacrylate	50	43.7	87	77-137
100-41-4	Ethylbenzene	50	52.8	106	70-130
87-68-3	Hexachlorobutadiene	50	44.8	90	70-130
591-78-6	2-Hexanone	50	40.0	80	70-130
98-82-8	Isopropylbenzene	50	57.5	115	70-130
99-87-6	p-Isopropyltoluene	50	55.9	112	70-130
1634-04-4	Methyl Tert Butyl Ether	50	65.9	132* a	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	58.0	116	70-130
74-95-3	Methylene bromide	50	51.2	102	70-130
75-09-2	Methylene chloride	50	65.6	131* a	70-130
91-20-3	Naphthalene	50	41.2	82	70-130
103-65-1	n-Propylbenzene	50	57.7	115	70-130
100-42-5	Styrene	50	49.7	99	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	51.8	104	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	54.1	108	70-130
127-18-4	Tetrachloroethene	50	47.9	96	70-130
108-88-3	Toluene	50	53.0	106	70-130
87-61-6	1,2,3-Trichlorobenzene	50	43.6	87	70-130
120-82-1	1,2,4-Trichlorobenzene	50	44.7	89	70-130
71-55-6	1,1,1-Trichloroethane	50	56.5	113	70-130
79-00-5	1,1,2-Trichloroethane	50	51.3	103	70-130
79-01-6	Trichloroethene	50	47.9	96	70-130
75-69-4	Trichlorofluoromethane	50	83.8	168* b	70-130
96-18-4	1,2,3-Trichloropropane	50	55.6	111	70-130
95-63-6	1,2,4-Trimethylbenzene	50	54.7	109	70-130
108-67-8	1,3,5-Trimethylbenzene	50	54.2	108	70-130
108-05-4	Vinyl Acetate	50	66.0	132* b	70-130
75-01-4	Vinyl chloride	50	87.0	174* b	70-130
	m,p-Xylene	100	102	102	70-130
95-47-6	o-Xylene	50	53.4	107	70-130
1330-20-7	Xylene (total)	150	156	104	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1225-BS	V33182.D	1	07/24/14	AMY	n/a	n/a	MSV1225

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

MC32120-1, MC32120-2, MC32120-3, MC32120-4, MC32120-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	99%	70-130%

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

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSH2253-BS	H67782.D	1	07/28/14	AMY	n/a	n/a	MSH2253

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

MC32120-3, MC32120-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	52.3	105	70-130
100-41-4	Ethylbenzene	50	45.7	91	70-130
108-88-3	Toluene	50	49.4	99	70-130
	m,p-Xylene	100	91.0	91	70-130
95-47-6	o-Xylene	50	44.9	90	70-130
1330-20-7	Xylene (total)	150	136	91	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	113%	70-130%
2037-26-5	Toluene-D8	108%	70-130%
460-00-4	4-Bromofluorobenzene	97%	70-130%

* = Outside of Control Limits.

6.2.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32120-1MS	V33203.D	5	07/24/14	AMY	n/a	n/a	MSV1225
MC32120-1MSD	V33204.D	5	07/24/14	AMY	n/a	n/a	MSV1225
MC32120-1	V33192.D	1	07/24/14	AMY	n/a	n/a	MSV1225

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

MC32120-1, MC32120-2, MC32120-3, MC32120-4, MC32120-5

CAS No.	Compound	MC32120-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	298	119	250	304	122	2	70-130/30
107-02-8	Acrolein	ND		1250	1180	94	1250	1160	93	2	70-130/30
107-13-1	Acrylonitrile	ND		250	440	176* a	250	430	172* a	2	70-130/30
71-43-2	Benzene	5.8		250	772	306* a	250	518	205* a	39* b	70-130/30
108-86-1	Bromobenzene	ND		250	271	108	250	262	105	3	70-130/30
74-97-5	Bromochloromethane	ND		250	262	105	250	250	100	5	70-130/30
75-27-4	Bromodichloromethane	ND		250	256	102	250	249	100	3	70-130/30
75-25-2	Bromoform	ND		250	249	100	250	249	100	0	70-130/30
74-83-9	Bromomethane	ND		250	342	137* c	250	341	136* c	0	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	223	89	250	218	87	2	70-130/30
104-51-8	n-Butylbenzene	ND		250	302	121	250	296	118	2	70-130/30
135-98-8	sec-Butylbenzene	ND		250	314	126	250	303	121	4	70-130/30
98-06-6	tert-Butylbenzene	ND		250	290	116	250	279	112	4	70-130/30
75-15-0	Carbon disulfide	ND		250	311	124	250	303	121	3	70-130/30
56-23-5	Carbon tetrachloride	ND		250	280	112	250	284	114	1	70-130/30
108-90-7	Chlorobenzene	ND		250	251	100	250	242	97	4	70-130/30
75-00-3	Chloroethane	ND		250	345	138* c	250	346	138* c	0	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	18.7	7* a	250	ND	0* a	200* b	70-130/30
67-66-3	Chloroform	ND		250	266	106	250	259	104	3	70-130/30
74-87-3	Chloromethane	ND		250	333	133* c	250	327	131* c	2	70-130/30
95-49-8	o-Chlorotoluene	ND		250	298	119	250	291	116	2	70-130/30
106-43-4	p-Chlorotoluene	ND		250	295	118	250	286	114	3	70-130/30
124-48-1	Dibromochloromethane	ND		250	234	94	250	231	92	1	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	262	105	250	256	102	2	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	272	109	250	263	105	3	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	264	106	250	256	102	3	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	211	84	250	216	86	2	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	326	130	250	316	126	3	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	247	99	250	239	96	3	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	350	140* a	250	344	138* a	2	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	307	123	250	292	117	5	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	348	139* a	250	334	134* a	4	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	260	104	250	250	100	4	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	257	103	250	251	100	2	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	346	138* a	250	341	136* a	1	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	298	119	250	292	117	2	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32120-1MS	V33203.D	5	07/24/14	AMY	n/a	n/a	MSV1225
MC32120-1MSD	V33204.D	5	07/24/14	AMY	n/a	n/a	MSV1225
MC32120-1	V33192.D	1	07/24/14	AMY	n/a	n/a	MSV1225

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

MC32120-1, MC32120-2, MC32120-3, MC32120-4, MC32120-5

CAS No.	Compound	MC32120-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	290	116	250	283	113	2	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	307	123	250	306	122	0	70-130/30
123-91-1	1,4-Dioxane	ND		1250	1300	104	1250	1410	113	8	70-130/30
97-63-2	Ethyl methacrylate	ND		250	230	92	250	226	90	2	72-139/30
100-41-4	Ethylbenzene	8.0		250	285	111	250	277	108	3	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	234	94	250	234	94	0	70-130/30
591-78-6	2-Hexanone	ND		250	193	77	250	186	74	4	70-130/30
98-82-8	Isopropylbenzene	0.53	J	250	330	132* a	250	322	129	2	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	303	121	250	293	117	3	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	391	156* a	250	383	153* a	2	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	242	97	250	231	92	5	70-130/30
74-95-3	Methylene bromide	ND		250	238	95	250	229	92	4	70-130/30
75-09-2	Methylene chloride	ND		250	335	134* a	250	324	130	3	70-130/30
91-20-3	Naphthalene	4.5	J	250	214	84	250	224	88	5	70-130/30
103-65-1	n-Propylbenzene	0.98	J	250	308	123	250	299	119	3	70-130/30
100-42-5	Styrene	ND		250	257	103	250	251	100	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	254	102	250	251	100	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	282	113	250	276	110	2	70-130/30
127-18-4	Tetrachloroethene	ND		250	249	100	250	240	96	4	70-130/30
108-88-3	Toluene	2.4		250	255	101	250	249	99	2	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	204	82	250	216	86	6	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	233	93	250	235	94	1	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	286	114	250	284	114	1	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	228	91	250	223	89	2	70-130/30
79-01-6	Trichloroethene	ND		250	253	101	250	243	97	4	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	304	122	250	303	121	0	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	291	116	250	286	114	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	13.2		250	309	118	250	301	115	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	3.2	J	250	305	121	250	296	117	3	70-130/30
108-05-4	Vinyl Acetate	ND		250	298	119	250	288	115	3	70-130/30
75-01-4	Vinyl chloride	ND		250	348	139* c	250	343	137* c	1	70-130/30
	m,p-Xylene	37.1		500	577	108	500	561	105	3	70-130/30
95-47-6	o-Xylene	4.1		250	289	114	250	282	111	2	70-130/30
1330-20-7	Xylene (total)	41.2		750	866	110	750	843	107	3	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32120-1MS	V33203.D	5	07/24/14	AMY	n/a	n/a	MSV1225
MC32120-1MSD	V33204.D	5	07/24/14	AMY	n/a	n/a	MSV1225
MC32120-1	V33192.D	1	07/24/14	AMY	n/a	n/a	MSV1225

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

MC32120-1, MC32120-2, MC32120-3, MC32120-4, MC32120-5

CAS No.	Surrogate Recoveries	MS	MSD	MC32120-1	Limits
1868-53-7	Dibromofluoromethane	91%	90%	92%	70-130%
2037-26-5	Toluene-D8	88%	90%	90%	70-130%
460-00-4	4-Bromofluorobenzene	101%	100%	104%	70-130%

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

6.3.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32345-12MS	H67793.D	5	07/28/14	AMY	n/a	n/a	MSH2253
MC32345-12MSD	H67794.D	5	07/28/14	AMY	n/a	n/a	MSH2253
MC32345-12	H67787.D	1	07/28/14	AMY	n/a	n/a	MSH2253

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

MC32120-3, MC32120-4

CAS No.	Compound	MC32345-12 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		250	274	110	250	252	101	8	70-130/30
100-41-4	Ethylbenzene	ND		250	245	98	250	225	90	9	70-130/30
108-88-3	Toluene	ND		250	260	104	250	239	96	8	70-130/30
	m,p-Xylene	ND		500	484	97	500	447	89	8	70-130/30
95-47-6	o-Xylene	ND		250	232	93	250	219	88	6	70-130/30
1330-20-7	Xylene (total)	ND		750	715	95	750	666	89	7	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC32345-12	Limits
1868-53-7	Dibromofluoromethane	107%	114%	108%	70-130%
2037-26-5	Toluene-D8	108%	107%	105%	70-130%
460-00-4	4-Bromofluorobenzene	102%	101%	107%	70-130%

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSH2253-CC2244	Injection Date:	07/28/14
Lab File ID:	H67780.D	Injection Time:	09:00
Instrument ID:	GCMSH	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	294744	8.63	533886	9.49	300348	12.74	228339	15.31	88843	6.20
Upper Limit [a]	589488	9.13	1067772	9.99	600696	13.24	456678	15.81	177686	6.70
Lower Limit [b]	147372	8.13	266943	8.99	150174	12.24	114170	14.81	44422	5.70
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSH2253-BS	304899	8.62	536024	9.49	306658	12.74	228719	15.31	98152	6.21
MSH2253-MB	268663	8.63	471219	9.49	241486	12.75	150694	15.31	87001	6.21
ZZZZZZ	263063	8.63	456580	9.49	233001	12.74	144603	15.31	71804	6.21
ZZZZZZ	256418	8.63	445302	9.49	228171	12.74	141249	15.31	70439	6.21
MC32345-12	250548	8.63	429036	9.49	216846	12.75	137196	15.31	71833	6.22
ZZZZZZ	247608	8.62	417864	9.49	214691	12.75	137103	15.31	68530	6.20
ZZZZZZ	235052	8.63	405529	9.49	205604	12.74	126043	15.31	63001	6.22
ZZZZZZ	231228	8.63	405038	9.49	206650	12.75	124575	15.31	66024	6.21
ZZZZZZ	226010	8.63	401713	9.49	205241	12.75	126553	15.32	63952	6.20
ZZZZZZ	258797	8.63	445865	9.49	247409	12.74	208672	15.31	78454	6.20
MC32345-12MS	304963	8.63	532448	9.49	300641	12.74	204387	15.31	97583	6.21
MC32345-12MSD	316084	8.63	568755	9.49	318944	12.74	221552	15.31	104569	6.21
MC32120-3	305107	8.63	534626	9.49	282536	12.75	184972	15.31	101011	6.21
MC32120-4	314570	8.63	555868	9.49	292164	12.75	180723	15.31	98536	6.20
ZZZZZZ	280176	8.63	493711	9.50	253542	12.75	171091	15.31	99390	6.21
ZZZZZZ	268637	8.63	460356	9.49	240619	12.75	174317	15.31	89117	6.20
ZZZZZZ	296253	8.63	521450	9.49	284156	12.74	188651	15.31	90455	6.21
ZZZZZZ	321131	8.62	564865	9.49	288165	12.75	180818	15.31	91478	6.20
ZZZZZZ	301271	8.63	545812	9.49	271938	12.74	167134	15.32	87769	6.22
ZZZZZZ	283169	8.63	513224	9.49	254033	12.75	154113	15.31	83025	6.21
ZZZZZZ	267237	8.62	493787	9.49	246333	12.75	152710	15.32	77929	6.20
ZZZZZZ	258034	8.63	455220	9.49	227742	12.74	139705	15.31	74985	6.20
ZZZZZZ	249145	8.63	453306	9.49	217177	12.75	138775	15.31	69432	6.21

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

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

6.4.1

Volatile Internal Standard Area Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSV1225-CC1177	Injection Date:	07/24/14
Lab File ID:	V33182.D	Injection Time:	10:17
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	404031	6.57	514035	7.75	197537	11.09	255363	13.30	86801	3.51
Upper Limit [a]	808062	7.07	1028070	8.25	395074	11.59	510726	13.80	173602	4.01
Lower Limit [b]	202016	6.07	257018	7.25	98769	10.59	127682	12.80	43401	3.01
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1225-BS	404031	6.57	514035	7.75	197537	11.09	255363	13.30	86801	3.51
MSV1225-MB	423518	6.57	566497	7.75	207436	11.09	205531	13.30	98754	3.51
ZZZZZZ	314218	6.57	438886	7.75	188813	11.09	192114	13.30	77336	3.52
MC32120-5	290479	6.57	404629	7.75	165759	11.09	174831	13.30	70296	3.51
ZZZZZZ	288880	6.57	411369	7.75	166077	11.09	174974	13.30	70249	3.52
ZZZZZZ	276747	6.57	389072	7.75	163374	11.09	175404	13.30	71119	3.52
MC32120-1	607385	6.57	785192	7.75	234551	11.09	264980	13.30	222818[e]	3.52
MC32120-2	486512	6.57	549775	7.75	250156	11.09	237478	13.30	144045	3.53
MC32120-3	1143587[d]	6.57	1377476[d]	7.75	498634[d]	11.09	799272[d]	13.30	468647[d]	3.54
MC32120-4	1136706[d]	6.58	2013116[d]	7.76	850560[d]	11.09	1163371[d]	13.30	414495[d]	3.54
ZZZZZZ	785543	6.57	1497250[d]	7.75	414808[d]	11.09	403343	13.30	234913[d]	3.53
ZZZZZZ	790139	6.65	2282079[d]	7.78	446668[d]	11.09	664914[d]	13.30	161146	3.54
ZZZZZZ	747101	6.81	2775199[d]	7.87	605272[d]	11.10	665352[d]	13.30	279915[d]	3.55
ZZZZZZ	699213	6.83	2878266[d]	7.87	658120[d]	11.10	714187[d]	13.30	263249[d]	3.55
ZZZZZZ	620812	6.57	964822	7.75	360517	11.09	339994	13.30	168558	3.51
ZZZZZZ	617075	6.57	1365612[d]	7.75	342437	11.09	326577	13.30	161394	3.52
ZZZZZZ	832590[d]	6.61	2311394[d]	7.77	436447[d]	11.09	367710	13.30	226087[d]	3.53
MC32120-1MS	755293	6.57	1031451[e]	7.75	345043	11.09	415260	13.30	199822[e]	3.51
MC32120-1MSD	725008	6.57	972624	7.75	331686	11.09	399515	13.30	192608[e]	3.51
ZZZZZZ	529363	6.56	745611	7.75	261178	11.08	274494	13.30	144217	3.51
ZZZZZZ	503161	6.57	712256	7.75	249186	11.08	266369	13.30	138063	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.
(c) Outside control limits. Target analytes not associated with this internal standard.
(d) Outside control limits due to possible matrix interference. Confirmed by reanalysis.
(e) Outside control limits due to possible matrix interference. Confirmed by MS/MSD.

6.4.2

Volatile Surrogate Recovery Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC32120-1	V33192.D	92	90	104
MC32120-2	V33193.D	92	92	109
MC32120-3	H67795.D	106	106	110
MC32120-3	V33194.D	73	96	93
MC32120-4	H67796.D	105	106	114
MC32120-4	V33195.D	79	83	104
MC32120-5	V33187.D	122	94	101
MC32120-1MS	V33203.D	91	88	101
MC32120-1MSD	V33204.D	90	90	100
MC32345-12MS	H67793.D	107	108	102
MC32345-12MSD	H67794.D	114	107	101
MSH2253-BS	H67782.D	113	108	97
MSH2253-MB	H67784.D	106	107	109
MSV1225-BS	V33182.D	100	101	99
MSV1225-MB	V33185.D	114	87	102

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

6.5.1

New England ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38979-MB	X03977.D	1	07/28/14	WK	07/16/14	OP38979	MSX131

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

MC32120-1, MC32120-2, MC32120-3, MC32120-4

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	0.33	5.0	0.17	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

Method Blank Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38979-MB	X03977.D	1	07/28/14	WK	07/16/14	OP38979	MSX131

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

MC32120-1, MC32120-2, MC32120-3, MC32120-4

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	35%	15-110%
4165-62-2	Phenol-d5	25%	15-110%
118-79-6	2,4,6-Tribromophenol	76%	15-110%
4165-60-0	Nitrobenzene-d5	66%	30-130%
321-60-8	2-Fluorobiphenyl	60%	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	

Method Blank Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38980-MB	190888.D	1	07/28/14	MR	07/16/14	OP38980	MSI3383

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

MC32120-1, MC32120-2, MC32120-3, MC32120-4

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	0.057	0.20	0.050	ug/l	J
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	ug/l	
85-01-8	Phenanthrene	0.052	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	30%	15-110%
4165-62-2	Phenol-d5	21%	15-110%
118-79-6	2,4,6-Tribromophenol	72%	15-110%
4165-60-0	Nitrobenzene-d5	56%	30-130%
321-60-8	2-Fluorobiphenyl	51%	30-130%
1718-51-0	Terphenyl-d14	68%	30-130%

Blank Spike Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38979-BS	X03978.D	1	07/28/14	WK	07/16/14	OP38979	MSX131

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

MC32120-1, MC32120-2, MC32120-3, MC32120-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	14.8	30	30-130
95-57-8	2-Chlorophenol	50	37.1	74	30-130
59-50-7	4-Chloro-3-methyl phenol	50	42.8	86	30-130
120-83-2	2,4-Dichlorophenol	50	41.8	84	30-130
105-67-9	2,4-Dimethylphenol	50	29.5	59	30-130
51-28-5	2,4-Dinitrophenol	50	22.0	44	30-130
534-52-1	4,6-Dinitro-o-cresol	50	31.3	63	30-130
95-48-7	2-Methylphenol	50	33.2	66	30-130
	3&4-Methylphenol	100	64.4	64	30-130
88-75-5	2-Nitrophenol	50	40.0	80	30-130
100-02-7	4-Nitrophenol	50	18.1	36	30-130
87-86-5	Pentachlorophenol	50	40.0	80	30-130
108-95-2	Phenol	50	19.1	38	30-130
95-95-4	2,4,5-Trichlorophenol	50	47.1	94	30-130
88-06-2	2,4,6-Trichlorophenol	50	45.6	91	30-130
62-53-3	Aniline	50	28.6	57	40-140
101-55-3	4-Bromophenyl phenyl ether	50	52.6	105	40-140
85-68-7	Butyl benzyl phthalate	50	51.9	104	40-140
100-51-6	Benzyl Alcohol	50	30.0	60	40-140
91-58-7	2-Chloronaphthalene	50	45.4	91	40-140
106-47-8	4-Chloroaniline	50	41.8	84	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	43.4	87	40-140
111-44-4	bis(2-Chloroethyl)ether	50	41.8	84	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	40.8	82	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	49.3	99	40-140
122-66-7	1,2-Diphenylhydrazine	50	50.0	100	40-140
121-14-2	2,4-Dinitrotoluene	50	53.5	107	40-140
606-20-2	2,6-Dinitrotoluene	50	53.3	107	40-140
91-94-1	3,3'-Dichlorobenzidine	50	43.9	88	40-140
132-64-9	Dibenzofuran	50	42.6	85	40-140
84-74-2	Di-n-butyl phthalate	50	48.0	96	40-140
117-84-0	Di-n-octyl phthalate	50	60.1	120	40-140
84-66-2	Diethyl phthalate	50	51.4	103	40-140
131-11-3	Dimethyl phthalate	50	51.4	103	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	55.5	111	40-140
118-74-1	Hexachlorobenzene	50	53.8	108	40-140

* = Outside of Control Limits.

7.2.1

Blank Spike Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38979-BS	X03978.D	1	07/28/14	WK	07/16/14	OP38979	MSX131

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

MC32120-1, MC32120-2, MC32120-3, MC32120-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	19.5	39* a	40-140
67-72-1	Hexachloroethane	50	38.2	76	40-140
78-59-1	Isophorone	50	41.7	83	40-140
88-74-4	2-Nitroaniline	50	51.8	104	40-140
99-09-2	3-Nitroaniline	50	48.7	97	40-140
100-01-6	4-Nitroaniline	50	46.1	92	40-140
98-95-3	Nitrobenzene	50	42.8	86	40-140
62-75-9	n-Nitrosodimethylamine	50	23.0	46	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	45.7	91	40-140
86-30-6	N-Nitrosodiphenylamine	50	44.6	89	40-140
110-86-1	Pyridine	50	19.8	40	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	37%	15-110%
4165-62-2	Phenol-d5	28%	15-110%
118-79-6	2,4,6-Tribromophenol	81%	15-110%
4165-60-0	Nitrobenzene-d5	71%	30-130%
321-60-8	2-Fluorobiphenyl	67%	30-130%
1718-51-0	Terphenyl-d14	83%	30-130%

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

* = Outside of Control Limits.

7.2.1

Blank Spike Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38980-BS	I90889.D	1	07/28/14	MR	07/16/14	OP38980	MSI3383

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

MC32120-1, MC32120-2, MC32120-3, MC32120-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	37.6	75	40-140
208-96-8	Acenaphthylene	50	32.6	65	40-140
120-12-7	Anthracene	50	38.0	76	40-140
56-55-3	Benzo(a)anthracene	50	42.8	86	40-140
50-32-8	Benzo(a)pyrene	50	38.3	77	40-140
205-99-2	Benzo(b)fluoranthene	50	41.9	84	40-140
191-24-2	Benzo(g,h,i)perylene	50	42.8	86	40-140
207-08-9	Benzo(k)fluoranthene	50	35.9	72	40-140
218-01-9	Chrysene	50	39.5	79	40-140
53-70-3	Dibenzo(a,h)anthracene	50	40.8	82	40-140
206-44-0	Fluoranthene	50	36.7	73	40-140
86-73-7	Fluorene	50	39.3	79	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	42.0	84	40-140
90-12-0	1-Methylnaphthalene	50	37.2	74	40-140
91-57-6	2-Methylnaphthalene	50	37.7	75	40-140
85-01-8	Phenanthrene	50	39.0	78	40-140
129-00-0	Pyrene	50	35.7	71	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	33%	15-110%
4165-62-2	Phenol-d5	22%	15-110%
118-79-6	2,4,6-Tribromophenol	80%	15-110%
4165-60-0	Nitrobenzene-d5	60%	30-130%
321-60-8	2-Fluorobiphenyl	58%	30-130%
1718-51-0	Terphenyl-d14	69%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38979-MS	X03979.D	1	07/28/14	WK	07/16/14	OP38979	MSX131
OP38979-MSD	X03980.D	1	07/28/14	WK	07/16/14	OP38979	MSX131
MC32000-16	X03981.D	1	07/28/14	WK	07/16/14	OP38979	MSX131

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

MC32120-1, MC32120-2, MC32120-3, MC32120-4

7.3.1

CAS No.	Compound	MC32000-16 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	17.0	34	50	14.3	29* a	17	30-130/20
95-57-8	2-Chlorophenol	ND		50	38.7	77	50	37.3	75	4	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	42.3	85	50	41.6	83	2	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	41.9	84	50	41.4	83	1	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	31.5	63	50	31.4	63	0	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	23.8	48	50	24.7	49	4	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	32.0	64	50	33.0	66	3	30-130/20
95-48-7	2-Methylphenol	ND		50	34.4	69	50	32.3	65	6	30-130/20
	3&4-Methylphenol	ND		100	65.8	66	100	60.6	61	8	30-130/20
88-75-5	2-Nitrophenol	ND		50	40.6	81	50	40.1	80	1	30-130/20
100-02-7	4-Nitrophenol	ND		50	18.0	36	50	17.4	35	3	30-130/20
87-86-5	Pentachlorophenol	ND		50	37.2	74	50	40.0	80	7	30-130/20
108-95-2	Phenol	ND		50	19.9	40	50	18.2	36	9	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	45.9	92	50	45.7	91	0	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	44.0	88	50	45.4	91	3	30-130/20
62-53-3	Aniline	ND		50	31.8	64	50	27.0	54	16	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	56.0	112	50	52.5	105	6	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	53.3	107	50	49.8	100	7	40-140/20
100-51-6	Benzyl Alcohol	ND		50	35.2	70	50	30.8	62	13	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	47.6	95	50	44.2	88	7	40-140/20
106-47-8	4-Chloroaniline	ND		50	44.6	89	50	40.4	81	10	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	46.3	93	50	42.9	86	8	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	45.5	91	50	41.0	82	10	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	44.0	88	50	39.8	80	10	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	51.4	103	50	47.3	95	8	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	52.0	104	50	50.2	100	4	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	55.1	110	50	51.3	103	7	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	54.4	109	50	50.8	102	7	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	48.2	96	50	40.2	80	18	40-140/20
132-64-9	Dibenzofuran	ND		50	44.2	88	50	41.1	82	7	40-140/20
84-74-2	Di-n-butyl phthalate	0.31	J	50	48.9	97	50	46.9	93	4	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	62.5	125	50	56.7	113	10	40-140/20
84-66-2	Diethyl phthalate	ND		50	52.8	106	50	48.6	97	8	40-140/20
131-11-3	Dimethyl phthalate	ND		50	53.4	107	50	49.9	100	7	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	57.6	115	50	53.7	107	7	40-140/20
118-74-1	Hexachlorobenzene	ND		50	56.2	112	50	53.3	107	5	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38979-MS	X03979.D	1	07/28/14	WK	07/16/14	OP38979	MSX131
OP38979-MSD	X03980.D	1	07/28/14	WK	07/16/14	OP38979	MSX131
MC32000-16	X03981.D	1	07/28/14	WK	07/16/14	OP38979	MSX131

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

MC32120-1, MC32120-2, MC32120-3, MC32120-4

CAS No.	Compound	MC32000-16 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	22.7	45	50	21.2	42	7	40-140/20
67-72-1	Hexachloroethane	ND		50	42.1	84	50	37.9	76	11	40-140/20
78-59-1	Isophorone	ND		50	43.9	88	50	40.6	81	8	40-140/20
88-74-4	2-Nitroaniline	ND		50	53.1	106	50	49.4	99	7	40-140/20
99-09-2	3-Nitroaniline	ND		50	49.6	99	50	45.6	91	8	40-140/20
100-01-6	4-Nitroaniline	ND		50	48.0	96	50	43.0	86	11	40-140/20
98-95-3	Nitrobenzene	ND		50	45.9	92	50	42.4	85	8	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	25.0	50	50	23.4	47	7	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	49.6	99	50	44.0	88	12	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	47.0	94	50	44.0	88	7	40-140/20
110-86-1	Pyridine	ND		50	21.5	43	50	19.2	38* [a]	11	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC32000-16 Limits	
367-12-4	2-Fluorophenol	42%	38%	42%	15-110%
4165-62-2	Phenol-d5	31%	27%	30%	15-110%
118-79-6	2,4,6-Tribromophenol	88%	82%	85%	15-110%
4165-60-0	Nitrobenzene-d5	79%	72%	78%	30-130%
321-60-8	2-Fluorobiphenyl	72%	66%	72%	30-130%
1718-51-0	Terphenyl-d14	89%	80%	90%	30-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP38980-MS	I90890.D	1	07/28/14	MR	07/16/14	OP38980	MSI3383
OP38980-MSD	I90891.D	1	07/28/14	MR	07/16/14	OP38980	MSI3383
MC32000-17	I90892.D	1	07/28/14	MR	07/16/14	OP38980	MSI3383

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

MC32120-1, MC32120-2, MC32120-3, MC32120-4

7.3.2

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CAS No.	Compound	MC32000-17 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	39.6	79	50	37.0	74	7	40-140/20
208-96-8	Acenaphthylene	ND		50	34.2	68	50	32.2	64	6	40-140/20
120-12-7	Anthracene	ND		50	39.0	78	50	37.3	75	4	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	44.0	88	50	41.6	83	6	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	39.2	78	50	37.1	74	6	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	43.0	86	50	39.8	80	8	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	43.6	87	50	41.6	83	5	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	36.6	73	50	35.5	71	3	40-140/20
218-01-9	Chrysene	ND		50	40.7	81	50	38.9	78	5	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	41.8	84	50	39.7	79	5	40-140/20
206-44-0	Fluoranthene	ND		50	37.5	75	50	35.8	72	5	40-140/20
86-73-7	Fluorene	ND		50	40.9	82	50	38.6	77	6	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	42.9	86	50	40.7	81	5	40-140/20
90-12-0	1-Methylnaphthalene	0.065	J	50	39.7	79	50	36.6	73	8	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	40.4	81	50	37.4	75	8	40-140/20
85-01-8	Phenanthrene	0.038	J	50	40.2	80	50	38.5	77	4	40-140/20
129-00-0	Pyrene	ND		50	36.8	74	50	35.4	71	4	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC32000-17	Limits
367-12-4	2-Fluorophenol	37%	33%	35%	15-110%
4165-62-2	Phenol-d5	25%	22%	24%	15-110%
118-79-6	2,4,6-Tribromophenol	85%	81%	80%	15-110%
4165-60-0	Nitrobenzene-d5	65%	59%	65%	30-130%
321-60-8	2-Fluorobiphenyl	62%	57%	62%	30-130%
1718-51-0	Terphenyl-d14	72%	67%	74%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSI3383-CC3320	Injection Date:	07/28/14
Lab File ID:	I90884.D	Injection Time:	08:22
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	680355	4.36	1407590	5.41	750403	6.96	1285689	8.37	790065	11.14	2101925	12.65
Upper Limit [a]	1360710	4.86	2815180	5.91	1500806	7.46	2571378	8.87	1580130	11.64	4203850	13.15
Lower Limit [b]	340178	3.86	703795	4.91	375202	6.46	642845	7.87	395033	10.64	1050963	12.15
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
ZZZZZZZ	723263	4.36	1495016	5.41	780439	6.96	1346857	8.37	818241	11.14	2199313	12.65
ZZZZZZZ	705795	4.36	1468848	5.41	755778	6.96	1298679	8.38	793476	11.14	2157828	12.65
ZZZZZZZ	703545	4.36	1486574	5.41	765716	6.96	1321322	8.37	813855	11.14	2180216	12.66
OP38980-MB	702126	4.36	1472463	5.41	764879	6.96	1314002	8.37	818449	11.14	2180519	12.65
OP38980-BS	688060	4.36	1460725	5.41	753569	6.96	1296030	8.38	806802	11.15	2122316	12.66
OP38980-MS	678303	4.35	1450186	5.41	753072	6.96	1291988	8.38	804237	11.15	2124961	12.66
OP38980-MSD	684269	4.36	1475893	5.41	764948	6.96	1311239	8.38	821423	11.15	2185749	12.66
MC32000-17	600372	4.36	1264502	5.41	661557	6.96	1138416	8.37	692573	11.14	1852131	12.65
MC32120-1	664020	4.36	1393852	5.41	733390	6.96	1255433	8.37	773397	11.14	2079327	12.65
MC32120-2	656037	4.36	1370237	5.41	704479	6.96	1206114	8.37	750514	11.14	2014630	12.66
MC32120-3	649875	4.36	1346489	5.41	699274	6.96	1206057	8.37	749601	11.14	2002239	12.65
MC32120-4	695356	4.37	1421944	5.41	736462	6.96	1255873	8.38	730312	11.14	1928967	12.66
OP39111-MB	631539	4.35	1325855	5.41	690169	6.95	1184831	8.37	718530	11.14	1933812	12.65
OP39111-BS	645398	4.36	1371599	5.41	706566	6.96	1219902	8.38	744300	11.15	1979600	12.66
OP39111-MS	637856	4.36	1365416	5.41	707096	6.96	1215544	8.38	752849	11.15	1988604	12.66
OP39111-MSD	611328	4.36	1294518	5.41	672567	6.96	1151628	8.38	706877	11.15	1877664	12.66
ZZZZZZZ	622398	4.35	1297687	5.41	679831	6.96	1144889	8.37	698081	11.14	1863032	12.65
ZZZZZZZ	660434	4.35	1396226	5.41	724902	6.95	1242259	8.37	756698	11.14	1987188	12.66
ZZZZZZZ	656436	4.35	1376013	5.41	712255	6.95	1219344	8.37	739802	11.14	1952251	12.66
ZZZZZZZ	616353	4.35	1265563	5.41	631236	6.96	1085198	8.38	697819	11.14	1870716	12.66
ZZZZZZZ	604055	4.35	1244564	5.41	623434	6.95	1027275	8.37	606963	11.14	1669786	12.66
ZZZZZZZ	645722	4.37	1254801	5.41	660004	6.96	1094541	8.37	657343	11.14	1742712	12.65
ZZZZZZZ	662978	4.35	1306277	5.41	677075	6.96	1133629	8.38	740511	11.14	2001317	12.66
ZZZZZZZ	653932	4.35	1379398	5.41	709345	6.95	1202828	8.37	737842	11.14	1941216	12.65
ZZZZZZZ	680708	4.35	1420409	5.41	721071	6.95	1210567	8.37	725271	11.14	1923964	12.65

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

7.4.1

Semivolatile Internal Standard Area Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSX131-CC106	Injection Date:	07/28/14
Lab File ID:	X03957.D	Injection Time:	08:01
Instrument ID:	GCMSX	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	302173	3.52	1135508	4.56	628031	6.08	1015275	7.36	814363	9.79	651609	11.38
Upper Limit [a]	604346	4.02	2271016	5.06	1256062	6.58	2030550	7.86	1628726	10.29	1303218	11.88
Lower Limit [b]	151087	3.02	567754	4.06	314016	5.58	507638	6.86	407182	9.29	325805	10.88

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP39086-MB	508238	3.52	1924906	4.56	1050741	6.08	1617221	7.36	1078149	9.79	755188	11.37
OP39086-BS	507616	3.52	1913957	4.56	1052797	6.08	1654063	7.36	1215076	9.79	945267	11.38
OP39086-MS	498265	3.52	1883209	4.56	986626	6.08	1509391	7.36	1057672	9.80	809340	11.39
OP39086-MSD	409960	3.52	1526086	4.56	829025	6.08	1308560	7.36	1064451	9.80	788593	11.39
MC32281-1	351602	3.52	1338568	4.56	714493	6.08	1075887	7.36	797106	9.79	643315	11.39
ZZZZZZ	392001	3.52	1469469	4.56	803303	6.08	1172200	7.36	782410	9.79	657749	11.38
ZZZZZZ	528482	3.52	2010455	4.56	1084183	6.08	1554829	7.36	1072938	9.79	869026	11.39
ZZZZZZ	399576	3.52	1497097	4.56	827949	6.08	1247593	7.36	960684	9.79	813121	11.38
ZZZZZZ	356864	3.52	1332120	4.56	742432	6.08	1124959	7.36	879717	9.79	734307	11.38
ZZZZZZ	409291	3.52	1539133	4.56	852944	6.08	1308413	7.36	1005327	9.79	822378	11.38
ZZZZZZ	369338	3.52	1366480	4.56	758428	6.08	1150004	7.36	905190	9.79	715191	11.38
ZZZZZZ	393795	3.52	1525646	4.56	840537	6.08	1278080	7.36	994639	9.79	776413	11.38
ZZZZZZ	350377	3.52	1290081	4.56	708750	6.08	1070496	7.36	820476	9.79	659543	11.38
ZZZZZZ	359303	3.52	1329401	4.56	735632	6.08	1117020	7.36	862786	9.79	684767	11.38
ZZZZZZ	502940	3.52	1872507	4.56	1007507	6.08	1438333	7.36	924792	9.79	734284	11.38
ZZZZZZ	453986	3.52	1730698	4.56	942098	6.08	1387541	7.36	942218	9.79	760716	11.38
ZZZZZZ	482143	3.51	1783662	4.56	916383	6.08	1330347	7.36	868862	9.79	718231	11.37
ZZZZZZ	478380	3.52	1804465	4.56	964927	6.08	1343312	7.36	901144	9.79	742080	11.37
ZZZZZZ	582213	3.51	2220037	4.56	1192756	6.08	1676969	7.36	1050209	9.79	828561	11.37
OP38979-MB	413855	3.51	1562523	4.56	857896	6.08	1317237	7.35	965958	9.79	743819	11.37
OP38979-BS	406366	3.52	1543001	4.56	820587	6.08	1315849	7.36	1007670	9.79	791204	11.38
OP38979-MS	404253	3.52	1551169	4.56	834554	6.08	1320302	7.36	1004702	9.79	784874	11.38
OP38979-MSD	444273	3.52	1632596	4.56	850577	6.08	1296722	7.36	1004312	9.79	816248	11.38
MC32000-16	343871	3.51	1279353	4.56	679809	6.08	1050507	7.35	775755	9.78	599835	11.37
MC32120-1	392404	3.51	1482346	4.56	828340	6.08	1250610	7.35	903368	9.78	699051	11.37
MC32120-2	381697	3.51	1434794	4.56	796315	6.08	1199801	7.35	868326	9.78	699726	11.37
MC32120-3	324669	3.52	1234682	4.56	693841	6.08	1072098	7.35	821048	9.78	646019	11.37
MC32120-4	385749	3.52	1407274	4.56	722711	6.08	1053369	7.36	793629	9.78	643926	11.37

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

7.4.2

Semivolatile Internal Standard Area Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSX131-CC106	Injection Date:	07/28/14
Lab File ID:	X03957.D	Injection Time:	08:01
Instrument ID:	GCMSX	Method:	SW846 8270D

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

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

7.4.2

Semivolatile Surrogate Recovery Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC32120-1	X03982.D	41	30	84	75	70	87
MC32120-2	X03983.D	41	30	88	77	73	86
MC32120-3	X03984.D	47	33	92	80	74	89
MC32120-4	X03985.D	34	33	103	86	81	92
OP38979-BS	X03978.D	37	28	81	71	67	83
OP38979-MB	X03977.D	35	25	76	66	60	84
OP38979-MS	X03979.D	42	31	88	79	72	89
OP38979-MSD	X03980.D	38	27	82	72	66	80

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: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC32120-1	I90893.D	65	62	70
MC32120-2	I90894.D	65	64	68
MC32120-3	I90895.D	67	67	74
MC32120-4	I90896.D	71	69	79
OP38980-BS	I90889.D	60	58	69
OP38980-MB	I90888.D	56	51	68
OP38980-MS	I90890.D	65	62	72
OP38980-MSD	I90891.D	59	57	67

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

7.5.2

New England ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39069-MB	BK39758.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290

The QC reported here applies to the following samples: Method: SW846 8011

MC32120-1, MC32120-2, MC32120-3, MC32120-4, MC32120-6

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	111%	36-173%
460-00-4	Bromofluorobenzene (S)	109%	36-173%

Blank Spike Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39069-BS	BK39759.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290

The QC reported here applies to the following samples: Method: SW846 8011

MC32120-1, MC32120-2, MC32120-3, MC32120-4, MC32120-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.142	0.11	78	60-140
106-93-4	1,2-Dibromoethane	0.142	0.11	78	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	127%	36-173%
460-00-4	Bromofluorobenzene (S)	118%	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39069-MS	BK39760.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290
OP39069-MSD	BK39761.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290
MC32236-13	BK39762.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290

The QC reported here applies to the following samples: Method: SW846 8011

MC32120-1, MC32120-2, MC32120-3, MC32120-4, MC32120-6

CAS No.	Compound	MC32236-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.142	0.10	71	0.142	0.10	71	0	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.142	0.11	78	0.142	0.11	78	0	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC32236-13 Limits
460-00-4	Bromofluorobenzene (S)	130%	117%	121% 36-173%
460-00-4	Bromofluorobenzene (S)	120%	111%	116% 36-173%

8.3.1

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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]
MC32120-1	BK39763.D	110	99
MC32120-2	BK39764.D	118	111
MC32120-3	BK39765.D	119	115
MC32120-4	BK39766.D	108	111
MC32120-6	BK39767.D	100	98
OP39069-BS	BK39759.D	127	118
OP39069-MB	BK39758.D	111	109
OP39069-MS	BK39760.D	130	120
OP39069-MSD	BK39761.D	117	111

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC32120
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	GBK1290-ICC1290	Injection Date:	07/24/14
Lab File ID:	BK39754.D	Injection Time:	17:33
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.39	4.41

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP39069-MB	BK39758.D	07/24/14	18:50	4.39	4.41
OP39069-BS	BK39759.D	07/24/14	19:10	4.39	4.41
OP39069-MS	BK39760.D	07/24/14	19:29	4.39	4.41
OP39069-MSD	BK39761.D	07/24/14	19:48	4.39	4.41
MC32236-13	BK39762.D	07/24/14	20:07	4.39	4.41
MC32120-1	BK39763.D	07/24/14	20:26	4.39	4.41
MC32120-2	BK39764.D	07/24/14	20:46	4.39	4.41
MC32120-3	BK39765.D	07/24/14	21:05	4.39	4.41
MC32120-4	BK39766.D	07/24/14	21:25	4.39	4.41
MC32120-6	BK39767.D	07/24/14	21:44	4.39	4.41

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 – 3rd Quarter 2014 Data Review

Laboratory SDG: MC32168

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 8/1/2014

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

Sample Identification	Sample Identification
MW4-ROX-071614	MW8-ROX-071614
MW7-ROX-071614	MW7-ROX-071614-Dup
TB-071614-HCL	TB-071614-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 and SVOC LCS recoveries were outside evaluation criteria. The VOC surrogate recovery for toluene-d_8 was outside evaluation criteria in sample MW8-ROX-071614-Run#1. Internal standard area recoveries were outside criteria in several samples. Samples were diluted due to high levels of VOC target analytes. These issues are addressed further in the appropriate sections below. Additionally, the continuing calibration standard for several analytes exceeded 20 percent difference (%D), and several others exceeded 40%D. Also, the initial calibration verification for dichlorodifluoromethane exceeded 30%D.

The cooler receipt form indicated that one of one cooler was received by the laboratory at a temperature of 0.9ºC, which is outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
OP39011-MB	SVOCs	Di-n-butyl phthalate	0.23 µg/L
OP39012-MB	PAHs	Phenanthrene	0.020 µg/L

Qualifications due to blank contamination are included in the table below. Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not required qualification.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
MW4-ROX-071614	SVOCs	Di-n-butyl phthalate	-	**U**
MW4-ROX-071614	PAHs	Phenanthrene	-	**U**
MW8-ROX-071614	SVOCs	Di-n-butyl phthalate	-	**U**
MW7-ROX-071614	SVOCs	Di-n-butyl phthalate	-	**U**
MW7-ROX-071614-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
MSV1225-BS	VOCs	Acrylonitrile	**133**	70-130
MSV1225-BS	VOCs	Bromomethane	**193**	70-130
MSV1225-BS	VOCs	Chloroethane	**210**	70-130
MSV1225-BS	VOCs	Chloromethane	**189**	70-130
MSV1225-BS	VOCs	1,1-Dichloroethene	**135**	70-130
MSV1225-BS	VOCs	trans-1,2-Dichloroethene	**131**	70-130
MSV1225-BS	VOCs	Methyl tert butyl ether	**132**	70-130
MSV1225-BS	VOCs	Methylene chloride	**131**	70-130
MSV1225-BS	VOCs	Trichlorofluoromethane	**168**	70-130
MSV1225-BS	VOCs	Vinyl acetate	**132**	70-130
MSV1225-BS	VOCs	Vinyl chloride	**174**	70-130
OP39011-BS	SVOCs	Hexachlorocyclopentadiene	**29**	40-140

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS MSV1225-BS was also associated with the trip blank. Blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
MW4-ROX-071614	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW8-ROX-071614	VOCs	Methyl tert butyl ether	**J**
MW8-ROX-071614	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW7-ROX-071614	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW7-ROX-071614-Dup	SVOCs	Hexachlorocyclopentadiene	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW8-ROX-071614-Run#1	VOCs	Toluene-d_8	**65**	70-130

Analytical data that required qualification based on surrogate data are included in the table below.

Sample ID	Parameter	Analyte	Qualification
MW8-ROX-071614	VOCs	All non-detects	**UJ**
MW8-ROX-071614	VOCs	n-Butylbenzene	**J**
MW8-ROX-071614	VOCs	sec-Butylbenzene	**J**
MW8-ROX-071614	VOCs	tert-Butylbenzene	**J**
MW8-ROX-071614	VOCs	Isopropylbenzene	**J**
MW8-ROX-071614	VOCs	p-Isopropyltoluene	**J**
MW8-ROX-071614	VOCs	Naphthalene	**J**
MW8-ROX-071614	VOCs	n-Propylbenzene	**J**
MW8-ROX-071614	VOCs	Toluene	**J**
MW8-ROX-071614	VOCs	1,2,4-Trimethylbenzene	**J**
MW8-ROX-071614	VOCs	1,3,5-Trimethylbenzene	**J**
MW8-ROX-071614	VOCs	m,p-Xylene	**J**
MW8-ROX-071614	VOCs	o-Xylene	**J**
MW8-ROX-071614	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
MW4-ROX-071614	VOCs	1,4-Difluorobenzene	**1497250**	257018-1028070
MW4-ROX-071614	VOCs	Chlorobenzene-d_5	**414808**	98769-395074
MW4-ROX-071614	VOCs	Tert butyl alcohol-d_9	**234913**	43401-173602
MW8-ROX-071614	VOCs	1,4-Difluorobenzene	**2282079**	257018-1028070
MW8-ROX-071614	VOCs	Chlorobenzene-d_5	**446668**	98769-395074
MW8-ROX-071614	VOCs	1,4-Dichlorobenzene-d_4	**664914**	127682-510726
MW7-ROX-071614	VOCs	1,4-Difluorobenzene	**2775199**	257018-1028070
MW7-ROX-071614	VOCs	Chlorobenzene-d_5	**605272**	98769-395074
MW7-ROX-071614	VOCs	1,4-Dichlorobenzene-d_4	**665352**	127682-510726
MW7-ROX-071614	VOCs	Tert butyl alcohol-d_9	**279915**	43401-173602

Sample ID	Parameter	Analyte	IS Area Recovery	IS Criteria
MW7-ROX-071614-Dup	VOCs	1,4-Difluorobenzene	**2878266**	257018-1028070
MW7-ROX-071614-Dup	VOCs	Chlorobenzene-d_5	**658120**	98769-395074
MW7-ROX-071614-Dup	VOCs	1,4-Dichlorobenzene-d_4	**714187**	127682-510726
MW7-ROX-071614-Dup	VOCs	Tert butyl alcohol-d_9	**263249**	43401-173602

Analytical data that required qualification based on internal standard data are included in the table below. Analytical data reported as non-detect and associated with IS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Sample MW8-ROX-071614 was previously qualified in Section 6.0 due to surrogate data outside of evaluation criteria; no further qualification of sample MW8-ROX-071614 was required.

Field ID	Parameter	Analyte	Qualification
MW4-ROX-071614	VOCs	Toluene	**J**
MW7-ROX-071614	VOCs	n-Butylbenzene	**J**
MW7-ROX-071614	VOCs	sec-Butylbenzene	**J**
MW7-ROX-071614	VOCs	tert-Butylbenzene	**J**
MW7-ROX-071614	VOCs	Ethylbenzene	**J**
MW7-ROX-071614	VOCs	Isopropylbenzene	**J**
MW7-ROX-071614	VOCs	p-Isopropyltoluene	**J**
MW7-ROX-071614	VOCs	Naphthalene	**J**
MW7-ROX-071614	VOCs	n-Propylbenzene	**J**
MW7-ROX-071614	VOCs	Toluene	**J**
MW7-ROX-071614	VOCs	1,2,4-Trimethylbenzene	**J**
MW7-ROX-071614	VOCs	1,3,5-Trimethylbenzene	**J**
MW7-ROX-071614	VOCs	m,p-Xylene	**J**
MW7-ROX-071614	VOCs	o-Xylene	**J**
MW7-ROX-071614	VOCs	Xylene (total)	**J**
MW7-ROX-071614-Dup	VOCs	n-Butylbenzene	**J**
MW7-ROX-071614-Dup	VOCs	sec-Butylbenzene	**J**
MW7-ROX-071614-Dup	VOCs	tert-Butylbenzene	**J**
MW7-ROX-071614-Dup	VOCs	Ethylbenzene	**J**
MW7-ROX-071614-Dup	VOCs	Isopropylbenzene	**J**
MW7-ROX-071614-Dup	VOCs	p-Isopropyltoluene	**J**
MW7-ROX-071614-Dup	VOCs	Naphthalene	**J**
MW7-ROX-071614-Dup	VOCs	n-Propylbenzene	**J**
MW7-ROX-071614-Dup	VOCs	Toluene	**J**
MW7-ROX-071614-Dup	VOCs	1,2,4-Trimethylbenzene	**J**
MW7-ROX-071614-Dup	VOCs	1,3,5-Trimethylbenzene	**J**
MW7-ROX-071614-Dup	VOCs	m,p-Xylene	**J**
MW7-ROX-071614-Dup	VOCs	o-Xylene	**J**
MW7-ROX-071614-Dup	VOCs	Xylene (total)	**J**

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
MW7-ROX-071614	MW7-ROX-071614-Dup

Were field duplicates within evaluation criteria?

Yes

11.0 Sample Dilutions

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

Not applicable; analytes were detected in samples that were diluted.

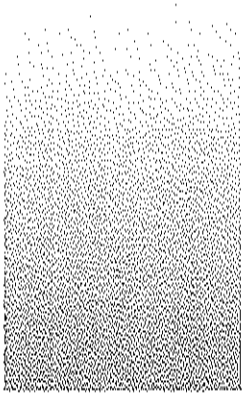
12.0 Additional Qualifications

Were additional qualifications applied?

No

New England ACCUTEST LABORATORIES

07/31/14





Technical Report for

Shell Oil

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana,

Accutest Job Number: MC32168

Sampling Date: 07/16/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: **90**

Reviewed on 8/1/14

Reza Tand
Lab Director

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

Client Service contact: Matthew Morrell 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

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Test results relate only to samples analyzed.

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Sample Summary

Shell Oil

Job No: MC32168

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC32168-1	07/16/14	09:50	CWLC	07/17/14	AQ	Ground Water	MW4-ROX-071614
MC32168-2	07/16/14	11:00	CWLC	07/17/14	AQ	Ground Water	MW8-ROX-071614
MC32168-3	07/16/14	14:15	CWLC	07/17/14	AQ	Ground Water	MW7-ROX-071614
MC32168-4	07/16/14	14:15	CWLC	07/17/14	AQ	Ground Water	MW7-ROX-071614-DUP
MC32168-5	07/16/14	00:00	CWLC	07/17/14	AQ	Trip Blank Water	TB-071614-HCL
MC32168-6	07/16/14	00:00	CWLC	07/17/14	AQ	Trip Blank Water	TB-071614-ST

ACCUTEST LABORATORIES

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	Job No	MC32168
Site:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central	Report Date	7/31/2014 12:59:21 PM

4 Sample(s), 2 Trip Blank(s) were collected on 07/16/2014 and were received at Accutest on 07/17/2014 properly preserved, at 0.9 Deg. C and intact. These Samples received an Accutest job number of MC32168. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Sample 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: MSH2253

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32345-12MS, MC32345-12MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix AQ	Batch ID: MSH2255

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32412-6MS, MC32412-6MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix AQ	Batch ID: MSV1225

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32120-1MS, MC32120-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MSV1225-BS Recovery(s) for 1,1-Dichloroethene, Acrylonitrile, Methyl Tert Butyl Ether, Methylene chloride, trans-1,2-Dichloroethene are outside control limits. Blank Spike meets program technical requirements
- MSV1225-BS Recovery(s) for Bromomethane, Chloroethane, Chloromethane, Trichlorofluoromethane, Vinyl Acetate, Vinyl chloride are outside control limits. Associated samples are non-detect for this compound.
- MC32120-1MS/MSD for Bromomethane, Chloroethane, Chloromethane, Vinyl chloride: Outside control limits. Associated samples are non-detect for this compound.
- Matrix Spike Recovery(s) for 1,1-Dichloroethene, 2,2-Dichloropropane, 2-Chloroethyl vinyl ether, Acrylonitrile, Benzene, Isopropylbenzene, Methyl Tert Butyl Ether, Methylene chloride, trans-1,2-Dichloroethene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2-Chloroethyl vinyl ether, Benzene are outside control limits for sample MC32120-1MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- Matrix Spike Duplicate Recovery(s) for 1,1-Dichloroethene, 2,2-Dichloropropane, Acrylonitrile, Methyl Tert Butyl Ether, trans-1,2-Dichloroethene, 2-Chloroethyl vinyl ether, Benzene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- MC32120-1MS/MSD for has internal standard outside control limits. Outside control limits due to possible matrix interference. Confirmed by MS/MSD
- Continuing calibration check standard MSV1225-CC1177 for chloromethane, vinyl chloride, bromomethane, chloroethane, trichlorofluoromethane exceed 40% Difference (response bias high) Associated samples are non-detect for these compounds.
- MC32168-1,2,3,4 has internal standard outside control limits. Outside control limits due to possible matrix interference. Confirmed by reanalysis.
- Continuing calibration check standard MSV1225-CC1177 for 1,1-dichloroethene, methylene chloride, methyl tert butyl ether, acrylonitrile, trans-1,2-dichloroethene, vinyl acetate, 1,1-dichloroethane, 2,2-dichloropropane, carbon tetrachloride, trans-1,3-dichloropropene exceed 20% Difference (response bias high) Associated samples are non-detect for these compounds.

Volatiles by GCMS By Method SW846 8260C

Matrix AQ	Batch ID: MSV1225

- Initial calibration verification MSV1177-ICV1177 for dichlorodifluoromethane exceed 30% Difference (response bias high). Associated samples are non-detect for this compound
- MC32168-2 for Toluene-D8: Outside control limits due to possible matrix interference. Confirmed by reanalysis.

Extractables by GCMS By Method SW846 8270D

Matrix AQ	Batch ID: OP39011

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32000-22MS, MC32000-22MSD were used as the QC samples indicated.
- Sample(s) MC32168-1, MC32168-2, MC32168-3, MC32168-4 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- OP39011-BS/MS/MSD Recovery(s) for Hexachlorocyclopentadiene are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike 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 4-Nitrophenol are outside control limits for sample OP39011-MSD. High RPD due to possible matrix interference and/or sample heterogeneity.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ	Batch ID: OP39012

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32000-23MS, MC32000-23MSD were used as the QC samples indicated.
- OP39012-MS, OP39012-MSD has internal standard outside control limits. Outside control limits due to possible matrix interference.
- Sample(s) MC32168-1, MC32168-2 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: OP39069

- 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) MC32236-13MS, MC32236-13MSD were used as the QC samples indicated.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC32168).

Summary of Hits

Job Number: MC32168
Account: Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Collected: 07/16/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC32168-1	MW4-ROX-071614					
Benzene		1880	5.0	3.2	ug/l	SW846 8260C
Toluene		6.0 J	1.0	0.33	ug/l	SW846 8260C
Xylene (total)		5.5 J	10	3.6	ug/l	SW846 8260C
Di-n-butyl phthalate		~~0.43~~ JB U	5.2	0.18	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.38 J	2.1	0.34	ug/l	SW846 8270D
1-Methylnaphthalene		0.24	0.21	0.051	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		0.22	0.21	0.076	ug/l	SW846 8270D BY SIM
Phenanthrene		~~0.041~~ JB U	0.052	0.013	ug/l	SW846 8270D BY SIM
MC32168-2	MW8-ROX-071614					
Benzene		280000	500	320	ug/l	SW846 8260C
n-Butylbenzene		6.9 J	5.0	1.1	ug/l	SW846 8260C
sec-Butylbenzene		4.2 J	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene		2.8 J	5.0	0.39	ug/l	SW846 8260C
Ethylbenzene		266	100	38	ug/l	SW846 8260C
Isopropylbenzene		26.6 J	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene		3.2 J	5.0	0.37	ug/l	SW846 8260C
Methyl Tert Butyl Ether		392	100	51	ug/l	SW846 8260C
Naphthalene		59.8	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene		60.6	5.0	0.49	ug/l	SW846 8260C
Toluene		108	1.0	0.33	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		226	5.0	0.32	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		90.4	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene		377	1.0	0.93	ug/l	SW846 8260C
o-Xylene		141	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		518	1.0	0.36	ug/l	SW846 8260C
2-Methylphenol		3.7 J	10	0.23	ug/l	SW846 8270D
3&4-Methylphenol		4.5 J	10	0.48	ug/l	SW846 8270D
Phenol		111	5.2	0.31	ug/l	SW846 8270D
Dibenzofuran		0.41 J	2.1	0.27	ug/l	SW846 8270D
Di-n-butyl phthalate		~~0.45~~ JB U	5.2	0.18	ug/l	SW846 8270D
Diethyl phthalate		0.57 J	5.2	0.21	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.38 J	2.1	0.34	ug/l	SW846 8270D
Acenaphthene		0.18	0.10	0.071	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.068 J	0.10	0.051	ug/l	SW846 8270D BY SIM
Fluorene		0.38	0.10	0.10	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		12.5	0.21	0.051	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		4.8	0.21	0.076	ug/l	SW846 8270D BY SIM
Phenanthrene		0.20 B	0.052	0.013	ug/l	SW846 8270D BY SIM

Summary of Hits

Job Number: MC32168
Account: Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Collected: 07/16/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC32168-3	MW7-ROX-071614					
Benzene		1290000	5000	3200	ug/l	SW846 8260C
n-Butylbenzene		3.6 J	5.0	1.1	ug/l	SW846 8260C
sec-Butylbenzene		2.2 J	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene		2.2 J	5.0	0.39	ug/l	SW846 8260C
Ethylbenzene		208	1.0	0.38	ug/l	SW846 8260C
Isopropylbenzene		12.7	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene		1.5 J	5.0	0.37	ug/l	SW846 8260C
Naphthalene		16.5	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene		19.7	5.0	0.49	ug/l	SW846 8260C
Toluene		224	1.0	0.33	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		143	5.0	0.32	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		32.4	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene		480	1.0	0.93	ug/l	SW846 8260C
o-Xylene		187	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		667	1.0	0.36	ug/l	SW846 8260C
Phenol		61.8	5.2	0.31	ug/l	SW846 8270D
Di-n-butyl phthalate		~~0.27~~ JB	5.2	0.18	ug/l	SW846 8270D
Acenaphthene		0.24	0.10	0.069	ug/l	SW846 8270D BY SIM
Fluorene		0.21	0.10	0.099	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		5.2	0.20	0.050	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		7.9	0.20	0.074	ug/l	SW846 8270D BY SIM
Phenanthrene		0.28	0.050	0.013	ug/l	SW846 8270D BY SIM
MC32168-4	MW7-ROX-071614-DUP					
Benzene		1390000	5000	3200	ug/l	SW846 8260C
n-Butylbenzene		3.4 J	5.0	1.1	ug/l	SW846 8260C
sec-Butylbenzene		2.3 J	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene		2.2 J	5.0	0.39	ug/l	SW846 8260C
Ethylbenzene		206	1.0	0.38	ug/l	SW846 8260C
Isopropylbenzene		13.1	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene		1.5 J	5.0	0.37	ug/l	SW846 8260C
Naphthalene		14.1	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene		19.4	5.0	0.49	ug/l	SW846 8260C
Toluene		222	1.0	0.33	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		142	5.0	0.32	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		31.8	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene		465	1.0	0.93	ug/l	SW846 8260C
o-Xylene		181	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		647	1.0	0.36	ug/l	SW846 8260C
Phenol		63.8	5.2	0.31	ug/l	SW846 8270D
Di-n-butyl phthalate		~~0.38~~ JB	5.2	0.18	ug/l	SW846 8270D
Acenaphthene		0.22	0.10	0.069	ug/l	SW846 8270D BY SIM

Summary of Hits

Job Number: MC32168
Account: Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Collected: 07/16/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Fluorene		0.19	0.10	0.099	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		5.2	0.20	0.050	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		7.7	0.20	0.074	ug/l	SW846 8270D BY SIM
Phenanthrene		0.26	0.050	0.013	ug/l	SW846 8270D BY SIM

MC32168-5 TB-071614-HCL

No hits reported in this sample.

MC32168-6 TB-071614-ST

No hits reported in this sample.

New England ACCUTEST LABORATORIES

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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW4-ROX-071614		
Lab Sample ID:	MC32168-1	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33196.D	1	07/24/14	AMY	n/a	n/a	MSV1225
Run #2	H67798.D	10	07/28/14	AMY	n/a	n/a	MSH2253

	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	1880 [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	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND [a]	50	4.2	ug/l	
98-06-6	tert-Butylbenzene	ND [a]	50	3.9	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:	MW4-ROX-071614		
Lab Sample ID:	MC32168-1	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND [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	ND [a]	50	3.5	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 [a]	50	6.9	ug/l	
103-65-1	n-Propylbenzene	ND [a]	50	4.9	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	6.0	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 [a]	50	3.2	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND [a]	50	3.8	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 [a]	10	9.3	ug/l	
95-47-6	o-Xylene	ND [a]	10	3.6	ug/l	
1330-20-7	Xylene (total)	5.5 [a]	10	3.6	ug/l	J

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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-071614		
Lab Sample ID:	MC32168-1	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	83%	101%	70-130%
2037-26-5	Toluene-D8	71%	105%	70-130%
460-00-4	4-Bromofluorobenzene	108%	109%	70-130%

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

(a) Result is from Run# 2

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

Report of Analysis

Client Sample ID:	MW4-ROX-071614		
Lab Sample ID:	MC32168-1	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F74831.D	1	07/24/14	WK	07/18/14	OP39011	MSF3296
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.6	ug/l	
95-57-8	2-Chlorophenol	ND	5.2	0.32	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.85	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.41	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.58	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.48	ug/l	
88-75-5	2-Nitrophenol	ND	10	3.0	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.55	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.2	ug/l	
108-95-2	Phenol	ND	5.2	0.31	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.38	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.66	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.2	0.49	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.2	0.55	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.2	0.32	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.57	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.2	0.30	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.2	0.36	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.2	0.34	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.2	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.2	0.25	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.47	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.31	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.2	0.28	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	~~0.43~~ 4	5.2	0.18	ug/l	JB 4
117-84-0	Di-n-octyl phthalate	ND	5.2	0.29	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:	MW4-ROX-071614		
Lab Sample ID:	MC32168-1	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.2	0.21	ug/l	
131-11-3	Dimethyl phthalate	ND	5.2	0.35	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.38	2.1	0.34	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.2	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	UJ
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	46%		15-110%
4165-62-2	Phenol-d5	30%		15-110%
118-79-6	2,4,6-Tribromophenol	82%		15-110%
4165-60-0	Nitrobenzene-d5	80%		30-130%
321-60-8	2-Fluorobiphenyl	79%		30-130%
1718-51-0	Terphenyl-d14	89%		30-130%

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

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-071614		
Lab Sample ID:	MC32168-1	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90919.D	1	07/29/14	MR	07/18/14	OP39012	MSI3384
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.071	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.051	ug/l	
120-12-7	Anthracene	ND	0.10	0.095	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.052	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.030	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.052	0.033	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.028	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.040	ug/l	
218-01-9	Chrysene	ND	0.10	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.033	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.042	ug/l	
86-73-7	Fluorene	ND	0.10	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.032	ug/l	
90-12-0	1-Methylnaphthalene	0.24	0.21	0.051	ug/l	
91-57-6	2-Methylnaphthalene	0.22	0.21	0.076	ug/l	
85-01-8	Phenanthrene	~~0.011~~ J	0.052	0.013	ug/l	JB J
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	86%		30-130%
321-60-8	2-Fluorobiphenyl	71%		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:	MW4-ROX-071614		
Lab Sample ID:	MC32168-1	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39769.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290
Run #2							

	Initial Volume	Final Volume
Run #1	36.2 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	108%		36-173%
460-00-4	Bromofluorobenzene (S)	111%		36-173%

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

Report of Analysis

Client Sample ID:	MW8-ROX-071614		
Lab Sample ID:	MC32168-2	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33197.D	1	07/24/14	AMY	n/a	n/a	MSV1225
Run #2	H67801.D	100	07/28/14	AMY	n/a	n/a	MSH2253
Run #3	H67848.D	1000	07/29/14	AMY	n/a	n/a	MSH2255

	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	U
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	280000 [a]	500	320	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	U
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	6.9	5.0	1.1	ug/l	J
135-98-8	sec-Butylbenzene	4.2	5.0	0.42	ug/l	J
98-06-6	tert-Butylbenzene	2.8	5.0	0.39	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	U
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	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-071614		
Lab Sample ID:	MC32168-2	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

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	UJ
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	0.50	ug/l	
100-41-4	Ethylbenzene	266 b	100	38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	UJ
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	UJ
98-82-8	Isopropylbenzene	26.6	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	3.2	5.0	0.37	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	392 b	100	51	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	UJ
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	UJ
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	UJ
91-20-3	Naphthalene	59.8	5.0	0.69	ug/l	J
103-65-1	n-Propylbenzene	60.6	5.0	0.49	ug/l	J
100-42-5	Styrene	ND	5.0	0.85	ug/l	UJ
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	108	1.0	0.33	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	UJ
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	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	226	5.0	0.32	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	90.4	5.0	0.38	ug/l	J
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	UJ
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	UJ
	m,p-Xylene	377	1.0	0.93	ug/l	J
95-47-6	o-Xylene	141	1.0	0.36	ug/l	J
1330-20-7	Xylene (total)	518	1.0	0.36	ug/l	J

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

Report of Analysis

Client Sample ID:	MW8-ROX-071614		
Lab Sample ID:	MC32168-2	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	81%	105%	110%	70-130%
2037-26-5	Toluene-D8	65% [c]	101%	101%	70-130%
460-00-4	4-Bromofluorobenzene	108%	107%	104%	70-130%

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

(a) Result is from Run# 3
(b) Result is from Run# 2
(c) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

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

Report of Analysis

Client Sample ID:	MW8-ROX-071614		
Lab Sample ID:	MC32168-2	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F74832.D	1	07/24/14	WK	07/18/14	OP39011	MSF3296
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.6	ug/l	
95-57-8	2-Chlorophenol	ND	5.2	0.32	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.85	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.41	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.58	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	3.7	10	0.23	ug/l	J
	3&4-Methylphenol	4.5	10	0.48	ug/l	J
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	111	5.2	0.31	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.38	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.66	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.2	0.49	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.2	0.55	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.2	0.32	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.57	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.2	0.30	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.2	0.36	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.2	0.34	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.2	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.2	0.25	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.47	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.31	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.2	0.28	ug/l	
132-64-9	Dibenzofuran	0.41	2.1	0.27	ug/l	J
84-74-2	Di-n-butyl phthalate	~~0.45~~ 4	5.2	0.18	ug/l	JB 4
117-84-0	Di-n-octyl phthalate	ND	5.2	0.29	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:	MW8-ROX-071614		
Lab Sample ID:	MC32168-2	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	0.57	5.2	0.21	ug/l	J
131-11-3	Dimethyl phthalate	ND	5.2	0.35	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.38	2.1	0.34	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.2	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	UJ
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	45%		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	75%		30-130%
321-60-8	2-Fluorobiphenyl	74%		30-130%
1718-51-0	Terphenyl-d14	81%		30-130%

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

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

Report of Analysis

Client Sample ID:	MW8-ROX-071614		
Lab Sample ID:	MC32168-2	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90920.D	1	07/29/14	MR	07/18/14	OP39012	MSI3384
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.18	0.10	0.071	ug/l	
208-96-8	Acenaphthylene	0.068	0.10	0.051	ug/l	J
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	0.38	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	12.5	0.21	0.051	ug/l	
91-57-6	2-Methylnaphthalene	4.8	0.21	0.076	ug/l	
85-01-8	Phenanthrene	0.20	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	80%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	67%		30-130%

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

Report of Analysis

Client Sample ID:	MW8-ROX-071614		
Lab Sample ID:	MC32168-2	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39770.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290
Run #2							

	Initial Volume	Final Volume
Run #1	36.7 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	100%		36-173%
460-00-4	Bromofluorobenzene (S)	117%		36-173%

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

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

Report of Analysis

Client Sample ID:	MW7-ROX-071614		
Lab Sample ID:	MC32168-3	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33198.D	1	07/24/14	AMY	n/a	n/a	MSV1225
Run #2	H67799.D	10000	07/28/14	AMY	n/a	n/a	MSH2253

	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	1290000 [a]	5000	3200	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	3.6	5.0	1.1	ug/l	J
135-98-8	sec-Butylbenzene	2.2	5.0	0.42	ug/l	J
98-06-6	tert-Butylbenzene	2.2	5.0	0.39	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
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:	MW7-ROX-071614		
Lab Sample ID:	MC32168-3	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	208	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	12.7	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	1.5	5.0	0.37	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	16.5	5.0	0.69	ug/l	J
103-65-1	n-Propylbenzene	19.7	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	224	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	143	5.0	0.32	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	32.4	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	480	1.0	0.93	ug/l	J
95-47-6	o-Xylene	187	1.0	0.36	ug/l	J
1330-20-7	Xylene (total)	667	1.0	0.36	ug/l	J

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

Report of Analysis

Client Sample ID:	MW7-ROX-071614		
Lab Sample ID:	MC32168-3	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%	103%	70-130%
2037-26-5	Toluene-D8	72%	103%	70-130%
460-00-4	4-Bromofluorobenzene	115%	109%	70-130%

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

(a) Result is from Run# 2

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

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

Report of Analysis

Client Sample ID:	MW7-ROX-071614		
Lab Sample ID:	MC32168-3	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F74833.D	1	07/24/14	WK	07/18/14	OP39011	MSF3296
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.6	ug/l	
95-57-8	2-Chlorophenol	ND	5.2	0.32	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.85	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.41	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.58	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.48	ug/l	
88-75-5	2-Nitrophenol	ND	10	3.0	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.55	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.2	ug/l	
108-95-2	Phenol	61.8	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	~~0.27~~ 0.18	5.2	0.18	ug/l	JB
117-84-0	Di-n-octyl phthalate	ND	5.2	0.29	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW7-ROX-071614		
Lab Sample ID:	MC32168-3	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	UJ
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	43%		15-110%
4165-62-2	Phenol-d5	27%		15-110%
118-79-6	2,4,6-Tribromophenol	94%		15-110%
4165-60-0	Nitrobenzene-d5	72%		30-130%
321-60-8	2-Fluorobiphenyl	77%		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	

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RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW7-ROX-071614		
Lab Sample ID:	MC32168-3	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	190921.D	1	07/29/14	MR	07/18/14	OP39012	MSI3384
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.24	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	0.21	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	5.2	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	7.9	0.20	0.074	ug/l	
85-01-8	Phenanthrene	0.28	0.050	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	84%		30-130%
321-60-8	2-Fluorobiphenyl	71%		30-130%
1718-51-0	Terphenyl-d14	71%		30-130%

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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:	MW7-ROX-071614		
Lab Sample ID:	MC32168-3	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39771.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290
Run #2							

	Initial Volume	Final Volume
Run #1	36.3 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	115%		36-173%
460-00-4	Bromofluorobenzene (S)	118%		36-173%

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

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

Report of Analysis

Client Sample ID:	MW7-ROX-071614-DUP		
Lab Sample ID:	MC32168-4	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33199.D	1	07/24/14	AMY	n/a	n/a	MSV1225
Run #2	H67800.D	10000	07/28/14	AMY	n/a	n/a	MSH2253

	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	1390000 [a]	5000	3200	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	3.4	5.0	1.1	ug/l	J
135-98-8	sec-Butylbenzene	2.3	5.0	0.42	ug/l	J
98-06-6	tert-Butylbenzene	2.2	5.0	0.39	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
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:	MW7-ROX-071614-DUP		
Lab Sample ID:	MC32168-4	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	J
100-41-4	Ethylbenzene	206	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	13.1	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	1.5	5.0	0.37	ug/l	J 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	14.1	5.0	0.69	ug/l	J J
103-65-1	n-Propylbenzene	19.4	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	222	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	142	5.0	0.32	ug/l	J J
108-67-8	1,3,5-Trimethylbenzene	31.8	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	465	1.0	0.93	ug/l	J
95-47-6	o-Xylene	181	1.0	0.36	ug/l	J
1330-20-7	Xylene (total)	647	1.0	0.36	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:	MW7-ROX-071614-DUP		
Lab Sample ID:	MC32168-4	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.4

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%	103%	70-130%
2037-26-5	Toluene-D8	72%	102%	70-130%
460-00-4	4-Bromofluorobenzene	118%	111%	70-130%

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

(a) Result is from Run# 2

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

Report of Analysis

Client Sample ID:	MW7-ROX-071614-DUP		
Lab Sample ID:	MC32168-4	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F74834.D	1	07/24/14	WK	07/18/14	OP39011	MSF3296
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.6	ug/l	
95-57-8	2-Chlorophenol	ND	5.2	0.32	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.85	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.41	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.58	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.48	ug/l	
88-75-5	2-Nitrophenol	ND	10	3.0	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.55	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.2	ug/l	
108-95-2	Phenol	63.8	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	~~0.38~~ 4	5.2	0.18	ug/l	JB 4
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-071614-DUP		
Lab Sample ID:	MC32168-4	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.4

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	UCV
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	44%		15-110%
4165-62-2	Phenol-d5	28%		15-110%
118-79-6	2,4,6-Tribromophenol	95%		15-110%
4165-60-0	Nitrobenzene-d5	73%		30-130%
321-60-8	2-Fluorobiphenyl	79%		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:	MW7-ROX-071614-DUP		
Lab Sample ID:	MC32168-4	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90922.D	1	07/29/14	MR	07/18/14	OP39012	MSI3384
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.22	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	0.19	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	5.2	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	7.7	0.20	0.074	ug/l	
85-01-8	Phenanthrene	0.26	0.050	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	85%		30-130%
321-60-8	2-Fluorobiphenyl	67%		30-130%
1718-51-0	Terphenyl-d14	70%		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:	MW7-ROX-071614-DUP		
Lab Sample ID:	MC32168-4	Date Sampled:	07/16/14
Matrix:	AQ - Ground Water	Date Received:	07/17/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39772.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290
Run #2							

	Initial Volume	Final Volume
Run #1	36.5 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	78%		36-173%
460-00-4	Bromofluorobenzene (S)	84%		36-173%

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

Report of Analysis

Client Sample ID:	TB-071614-HCL		
Lab Sample ID:	MC32168-5	Date Sampled:	07/16/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33188.D	1	07/24/14	AMY	n/a	n/a	MSV1225
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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

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

Report of Analysis

Client Sample ID:	TB-071614-HCL		
Lab Sample ID:	MC32168-5	Date Sampled:	07/16/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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

Report of Analysis

Client Sample ID:	TB-071614-HCL		
Lab Sample ID:	MC32168-5	Date Sampled:	07/16/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	123%		70-130%
2037-26-5	Toluene-D8	95%		70-130%
460-00-4	4-Bromofluorobenzene	105%		70-130%

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

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

Report of Analysis

Client Sample ID:	TB-071614-ST		
Lab Sample ID:	MC32168-6	Date Sampled:	07/16/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/17/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39773.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290
Run #2							

	Initial Volume	Final Volume
Run #1	36.1 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	112%		36-173%
460-00-4	Bromofluorobenzene (S)	107%		36-173%

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

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

New England ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

LAB (LOCATION)

☐ VENDOR (.....)
☐ CASCADE
☑ OTHER Accutest Lab, 495 Technology Cir W Marlborough, MA 01752 (508-481-6200)
☐ SPL (Lab Vendor # (.....))

Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:
☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SOACH ☐ CONSULTANT ☐ TANKS
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Bilman

PO #

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

SAP #: 3 4 0 0 0 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 07-16-14

PAGE: 1 of 1

COMPANY CONTACT: URS CORPORATION

COST CODE:

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

PROJECT CONTACT: Elizabeth Kunkel, Wendy Pennington, Bob Bilman, Lindsay Rathbone

TELEPHONE: 314-429-0100 FAX: 314-429-0402

REPORT CONTACT: bob.bilman@urs.com, elizabeth.kunkel@aecom.com, wendy.pennington@urs.com, lindsay.rathbone@aecom.com

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (30 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON/OFF-SEND

☐ LA - RWQCB REPORT FORMAT ☐ USE AGENCY:

DELIVERABLES: ☐ LEVEL 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C°: Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Reports.
* Please provide sample receipt upon login.

☑ SHELL CONTRACT RATE APPLIES
☐ STATE ADMINISTRATIVE RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE EDD DISK

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

State: IL

Site Identification: Roxana Quarterly GW / 21082973.03003

CONTACT NAME: C. Williams, L. Cheadle

LAB USE ONLY: mc32168

REQUESTED ANALYSIS

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8260C SL+TICS	VOC 8015 SL	SVOC 8270D SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	MW4-ROX-071614	7/16/14	0950	Water	2			2	2	6	X	X	X	X	0	
-2	MW8-ROX-071614	7/16/14	1100		↓			↓	↓		X	X	X	X	↓	
-3	MW7-ROX-071614	7/16/14	1415								X	X	X	X		
-4	MW7-ROX-071614-DUP	7/16/14	1415								X	X	X	X		
-5	TB-071614-HCL	7/16/14	00:00							2	X					
-6	TB-071614-ST	7/16/14	00:00						2	2		X				
																19NA, 4K2,

Relinquished by (Signature)	Received by (Signature)	Date	Time
[signature]	FED EX	07/16/14	1700
Relinquished by (Signature): FX	Received by (Signature): [signature]	7-17-14	930
Relinquished by (Signature)	Received by (Signature)	7-17-14	0.9°C

5.1

5

MC32168: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC32168 Client: URS Immediate Client Services Action Required: No

Date / Time Received: 7/17/2014 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:	Infared gun
3. Cooler media:	Ice (bag)

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

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

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

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

Comments

MC32168: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC32168

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC32168-1 Collected: 16-JUL-14 09:50 By: CWLC Received: 17-JUL-14 By: MW4-ROX-071614						
MC32168-1	SW846 8270D	24-JUL-14 12:33	WK	18-JUL-14	MD	AB8270SL+
MC32168-1	SW846 8260C	24-JUL-14 16:35	AMY			V8260SL+
MC32168-1	SW846 8011	24-JUL-14 22:23	NK	22-JUL-14	MEW	V8011SL
MC32168-1	SW846 8260C	28-JUL-14 18:25	AMY			V8260SL+
MC32168-1	SW846 8270D BY SIM	29-JUL-14 09:50	MR	18-JUL-14	MD	B8270SIMSL
MC32168-2 Collected: 16-JUL-14 11:00 By: CWLC Received: 17-JUL-14 By: MW8-ROX-071614						
MC32168-2	SW846 8270D	24-JUL-14 12:56	WK	18-JUL-14	MD	AB8270SL+
MC32168-2	SW846 8260C	24-JUL-14 17:01	AMY			V8260SL+
MC32168-2	SW846 8011	24-JUL-14 22:42	NK	22-JUL-14	MEW	V8011SL
MC32168-2	SW846 8260C	28-JUL-14 19:50	AMY			V8260SL+
MC32168-2	SW846 8270D BY SIM	29-JUL-14 10:13	MR	18-JUL-14	MD	B8270SIMSL
MC32168-2	SW846 8260C	29-JUL-14 18:30	AMY			V8260SL+
MC32168-3 Collected: 16-JUL-14 14:15 By: CWLC Received: 17-JUL-14 By: MW7-ROX-071614						
MC32168-3	SW846 8270D	24-JUL-14 13:19	WK	18-JUL-14	MD	AB8270SL+
MC32168-3	SW846 8260C	24-JUL-14 17:28	AMY			V8260SL+
MC32168-3	SW846 8011	24-JUL-14 23:01	NK	22-JUL-14	MEW	V8011SL
MC32168-3	SW846 8260C	28-JUL-14 18:53	AMY			V8260SL+
MC32168-3	SW846 8270D BY SIM	29-JUL-14 10:35	MR	18-JUL-14	MD	B8270SIMSL
MC32168-4 Collected: 16-JUL-14 14:15 By: CWLC Received: 17-JUL-14 By: MW7-ROX-071614-DUP						
MC32168-4	SW846 8270D	24-JUL-14 13:43	WK	18-JUL-14	MD	AB8270SL+
MC32168-4	SW846 8260C	24-JUL-14 17:54	AMY			V8260SL+
MC32168-4	SW846 8011	24-JUL-14 23:21	NK	22-JUL-14	MEW	V8011SL
MC32168-4	SW846 8260C	28-JUL-14 19:21	AMY			V8260SL+
MC32168-4	SW846 8270D BY SIM	29-JUL-14 10:58	MR	18-JUL-14	MD	B8270SIMSL
MC32168-5 Collected: 16-JUL-14 00:00 By: CWLC Received: 17-JUL-14 By: TB-071614-HCL						

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC32168

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC32168-5	SW846 8260C	24-JUL-14 13:06	AMY			V8260SL+
MC32168-6 Collected: 16-JUL-14 00:00 By: CWLC Received: 17-JUL-14 By: TB-071614-ST						
MC32168-6	SW846 8011	24-JUL-14 23:40	NK	22-JUL-14	MEW	V8011SL

Accutest Internal Chain of Custody

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Received: 07/17/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC32168-1.1	Walk In Ref #22	Michael DiBuono	07/18/14 11:47	Retrieve from Storage
MC32168-1.3	VOC Ref #4	Amy Min Yang	07/28/14 12:47	Retrieve from Storage
MC32168-1.3	Amy Min Yang	GCMSH	07/28/14 12:47	Load on Instrument
MC32168-1.3	GCMSH	Amy Min Yang	07/29/14 11:03	Unload from Instrument
MC32168-1.3	Amy Min Yang	VOC Ref #4	07/29/14 11:03	Return to Storage
MC32168-1.4	VOC Ref #4	Amy Min Yang	07/24/14 11:37	Retrieve from Storage
MC32168-1.4	Amy Min Yang	GCMSV	07/24/14 11:37	Load on Instrument
MC32168-1.6	VOC Ref #4	Marc Tahtamoni	07/22/14 14:29	Retrieve from Storage
MC32168-2.2	Walk In Ref #22	Michael DiBuono	07/18/14 11:47	Retrieve from Storage
MC32168-2.3	VOC Ref #4	Amy Min Yang	07/28/14 12:47	Retrieve from Storage
MC32168-2.3	Amy Min Yang	GCMSH	07/28/14 12:47	Load on Instrument
MC32168-2.3	GCMSH	Amy Min Yang	07/30/14 16:42	Unload from Instrument
MC32168-2.3	Amy Min Yang	VOC Ref #4	07/30/14 16:42	Return to Storage
MC32168-2.4	VOC Ref #4	Amy Min Yang	07/24/14 11:37	Retrieve from Storage
MC32168-2.4	Amy Min Yang	GCMSV	07/24/14 11:37	Load on Instrument
MC32168-2.6	VOC Ref #4	Marc Tahtamoni	07/22/14 14:29	Retrieve from Storage
MC32168-3.1	Walk In Ref #22	Michael DiBuono	07/18/14 11:47	Retrieve from Storage
MC32168-3.3	VOC Ref #4	Amy Min Yang	07/24/14 11:37	Retrieve from Storage
MC32168-3.3	Amy Min Yang	GCMSV	07/24/14 11:37	Load on Instrument
MC32168-3.4	VOC Ref #4	Amy Min Yang	07/28/14 12:47	Retrieve from Storage
MC32168-3.4	Amy Min Yang	GCMSH	07/28/14 12:47	Load on Instrument
MC32168-3.4	GCMSH	Amy Min Yang	07/29/14 11:03	Unload from Instrument
MC32168-3.4	Amy Min Yang	VOC Ref #4	07/29/14 11:03	Return to Storage
MC32168-3.5	VOC Ref #4	Marc Tahtamoni	07/22/14 14:29	Retrieve from Storage
MC32168-4.2	Walk In Ref #22	Michael DiBuono	07/18/14 11:47	Retrieve from Storage
MC32168-4.3	VOC Ref #4	Amy Min Yang	07/24/14 11:37	Retrieve from Storage
MC32168-4.3	Amy Min Yang	GCMSV	07/24/14 11:37	Load on Instrument
MC32168-4.4	VOC Ref #4	Amy Min Yang	07/28/14 12:47	Retrieve from Storage
MC32168-4.4	Amy Min Yang	GCMSH	07/28/14 12:47	Load on Instrument
MC32168-4.4	GCMSH	Amy Min Yang	07/29/14 11:03	Unload from Instrument

5.3

Accutest Internal Chain of Custody

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Received: 07/17/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC32168-4.4	Amy Min Yang	VOC Ref #4	07/29/14 11:03	Return to Storage
MC32168-4.5	VOC Ref #4	Marc Tahtamoni	07/22/14 14:29	Retrieve from Storage
MC32168-5.1	VOC Ref #4	Amy Min Yang	07/24/14 11:37	Retrieve from Storage
MC32168-5.1	Amy Min Yang	GCMSV	07/24/14 11:37	Load on Instrument
MC32168-6.2	VOC Ref #4	Marc Tahtamoni	07/22/14 14:29	Retrieve from Storage

5.3

New England ACCUTEST LABORATORIES

GC/MS Volatiles

6

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1225-MB	V33185.D	1	07/24/14	AMY	n/a	n/a	MSV1225

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

MC32168-1, MC32168-2, MC32168-3, MC32168-4, MC32168-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1225-MB	V33185.D	1	07/24/14	AMY	n/a	n/a	MSV1225

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

MC32168-1, MC32168-2, MC32168-3, MC32168-4, MC32168-5

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

6.1.1

Method Blank Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1225-MB	V33185.D	1	07/24/14	AMY	n/a	n/a	MSV1225

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

MC32168-1, MC32168-2, MC32168-3, MC32168-4, MC32168-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	114%	70-130%
2037-26-5	Toluene-D8	87%	70-130%
460-00-4	4-Bromofluorobenzene	102%	70-130%

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

6.1.1

Method Blank Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSH2253-MB	H67784.D	1	07/28/14	AMY	n/a	n/a	MSH2253

6.1.2

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

MC32168-1, MC32168-2, MC32168-3, MC32168-4

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.32	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	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	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	
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	
	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	106%	70-130%
2037-26-5	Toluene-D8	107%	70-130%
460-00-4	4-Bromofluorobenzene	109%	70-130%

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

Method Blank Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSH2255-MB	H67839.D	1	07/29/14	AMY	n/a	n/a	MSH2255

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

MC32168-2

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.32	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	111%	70-130%
2037-26-5	Toluene-D8	105%	70-130%
460-00-4	4-Bromofluorobenzene	108%	70-130%

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

6.1.3

Blank Spike Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1225-BS	V33182.D	1	07/24/14	AMY	n/a	n/a	MSV1225

The QC reported here applies to the following samples: Method: SW846 8260C

MC32168-1, MC32168-2, MC32168-3, MC32168-4, MC32168-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	43.4	87	70-130
107-02-8	Acrolein	250	302	121	70-130
107-13-1	Acrylonitrile	50	66.6	133* a	70-130
71-43-2	Benzene	50	54.4	109	70-130
108-86-1	Bromobenzene	50	50.2	100	70-130
74-97-5	Bromochloromethane	50	53.0	106	70-130
75-27-4	Bromodichloromethane	50	54.1	108	70-130
75-25-2	Bromoform	50	49.8	100	70-130
74-83-9	Bromomethane	50	96.7	193* b	70-130
78-93-3	2-Butanone (MEK)	50	40.4	81	70-130
104-51-8	n-Butylbenzene	50	54.7	109	70-130
135-98-8	sec-Butylbenzene	50	58.1	116	70-130
98-06-6	tert-Butylbenzene	50	51.8	104	70-130
75-15-0	Carbon disulfide	50	60.0	120	70-130
56-23-5	Carbon tetrachloride	50	61.1	122	70-130
108-90-7	Chlorobenzene	50	50.3	101	70-130
75-00-3	Chloroethane	50	105	210* b	70-130
110-75-8	2-Chloroethyl vinyl ether	50	40.9	82	70-130
67-66-3	Chloroform	50	54.5	109	70-130
74-87-3	Chloromethane	50	94.7	189* b	70-130
95-49-8	o-Chlorotoluene	50	55.1	110	70-130
106-43-4	p-Chlorotoluene	50	55.4	111	70-130
124-48-1	Dibromochloromethane	50	47.7	95	70-130
95-50-1	1,2-Dichlorobenzene	50	51.2	102	70-130
541-73-1	1,3-Dichlorobenzene	50	51.4	103	70-130
106-46-7	1,4-Dichlorobenzene	50	49.4	99	70-130
75-71-8	Dichlorodifluoromethane	50	55.8	112	70-130
75-34-3	1,1-Dichloroethane	50	64.4	129	70-130
107-06-2	1,2-Dichloroethane	50	57.1	114	70-130
75-35-4	1,1-Dichloroethene	50	67.4	135* a	70-130
156-59-2	cis-1,2-Dichloroethene	50	55.5	111	70-130
156-60-5	trans-1,2-Dichloroethene	50	65.4	131* a	70-130
78-87-5	1,2-Dichloropropane	50	50.6	101	70-130
142-28-9	1,3-Dichloropropane	50	50.2	100	70-130
594-20-7	2,2-Dichloropropane	50	64.4	129	70-130
563-58-6	1,1-Dichloropropene	50	55.5	111	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1225-BS	V33182.D	1	07/24/14	AMY	n/a	n/a	MSV1225

The QC reported here applies to the following samples: Method: SW846 8260C

MC32168-1, MC32168-2, MC32168-3, MC32168-4, MC32168-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	54.9	110	70-130
10061-02-6	trans-1,3-Dichloropropene	50	61.0	122	70-130
123-91-1	1,4-Dioxane	250	273	109	70-130
97-63-2	Ethyl methacrylate	50	43.7	87	77-137
100-41-4	Ethylbenzene	50	52.8	106	70-130
87-68-3	Hexachlorobutadiene	50	44.8	90	70-130
591-78-6	2-Hexanone	50	40.0	80	70-130
98-82-8	Isopropylbenzene	50	57.5	115	70-130
99-87-6	p-Isopropyltoluene	50	55.9	112	70-130
1634-04-4	Methyl Tert Butyl Ether	50	65.9	132* a	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	58.0	116	70-130
74-95-3	Methylene bromide	50	51.2	102	70-130
75-09-2	Methylene chloride	50	65.6	131* a	70-130
91-20-3	Naphthalene	50	41.2	82	70-130
103-65-1	n-Propylbenzene	50	57.7	115	70-130
100-42-5	Styrene	50	49.7	99	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	51.8	104	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	54.1	108	70-130
127-18-4	Tetrachloroethene	50	47.9	96	70-130
108-88-3	Toluene	50	53.0	106	70-130
87-61-6	1,2,3-Trichlorobenzene	50	43.6	87	70-130
120-82-1	1,2,4-Trichlorobenzene	50	44.7	89	70-130
71-55-6	1,1,1-Trichloroethane	50	56.5	113	70-130
79-00-5	1,1,2-Trichloroethane	50	51.3	103	70-130
79-01-6	Trichloroethene	50	47.9	96	70-130
75-69-4	Trichlorofluoromethane	50	83.8	168* b	70-130
96-18-4	1,2,3-Trichloropropane	50	55.6	111	70-130
95-63-6	1,2,4-Trimethylbenzene	50	54.7	109	70-130
108-67-8	1,3,5-Trimethylbenzene	50	54.2	108	70-130
108-05-4	Vinyl Acetate	50	66.0	132* b	70-130
75-01-4	Vinyl chloride	50	87.0	174* b	70-130
	m,p-Xylene	100	102	102	70-130
95-47-6	o-Xylene	50	53.4	107	70-130
1330-20-7	Xylene (total)	150	156	104	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1225-BS	V33182.D	1	07/24/14	AMY	n/a	n/a	MSV1225

6.2.1

The QC reported here applies to the following samples: Method: SW846 8260C

MC32168-1, MC32168-2, MC32168-3, MC32168-4, MC32168-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	99%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.
(b) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSH2253-BS	H67782.D	1	07/28/14	AMY	n/a	n/a	MSH2253

6.2.2

The QC reported here applies to the following samples: Method: SW846 8260C

MC32168-1, MC32168-2, MC32168-3, MC32168-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	52.3	105	70-130
135-98-8	sec-Butylbenzene	50	46.0	92	70-130
98-06-6	tert-Butylbenzene	50	45.4	91	70-130
100-41-4	Ethylbenzene	50	45.7	91	70-130
98-82-8	Isopropylbenzene	50	44.5	89	70-130
1634-04-4	Methyl Tert Butyl Ether	50	49.8	100	70-130
91-20-3	Naphthalene	50	37.7	75	70-130
103-65-1	n-Propylbenzene	50	49.2	98	70-130
95-63-6	1,2,4-Trimethylbenzene	50	46.7	93	70-130
108-67-8	1,3,5-Trimethylbenzene	50	46.2	92	70-130
	m,p-Xylene	100	91.0	91	70-130
95-47-6	o-Xylene	50	44.9	90	70-130
1330-20-7	Xylene (total)	150	136	91	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	113%	70-130%
2037-26-5	Toluene-D8	108%	70-130%
460-00-4	4-Bromofluorobenzene	97%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSH2255-BS	H67836.D	1	07/29/14	AMY	n/a	n/a	MSH2255
MSH2255-BSD	H67837.D	1	07/29/14	AMY	n/a	n/a	MSH2255

6.3.1

The QC reported here applies to the following samples: Method: SW846 8260C

MC32168-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	50	45.6	91	47.2	94	3	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	104%	104%	70-130%
2037-26-5	Toluene-D8	105%	107%	70-130%
460-00-4	4-Bromofluorobenzene	93%	99%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32120-1MS	V33203.D	5	07/24/14	AMY	n/a	n/a	MSV1225
MC32120-1MSD	V33204.D	5	07/24/14	AMY	n/a	n/a	MSV1225
MC32120-1	V33192.D	1	07/24/14	AMY	n/a	n/a	MSV1225

The QC reported here applies to the following samples: Method: SW846 8260C

MC32168-1, MC32168-2, MC32168-3, MC32168-4, MC32168-5

CAS No.	Compound	MC32120-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	298	119	250	304	122	2	70-130/30
107-02-8	Acrolein	ND		1250	1180	94	1250	1160	93	2	70-130/30
107-13-1	Acrylonitrile	ND		250	440	176* [a]	250	430	172* [a]	2	70-130/30
71-43-2	Benzene	5.8		250	772	306* [a]	250	518	205* [a]	39* [b]	70-130/30
108-86-1	Bromobenzene	ND		250	271	108	250	262	105	3	70-130/30
74-97-5	Bromochloromethane	ND		250	262	105	250	250	100	5	70-130/30
75-27-4	Bromodichloromethane	ND		250	256	102	250	249	100	3	70-130/30
75-25-2	Bromoform	ND		250	249	100	250	249	100	0	70-130/30
74-83-9	Bromomethane	ND		250	342	137* [c]	250	341	136* [c]	0	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	223	89	250	218	87	2	70-130/30
104-51-8	n-Butylbenzene	ND		250	302	121	250	296	118	2	70-130/30
135-98-8	sec-Butylbenzene	ND		250	314	126	250	303	121	4	70-130/30
98-06-6	tert-Butylbenzene	ND		250	290	116	250	279	112	4	70-130/30
75-15-0	Carbon disulfide	ND		250	311	124	250	303	121	3	70-130/30
56-23-5	Carbon tetrachloride	ND		250	280	112	250	284	114	1	70-130/30
108-90-7	Chlorobenzene	ND		250	251	100	250	242	97	4	70-130/30
75-00-3	Chloroethane	ND		250	345	138* [c]	250	346	138* [c]	0	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	18.7	7* [a]	250	ND	0* [a]	200* [b]	70-130/30
67-66-3	Chloroform	ND		250	266	106	250	259	104	3	70-130/30
74-87-3	Chloromethane	ND		250	333	133* [c]	250	327	131* [c]	2	70-130/30
95-49-8	o-Chlorotoluene	ND		250	298	119	250	291	116	2	70-130/30
106-43-4	p-Chlorotoluene	ND		250	295	118	250	286	114	3	70-130/30
124-48-1	Dibromochloromethane	ND		250	234	94	250	231	92	1	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	262	105	250	256	102	2	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	272	109	250	263	105	3	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	264	106	250	256	102	3	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	211	84	250	216	86	2	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	326	130	250	316	126	3	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	247	99	250	239	96	3	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	350	140* [a]	250	344	138* [a]	2	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	307	123	250	292	117	5	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	348	139* [a]	250	334	134* [a]	4	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	260	104	250	250	100	4	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	257	103	250	251	100	2	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	346	138* [a]	250	341	136* [a]	1	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	298	119	250	292	117	2	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32120-1MS	V33203.D	5	07/24/14	AMY	n/a	n/a	MSV1225
MC32120-1MSD	V33204.D	5	07/24/14	AMY	n/a	n/a	MSV1225
MC32120-1	V33192.D	1	07/24/14	AMY	n/a	n/a	MSV1225

The QC reported here applies to the following samples: Method: SW846 8260C

MC32168-1, MC32168-2, MC32168-3, MC32168-4, MC32168-5

CAS No.	Compound	MC32120-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	290	116	250	283	113	2	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	307	123	250	306	122	0	70-130/30
123-91-1	1,4-Dioxane	ND		1250	1300	104	1250	1410	113	8	70-130/30
97-63-2	Ethyl methacrylate	ND		250	230	92	250	226	90	2	72-139/30
100-41-4	Ethylbenzene	8.0		250	285	111	250	277	108	3	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	234	94	250	234	94	0	70-130/30
591-78-6	2-Hexanone	ND		250	193	77	250	186	74	4	70-130/30
98-82-8	Isopropylbenzene	0.53	J	250	330	132* [a]	250	322	129	2	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	303	121	250	293	117	3	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	391	156* [a]	250	383	153* [a]	2	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	242	97	250	231	92	5	70-130/30
74-95-3	Methylene bromide	ND		250	238	95	250	229	92	4	70-130/30
75-09-2	Methylene chloride	ND		250	335	134* [a]	250	324	130	3	70-130/30
91-20-3	Naphthalene	4.5	J	250	214	84	250	224	88	5	70-130/30
103-65-1	n-Propylbenzene	0.98	J	250	308	123	250	299	119	3	70-130/30
100-42-5	Styrene	ND		250	257	103	250	251	100	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	254	102	250	251	100	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	282	113	250	276	110	2	70-130/30
127-18-4	Tetrachloroethene	ND		250	249	100	250	240	96	4	70-130/30
108-88-3	Toluene	2.4		250	255	101	250	249	99	2	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	204	82	250	216	86	6	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	233	93	250	235	94	1	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	286	114	250	284	114	1	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	228	91	250	223	89	2	70-130/30
79-01-6	Trichloroethene	ND		250	253	101	250	243	97	4	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	304	122	250	303	121	0	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	291	116	250	286	114	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	13.2		250	309	118	250	301	115	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	3.2	J	250	305	121	250	296	117	3	70-130/30
108-05-4	Vinyl Acetate	ND		250	298	119	250	288	115	3	70-130/30
75-01-4	Vinyl chloride	ND		250	348	139* [c]	250	343	137* [c]	1	70-130/30
	m,p-Xylene	37.1		500	577	108	500	561	105	3	70-130/30
95-47-6	o-Xylene	4.1		250	289	114	250	282	111	2	70-130/30
1330-20-7	Xylene (total)	41.2		750	866	110	750	843	107	3	70-130/30

* = Outside of Control Limits.

6.4.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32120-1MS	V33203.D	5	07/24/14	AMY	n/a	n/a	MSV1225
MC32120-1MSD	V33204.D	5	07/24/14	AMY	n/a	n/a	MSV1225
MC32120-1	V33192.D	1	07/24/14	AMY	n/a	n/a	MSV1225

The QC reported here applies to the following samples: Method: SW846 8260C

MC32168-1, MC32168-2, MC32168-3, MC32168-4, MC32168-5

CAS No.	Surrogate Recoveries	MS	MSD	MC32120-1	Limits
1868-53-7	Dibromofluoromethane	91%	90%	92%	70-130%
2037-26-5	Toluene-D8	88%	90%	90%	70-130%
460-00-4	4-Bromofluorobenzene	101%	100%	104%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample non-homogeneity.
(c) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32345-12MS	H67793.D	5	07/28/14	AMY	n/a	n/a	MSH2253
MC32345-12MSD	H67794.D	5	07/28/14	AMY	n/a	n/a	MSH2253
MC32345-12	H67787.D	1	07/28/14	AMY	n/a	n/a	MSH2253

The QC reported here applies to the following samples: Method: SW846 8260C

MC32168-1, MC32168-2, MC32168-3, MC32168-4

CAS No.	Compound	MC32345-12 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		250	274	110	250	252	101	8	70-130/30
135-98-8	sec-Butylbenzene	ND		250	252	101	250	229	92	10	70-130/30
98-06-6	tert-Butylbenzene	ND		250	249	100	250	226	90	10	70-130/30
100-41-4	Ethylbenzene	ND		250	245	98	250	225	90	9	70-130/30
98-82-8	Isopropylbenzene	ND		250	253	101	250	229	92	10	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	252	101	250	247	99	2	70-130/30
91-20-3	Naphthalene	ND		250	191	76	250	180	72	6	70-130/30
103-65-1	n-Propylbenzene	ND		250	277	111	250	251	100	10	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	262	105	250	238	95	10	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	255	102	250	232	93	9	70-130/30
	m,p-Xylene	ND		500	484	97	500	447	89	8	70-130/30
95-47-6	o-Xylene	ND		250	232	93	250	219	88	6	70-130/30
1330-20-7	Xylene (total)	ND		750	715	95	750	666	89	7	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC32345-12	Limits
1868-53-7	Dibromofluoromethane	107%	114%	108%	70-130%
2037-26-5	Toluene-D8	108%	107%	105%	70-130%
460-00-4	4-Bromofluorobenzene	102%	101%	107%	70-130%

* = Outside of Control Limits.

6.4.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32412-6MS	H67846.D	5	07/29/14	AMY	n/a	n/a	MSH2255
MC32412-6MSD	H67847.D	5	07/29/14	AMY	n/a	n/a	MSH2255
MC32412-6	H67842.D	1	07/29/14	AMY	n/a	n/a	MSH2255

The QC reported here applies to the following samples: Method: SW846 8260C

MC32168-2

CAS No.	Compound	MC32412-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		250	241	96	250	237	95	2	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC32412-6	Limits
1868-53-7	Dibromofluoromethane	119%	117%	111%	70-130%
2037-26-5	Toluene-D8	107%	108%	104%	70-130%
460-00-4	4-Bromofluorobenzene	93%	93%	108%	70-130%

* = Outside of Control Limits.

6.4.3

Volatile Internal Standard Area Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSH2253-CC2244	Injection Date:	07/28/14
Lab File ID:	H67780.D	Injection Time:	09:00
Instrument ID:	GCMSH	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	294744	8.63	533886	9.49	300348	12.74	228339	15.31	88843	6.20
Upper Limit [a]	589488	9.13	1067772	9.99	600696	13.24	456678	15.81	177686	6.70
Lower Limit [b]	147372	8.13	266943	8.99	150174	12.24	114170	14.81	44422	5.70
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSH2253-BS	304899	8.62	536024	9.49	306658	12.74	228719	15.31	98152	6.21
MSH2253-MB	268663	8.63	471219	9.49	241486	12.75	150694	15.31	87001	6.21
ZZZZZZ	263063	8.63	456580	9.49	233001	12.74	144603	15.31	71804	6.21
ZZZZZZ	256418	8.63	445302	9.49	228171	12.74	141249	15.31	70439	6.21
MC32345-12	250548	8.63	429036	9.49	216846	12.75	137196	15.31	71833	6.22
ZZZZZZ	247608	8.62	417864	9.49	214691	12.75	137103	15.31	68530	6.20
ZZZZZZ	235052	8.63	405529	9.49	205604	12.74	126043	15.31	63001	6.22
ZZZZZZ	231228	8.63	405038	9.49	206650	12.75	124575	15.31	66024	6.21
ZZZZZZ	226010	8.63	401713	9.49	205241	12.75	126553	15.32	63952	6.20
ZZZZZZ	258797	8.63	445865	9.49	247409	12.74	208672	15.31	78454	6.20
MC32345-12MS	304963	8.63	532448	9.49	300641	12.74	204387	15.31	97583	6.21
MC32345-12MSD	316084	8.63	568755	9.49	318944	12.74	221552	15.31	104569	6.21
ZZZZZZ	305107	8.63	534626	9.49	282536	12.75	184972	15.31	101011	6.21
ZZZZZZ	314570	8.63	555868	9.49	292164	12.75	180723	15.31	98536	6.20
ZZZZZZ	280176	8.63	493711	9.50	253542	12.75	171091	15.31	99390	6.21
ZZZZZZ	268637	8.63	460356	9.49	240619	12.75	174317	15.31	89117	6.20
ZZZZZZ	296253	8.63	521450	9.49	284156	12.74	188651	15.31	90455	6.21
MC32168-1	321131	8.62	564865	9.49	288165	12.75	180818	15.31	91478	6.20
MC32168-3	301271	8.63	545812	9.49	271938	12.74	167134	15.32	87769	6.22
MC32168-4	283169	8.63	513224	9.49	254033	12.75	154113	15.31	83025	6.21
MC32168-2	267237	8.62	493787	9.49	246333	12.75	152710	15.32	77929	6.20
ZZZZZZ	258034	8.63	455220	9.49	227742	12.74	139705	15.31	74985	6.20
ZZZZZZ	249145	8.63	453306	9.49	217177	12.75	138775	15.31	69432	6.21

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.

6.5.1

Volatile Internal Standard Area Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973,03003 900 South Central Avenue, Roxana, IL

Check Std:	MSH2255-CC2244	Injection Date:	07/29/14
Lab File ID:	H67836.D	Injection Time:	12:28
Instrument ID:	GCMSH	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	245554	8.62	427374	9.49	226188	12.74	175483	15.31	72770	6.21
Upper Limit [a]	491108	9.12	854748	9.99	452376	13.24	350966	15.81	145540	6.71
Lower Limit [b]	122777	8.12	213687	8.99	113094	12.24	87742	14.81	36385	5.71
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSH2255-BS	245554	8.62	427374	9.49	226188	12.74	175483	15.31	72770	6.21
MSH2255-BSD	255179	8.63	433685	9.49	239263	12.74	175211	15.31	81429	6.21
MSH2255-MB	245023	8.63	438786	9.49	228605	12.74	147014	15.31	73385	6.22
ZZZZZZ	238117	8.63	418013	9.49	216043	12.74	138300	15.31	64420	6.21
ZZZZZZ	221446	8.63	398252	9.49	210168	12.75	128707	15.31	61001	6.21
MC32412-6	211628	8.62	376023	9.49	198843	12.75	125805	15.31	59092	6.21
ZZZZZZ	213695	8.63	375239	9.49	193044	12.74	124623	15.31	53554	6.20
ZZZZZZ	213133	8.63	396493	9.49	199595	12.74	136097	15.31	56246	6.20
ZZZZZZ	213513	8.63	379515	9.49	195859	12.75	122158	15.31	52518	6.22
MC32412-6MS	213527	8.63	386968	9.49	222105	12.74	178962	15.31	52568	6.21
MC32412-6MSD	221890	8.63	404384	9.49	228569	12.74	183608	15.31	58197	6.20
MC32168-2	225087	8.63	418251	9.49	206226	12.74	134195	15.31	57665	6.20
ZZZZZZ	216987	8.63	378411	9.49	195426	12.74	123650	15.31	53940	6.21
ZZZZZZ	203043	8.63	362591	9.49	192278	12.74	119352	15.31	56403	6.20
ZZZZZZ	194651	8.63	348562	9.49	180219	12.74	108856	15.31	41776	6.21
ZZZZZZ	191975	8.63	338035	9.49	177236	12.75	107136	15.31	42088	6.21
ZZZZZZ	186181	8.62	327979	9.49	173281	12.74	100936	15.31	42209	6.21
ZZZZZZ	184099	8.62	331317	9.49	177744	12.75	106433	15.31	43538	6.20
ZZZZZZ	182623	8.63	316286	9.49	176543	12.74	105842	15.31	48203	6.21
ZZZZZZ	178261	8.63	311195	9.49	165403	12.74	97351	15.31	33456[c]	6.21
ZZZZZZ	174805	8.63	311354	9.49	158333	12.74	90568	15.31	26799[c]	6.21
ZZZZZZ	169192	8.63	302286	9.49	156590	12.75	85726[d]	15.31	26308[d]	6.22

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.

6.5.2

Volatile Internal Standard Area Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSV1225-CC1177	Injection Date:	07/24/14
Lab File ID:	V33182.D	Injection Time:	10:17
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	404031	6.57	514035	7.75	197537	11.09	255363	13.30	86801	3.51
Upper Limit [a]	808062	7.07	1028070	8.25	395074	11.59	510726	13.80	173602	4.01
Lower Limit [b]	202016	6.07	257018	7.25	98769	10.59	127682	12.80	43401	3.01
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1225-BS	404031	6.57	514035	7.75	197537	11.09	255363	13.30	86801	3.51
MSV1225-MB	423518	6.57	566497	7.75	207436	11.09	205531	13.30	98754	3.51
ZZZZZZ	314218	6.57	438886	7.75	188813	11.09	192114	13.30	77336	3.52
ZZZZZZ	290479	6.57	404629	7.75	165759	11.09	174831	13.30	70296	3.51
MC32168-5	288880	6.57	411369	7.75	166077	11.09	174974	13.30	70249	3.52
ZZZZZZ	276747	6.57	389072	7.75	163374	11.09	175404	13.30	71119	3.52
MC32120-1	607385	6.57	785192	7.75	234551	11.09	264980	13.30	222818[c]	3.52
ZZZZZZ	486512	6.57	549775	7.75	250156	11.09	237478	13.30	144045	3.53
ZZZZZZ	1143587[d]	6.57	1377476[d]	7.75	498634[d]	11.09	799272[d]	13.30	468647[d]	3.54
ZZZZZZ	1136706[d]	6.58	2013116[d]	7.76	850560[d]	11.09	1163371[d]	13.30	414495[d]	3.54
MC32168-1	785543	6.57	1497250[d]	7.75	414808[d]	11.09	403343	13.30	234913[d]	3.53
MC32168-2	790139	6.65	2282079[d]	7.78	446668[d]	11.09	664914[d]	13.30	161146	3.54
MC32168-3	747101	6.81	2775199[d]	7.87	605272[d]	11.10	665352[d]	13.30	279915[d]	3.55
MC32168-4	699213	6.83	2878266[d]	7.87	658120[d]	11.10	714187[d]	13.30	263249[d]	3.55
ZZZZZZ	620812	6.57	964822	7.75	360517	11.09	339994	13.30	168558	3.51
ZZZZZZ	617075	6.57	1365612[d]	7.75	342437	11.09	326577	13.30	161394	3.52
ZZZZZZ	832590[d]	6.61	2311394[d]	7.77	436447[d]	11.09	367710	13.30	226087[d]	3.53
MC32120-1MS	755293	6.57	1031451[e]	7.75	345043	11.09	415260	13.30	199822[e]	3.51
MC32120-1MSD	725008	6.57	972624	7.75	331686	11.09	399515	13.30	192608[e]	3.51
ZZZZZZ	529363	6.56	745611	7.75	261178	11.08	274494	13.30	144217	3.51
ZZZZZZ	503161	6.57	712256	7.75	249186	11.08	266369	13.30	138063	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.
(c) Outside control limits. Target analytes not associated with this internal standard.
(d) Outside control limits due to possible matrix interference. Confirmed by reanalysis.
(e) Outside control limits due to possible matrix interference. Confirmed by MS/MSD.

6.5.3

Volatile Surrogate Recovery Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC32168-1	V33196.D	83	71	108
MC32168-1	H67798.D	101	105	109
MC32168-2	H67848.D	110	101	104
MC32168-2	H67801.D	105	101	107
MC32168-2	V33197.D	81	65* [a]	108
MC32168-3	H67799.D	103	103	109
MC32168-3	V33198.D	111	72	115
MC32168-4	H67800.D	103	102	111
MC32168-4	V33199.D	107	72	118
MC32168-5	V33188.D	123	95	105
MC32120-1MS	V33203.D	91	88	101
MC32120-1MSD	V33204.D	90	90	100
MC32345-12MS	H67793.D	107	108	102
MC32345-12MSD	H67794.D	114	107	101
MC32412-6MS	H67846.D	119	107	93
MC32412-6MSD	H67847.D	117	108	93
MSH2253-BS	H67782.D	113	108	97
MSH2253-MB	H67784.D	106	107	109
MSH2255-BS	H67836.D	104	105	93
MSH2255-BSD	H67837.D	104	107	99
MSH2255-MB	H67839.D	111	105	108
MSV1225-BS	V33182.D	100	101	99
MSV1225-MB	V33185.D	114	87	102

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

(a) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

New England ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39011-MB	F74824.D	1	07/24/14	WK	07/18/14	OP39011	MSF3296

The QC reported here applies to the following samples: Method: SW846 8270D

MC32168-1, MC32168-2, MC32168-3, MC32168-4

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	0.23	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: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39011-MB	F74824.D	1	07/24/14	WK	07/18/14	OP39011	MSF3296

The QC reported here applies to the following samples: Method: SW846 8270D

MC32168-1, MC32168-2, MC32168-3, MC32168-4

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	43%	15-110%
4165-62-2	Phenol-d5	27%	15-110%
118-79-6	2,4,6-Tribromophenol	86%	15-110%
4165-60-0	Nitrobenzene-d5	74%	30-130%
321-60-8	2-Fluorobiphenyl	73%	30-130%
1718-51-0	Terphenyl-d14	90%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

Method Blank Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39012-MB	R39446.D	1	07/23/14	WK	07/18/14	OP39012	MSR1453

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC32168-1, MC32168-2, MC32168-3, MC32168-4

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	0.020	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	43%	15-110%
4165-62-2	Phenol-d5	29%	15-110%
118-79-6	2,4,6-Tribromophenol	84%	15-110%
4165-60-0	Nitrobenzene-d5	78%	30-130%
321-60-8	2-Fluorobiphenyl	69%	30-130%
1718-51-0	Terphenyl-d14	80%	30-130%

7.1.2

Blank Spike Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39011-BS	F74825.D	1	07/24/14	WK	07/18/14	OP39011	MSF3296

The QC reported here applies to the following samples: Method: SW846 8270D

MC32168-1, MC32168-2, MC32168-3, MC32168-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	27.3	55	30-130
95-57-8	2-Chlorophenol	50	34.5	69	30-130
59-50-7	4-Chloro-3-methyl phenol	50	38.1	76	30-130
120-83-2	2,4-Dichlorophenol	50	40.3	81	30-130
105-67-9	2,4-Dimethylphenol	50	32.1	64	30-130
51-28-5	2,4-Dinitrophenol	50	40.1	80	30-130
534-52-1	4,6-Dinitro-o-cresol	50	42.7	85	30-130
95-48-7	2-Methylphenol	50	29.7	59	30-130
	3&4-Methylphenol	100	56.4	56	30-130
88-75-5	2-Nitrophenol	50	37.6	75	30-130
100-02-7	4-Nitrophenol	50	60.1	120	30-130
87-86-5	Pentachlorophenol	50	45.1	90	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	43.1	86	30-130
62-53-3	Aniline	50	27.3	55	40-140
101-55-3	4-Bromophenyl phenyl ether	50	45.3	91	40-140
85-68-7	Butyl benzyl phthalate	50	42.5	85	40-140
100-51-6	Benzyl Alcohol	50	29.9	60	40-140
91-58-7	2-Chloronaphthalene	50	40.9	82	40-140
106-47-8	4-Chloroaniline	50	35.6	71	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	30.5	61	40-140
111-44-4	bis(2-Chloroethyl)ether	50	38.2	76	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	42.9	86	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	41.7	83	40-140
122-66-7	1,2-Diphenylhydrazine	50	41.3	83	40-140
121-14-2	2,4-Dinitrotoluene	50	43.0	86	40-140
606-20-2	2,6-Dinitrotoluene	50	37.6	75	40-140
91-94-1	3,3'-Dichlorobenzidine	50	47.8	96	40-140
132-64-9	Dibenzofuran	50	38.9	78	40-140
84-74-2	Di-n-butyl phthalate	50	42.7	85	40-140
117-84-0	Di-n-octyl phthalate	50	46.6	93	40-140
84-66-2	Diethyl phthalate	50	43.6	87	40-140
131-11-3	Dimethyl phthalate	50	43.4	87	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	42.3	85	40-140
118-74-1	Hexachlorobenzene	50	45.8	92	40-140

* = Outside of Control Limits.

7.2.1

7

Blank Spike Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39011-BS	F74825.D	1	07/24/14	WK	07/18/14	OP39011	MSF3296

The QC reported here applies to the following samples: Method: SW846 8270D

MC32168-1, MC32168-2, MC32168-3, MC32168-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	14.4	29* a	40-140
67-72-1	Hexachloroethane	50	25.8	52	40-140
78-59-1	Isophorone	50	35.5	71	40-140
88-74-4	2-Nitroaniline	50	41.8	84	40-140
99-09-2	3-Nitroaniline	50	40.7	81	40-140
100-01-6	4-Nitroaniline	50	41.0	82	40-140
98-95-3	Nitrobenzene	50	37.2	74	40-140
62-75-9	n-Nitrosodimethylamine	50	23.5	47	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	41.0	82	40-140
86-30-6	N-Nitrosodiphenylamine	50	38.5	77	40-140
110-86-1	Pyridine	50	20.2	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	97%	15-110%
4165-60-0	Nitrobenzene-d5	73%	30-130%
321-60-8	2-Fluorobiphenyl	72%	30-130%
1718-51-0	Terphenyl-d14	84%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

7.2.1

7

Blank Spike Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39012-BS	R39447.D	1	07/23/14	WK	07/18/14	OP39012	MSR1453

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC32168-1, MC32168-2, MC32168-3, MC32168-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	38.0	76	40-140
208-96-8	Acenaphthylene	50	33.8	68	40-140
120-12-7	Anthracene	50	40.4	81	40-140
56-55-3	Benzo(a)anthracene	50	45.4	91	40-140
50-32-8	Benzo(a)pyrene	50	45.6	91	40-140
205-99-2	Benzo(b)fluoranthene	50	46.5	93	40-140
191-24-2	Benzo(g,h,i)perylene	50	50.4	101	40-140
207-08-9	Benzo(k)fluoranthene	50	49.7	99	40-140
218-01-9	Chrysene	50	41.4	83	40-140
53-70-3	Dibenzo(a,h)anthracene	50	51.3	103	40-140
206-44-0	Fluoranthene	50	39.8	80	40-140
86-73-7	Fluorene	50	43.3	87	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	51.7	103	40-140
90-12-0	1-Methylnaphthalene	50	34.9	70	40-140
91-57-6	2-Methylnaphthalene	50	34.4	69	40-140
85-01-8	Phenanthrene	50	40.0	80	40-140
129-00-0	Pyrene	50	38.9	78	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	45%	15-110%
4165-62-2	Phenol-d5	32%	15-110%
118-79-6	2,4,6-Tribromophenol	89%	15-110%
4165-60-0	Nitrobenzene-d5	80%	30-130%
321-60-8	2-Fluorobiphenyl	69%	30-130%
1718-51-0	Terphenyl-d14	80%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39011-MS	F74826.D	1	07/24/14	WK	07/18/14	OP39011	MSF3296
OP39011-MSD	F74827.D	1	07/24/14	WK	07/18/14	OP39011	MSF3296
MC32000-22	F74828.D	1	07/24/14	WK	07/18/14	OP39011	MSF3296

The QC reported here applies to the following samples: Method: SW846 8270D

MC32168-1, MC32168-2, MC32168-3, MC32168-4

CAS No.	Compound	MC32000-22 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	31.8	64	50	31.2	62	2	30-130/20
95-57-8	2-Chlorophenol	ND		50	35.9	72	50	37.2	74	4	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	38.6	77	50	39.2	78	2	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	43.5	87	50	43.9	88	1	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	32.6	65	50	32.9	66	1	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	41.5	83	50	40.7	81	2	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	44.1	88	50	45.0	90	2	30-130/20
95-48-7	2-Methylphenol	ND		50	31.6	63	50	32.7	65	3	30-130/20
	3&4-Methylphenol	ND		100	58.1	58	100	59.9	60	3	30-130/20
88-75-5	2-Nitrophenol	ND		50	41.9	84	50	41.1	82	2	30-130/20
100-02-7	4-Nitrophenol	ND		50	13.8	28* [a]	50	18.2	36	28* [b]	30-130/20
87-86-5	Pentachlorophenol	ND		50	46.6	93	50	45.9	92	2	30-130/20
108-95-2	Phenol	ND		50	17.9	36	50	18.0	36	1	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	41.5	83	50	42.1	84	1	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	42.9	86	50	43.5	87	1	30-130/20
62-53-3	Aniline	ND		50	29.0	58	50	29.0	58	0	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	46.2	92	50	46.6	93	1	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	43.8	88	50	42.4	85	3	40-140/20
100-51-6	Benzyl Alcohol	ND		50	32.1	64	50	33.0	66	3	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	45.6	91	50	44.8	90	2	40-140/20
106-47-8	4-Chloroaniline	ND		50	37.6	75	50	38.2	76	2	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	34.1	68	50	33.1	66	3	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	42.3	85	50	40.7	81	4	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	46.8	94	50	45.6	91	3	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	44.4	89	50	44.1	88	1	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	42.6	85	50	42.2	84	1	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	45.6	91	50	44.8	90	2	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	39.5	79	50	39.0	78	1	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	49.1	98	50	49.6	99	1	40-140/20
132-64-9	Dibenzofuran	ND		50	41.2	82	50	40.7	81	1	40-140/20
84-74-2	Di-n-butyl phthalate	0.23	JB	50	44.0	88	50	43.7	87	1	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	47.6	95	50	46.8	94	2	40-140/20
84-66-2	Diethyl phthalate	ND		50	45.4	91	50	44.4	89	2	40-140/20
131-11-3	Dimethyl phthalate	ND		50	45.0	90	50	44.2	88	2	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	43.6	87	50	43.3	87	1	40-140/20
118-74-1	Hexachlorobenzene	ND		50	46.8	94	50	47.4	95	1	40-140/20

* = Outside of Control Limits.

7.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39011-MS	F74826.D	1	07/24/14	WK	07/18/14	OP39011	MSF3296
OP39011-MSD	F74827.D	1	07/24/14	WK	07/18/14	OP39011	MSF3296
MC32000-22	F74828.D	1	07/24/14	WK	07/18/14	OP39011	MSF3296

The QC reported here applies to the following samples: Method: SW846 8270D

MC32168-1, MC32168-2, MC32168-3, MC32168-4

7.3.1

7

CAS No.	Compound	MC32000-22 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	17.2	34* c	50	17.2	34* c	0	40-140/20
67-72-1	Hexachloroethane	ND		50	30.0	60	50	30.6	61	2	40-140/20
78-59-1	Isophorone	ND		50	39.4	79	50	37.8	76	4	40-140/20
88-74-4	2-Nitroaniline	ND		50	43.2	86	50	42.2	84	2	40-140/20
99-09-2	3-Nitroaniline	ND		50	41.9	84	50	41.7	83	0	40-140/20
100-01-6	4-Nitroaniline	ND		50	42.1	84	50	42.0	84	0	40-140/20
98-95-3	Nitrobenzene	ND		50	41.8	84	50	40.9	82	2	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	24.4	49	50	25.2	50	3	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	45.9	92	50	43.8	88	5	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	40.0	80	50	39.2	78	2	40-140/20
110-86-1	Pyridine	ND		50	21.8	44	50	21.8	44	0	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC32000-22	Limits
367-12-4	2-Fluorophenol	44%	47%	47%	15-110%
4165-62-2	Phenol-d5	31%	32%	30%	15-110%
118-79-6	2,4,6-Tribromophenol	91%	97%	87%	15-110%
4165-60-0	Nitrobenzene-d5	81%	79%	78%	30-130%
321-60-8	2-Fluorobiphenyl	72%	74%	76%	30-130%
1718-51-0	Terphenyl-d14	82%	83%	90%	30-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample heterogeneity.
(c) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39012-MS	R39451.D	1	07/23/14	WK	07/18/14	OP39012	MSR1453
OP39012-MSD	R39453.D	1	07/23/14	WK	07/18/14	OP39012	MSR1453
MC32000-23	R39448.D	1	07/23/14	WK	07/18/14	OP39012	MSR1453

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC32168-1, MC32168-2, MC32168-3, MC32168-4

CAS No.	Compound	MC32000-23 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	40.6	81	50	40.5	81	0	40-140/20
208-96-8	Acenaphthylene	ND		50	36.2	72	50	36.0	72	1	40-140/20
120-12-7	Anthracene	ND		50	41.7	83	50	41.5	83	0	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	47.6	95	50	46.4	93	2	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	48.3	97	50	46.5	93	3	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	50.0	100	50	49.4	99	0	40-140/20
191-24-2	Benzo(g,h,i)perylene	0.041	J	50	46.2	92	50	50.6	101	3	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	51.9	104	50	50.0	100	3	40-140/20
218-01-9	Chrysene	ND		50	42.8	86	50	41.9	84	2	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	48.5	97	50	51.7	103	2	40-140/20
206-44-0	Fluoranthene	ND		50	48.1	96	50	43.0	86	0	40-140/20
86-73-7	Fluorene	ND		50	43.4	87	50	44.3	89	1	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	0.039	J	50	48.3	97	50	51.8	104	3	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	37.8	76	50	39.2	78	0	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	37.9	76	50	39.0	78	0	40-140/20
85-01-8	Phenanthrene	0.019	J	50	41.4	83	50	41.2	82	1	40-140/20
129-00-0	Pyrene	ND		50	45.8	92	50	41.8	84	0	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC32000-23 Limits	
367-12-4	2-Fluorophenol	45%	49%	47%	15-110%
4165-62-2	Phenol-d5	31%	34%	32%	15-110%
118-79-6	2,4,6-Tribromophenol	93%	92%	85%	15-110%
4165-60-0	Nitrobenzene-d5	83%	84%	82%	30-130%
321-60-8	2-Fluorobiphenyl	74%	73%	73%	30-130%
1718-51-0	Terphenyl-d14	91%	84%	83%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSF3296-CC3270	Injection Date:	07/24/14
Lab File ID:	F74823.D	Injection Time:	09:28
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	192332	3.32	664761	4.35	471843	5.84	875257	7.09	1166378	9.43	1038397	10.93
Upper Limit [a]	384664	3.82	1329522	4.85	943686	6.34	1750514	7.59	2332756	9.93	2076794	11.43
Lower Limit [b]	96166	2.82	332381	3.85	235922	5.34	437629	6.59	583189	8.93	519199	10.43
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP39011-MB	257976	3.32	879787	4.35	609392	5.84	1171720	7.09	1387028	9.42	1361815	10.92
OP39011-BS	229599	3.32	801637	4.35	567412	5.84	1042635	7.10	1365711	9.43	1208123	10.93
OP39011-MS	229987	3.32	795151	4.35	573201	5.84	1076512	7.09	1421427	9.43	1274880	10.93
OP39011-MSD	228501	3.32	781459	4.35	563122	5.84	1034458	7.10	1363092	9.43	1221743	10.92
MC32000-22	232225	3.32	796530	4.35	544129	5.84	1046120	7.09	1241227	9.42	1182018	10.92
ZZZZZZ	217027	3.32	748675	4.35	518349	5.84	994158	7.09	1223203	9.42	1125268	10.92
ZZZZZZ	203567	3.32	703448	4.35	488422	5.84	943115	7.09	1130041	9.42	1096889	10.92
MC32168-1	218244	3.32	751218	4.35	517442	5.84	996678	7.09	1178337	9.42	1115355	10.92
MC32168-2	227345	3.32	780842	4.35	546580	5.84	1053973	7.09	1258043	9.42	1234799	10.92
MC32168-3	249135	3.32	837064	4.35	575843	5.84	1082303	7.09	1265700	9.42	1215502	10.92
MC32168-4	264439	3.32	875120	4.35	604235	5.84	1132316	7.09	1355051	9.42	1324698	10.92
ZZZZZZ	270633	3.32	932411	4.35	649990	5.84	1236820	7.09	1488886	9.42	1465677	10.92
ZZZZZZ	237465	3.32	810187	4.35	560795	5.84	1083071	7.09	1297074	9.42	1264297	10.92
ZZZZZZ	201820	3.32	726114	4.35	480411	5.84	915026	7.09	1105541	9.42	1097535	10.92

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(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: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSI3384-CC3320	Injection Date:	07/29/14
Lab File ID:	I90918.D	Injection Time:	09:26
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	338626	4.33	711175	5.39	362839	6.93	616061	8.35	401772	11.11	1123777	12.63
Upper Limit [a]	677252	4.83	1422350	5.89	725678	7.43	1232122	8.85	803544	11.61	2247554	13.13
Lower Limit [b]	169313	3.83	355588	4.89	181420	6.43	308031	7.85	200886	10.61	561889	12.13

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
MC32168-1	467665	4.33	982095	5.39	507117	6.93	862764	8.35	576059	11.12	1469953	12.63
MC32168-2	437736	4.33	905743	5.39	466051	6.93	774560	8.35	527238	11.12	1463682	12.63
MC32168-3	447690	4.33	930325	5.39	475613	6.93	794702	8.35	522581	11.12	1443448	12.63
MC32168-4	461562	4.33	959779	5.38	497975	6.93	838997	8.35	553492	11.12	1516433	12.63
ZZZZZZ	365604	4.33	752790	5.39	391021	6.93	659794	8.35	453017	11.11	1232978	12.62
ZZZZZZ	362428	4.33	753587	5.38	387633	6.93	653721	8.35	433841	11.11	1191842	12.62

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

Semivolatile Internal Standard Area Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSR1453-CC1401	Injection Date:	07/23/14
Lab File ID:	R39444.D	Injection Time:	08:11
Instrument ID:	GCMSR	Method:	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	113424	5.16	414642	6.26	283190	7.80	570666	9.08	728209	11.62	1306561	13.30
Upper Limit [a]	226848	5.66	829284	6.76	566380	8.30	1141332	9.58	1456418	12.12	2613122	13.80
Lower Limit [b]	56712	4.66	207321	5.76	141595	7.30	285333	8.58	364105	11.12	653281	12.80
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP39012-MB	187877	5.16	677412	6.26	448573	7.80	871401	9.08	1058769	11.62	1843678	13.30
OP39012-BS	171628	5.16	631522	6.26	429960	7.80	858936	9.08	1047339	11.62	1792945	13.30
MC32000-23	228751[c]	5.16	814952	6.26	526889	7.80	991935	9.08	1129233	11.62	1914582	13.30
ZZZZZZ	315433[d]	5.16	1102035[d]	6.26	700245[d]	7.80	1264603[d]	9.08	1347676	11.62	2225964	13.30
OP39012-MS	399098[c]	5.16	1363511[c]	6.26	838604[c]	7.80	1470320[c]	9.08	1406136	11.62	2013320	13.30
OP39012-MSD	259705[c]	5.16	951200[c]	6.26	632491[c]	7.80	1206925[c]	9.08	1348971	11.62	2169583	13.30
OP39040-MB	214760	5.16	760525	6.26	494195	7.80	953470	9.08	1106995	11.62	1837434	13.30
OP39040-BS	165156	5.16	616371	6.26	429415	7.80	872813	9.08	1077746	11.62	1777161	13.30
ZZZZZZ	215343	5.16	776677	6.26	508095	7.80	962634	9.08	1117316	11.62	1887541	13.30

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.
(d) Outside control limits.Sample results confirmed by reanalysis.

7.4.3

Semivolatile Surrogate Recovery Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC32168-1	F74831.D	46	30	82	80	79	89
MC32168-2	F74832.D	45	29	89	75	74	81
MC32168-3	F74833.D	43	27	94	72	77	87
MC32168-4	F74834.D	44	28	95	73	79	85
OP39011-BS	F74825.D	46	30	97	73	72	84
OP39011-MB	F74824.D	43	27	86	74	73	90
OP39011-MS	F74826.D	44	31	91	81	72	82
OP39011-MSD	F74827.D	47	32	97	79	74	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: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC32168-1	I90919.D	86	71	72
MC32168-2	I90920.D	80	68	67
MC32168-3	I90921.D	84	71	71
MC32168-4	I90922.D	85	67	70
OP39012-BS	R39447.D	80	69	80
OP39012-MB	R39446.D	78	69	80
OP39012-MS	R39451.D	83	74	91
OP39012-MSD	R39453.D	84	73	84

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

7.5.2

New England ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

8

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39069-MB	BK39758.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290

The QC reported here applies to the following samples: Method: SW846 8011

MC32168-1, MC32168-2, MC32168-3, MC32168-4, MC32168-6

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	111%	36-173%
460-00-4	Bromofluorobenzene (S)	109%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39069-BS	BK39759.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290

The QC reported here applies to the following samples: Method: SW846 8011

MC32168-1, MC32168-2, MC32168-3, MC32168-4, MC32168-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.142	0.11	78	60-140
106-93-4	1,2-Dibromoethane	0.142	0.11	78	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	127%	36-173%
460-00-4	Bromofluorobenzene (S)	118%	36-173%

8.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39069-MS	BK39760.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290
OP39069-MSD	BK39761.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290
MC32236-13	BK39762.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290

The QC reported here applies to the following samples: Method: SW846 8011

MC32168-1, MC32168-2, MC32168-3, MC32168-4, MC32168-6

CAS No.	Compound	MC32236-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.142	0.10	71	0.142	0.10	71	0	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.142	0.11	78	0.142	0.11	78	0	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC32236-13 Limits	
460-00-4	Bromofluorobenzene (S)	130%	117%	121%	36-173%
460-00-4	Bromofluorobenzene (S)	120%	111%	116%	36-173%

8.3.1

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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]
MC32168-1	BK39769.D	108	111
MC32168-2	BK39770.D	100	117
MC32168-3	BK39771.D	115	118
MC32168-4	BK39772.D	78	84
MC32168-6	BK39773.D	112	107
OP39069-BS	BK39759.D	127	118
OP39069-MB	BK39758.D	111	109
OP39069-MS	BK39760.D	130	120
OP39069-MSD	BK39761.D	117	111

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: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	GBK1290-ICC1290	Injection Date:	07/24/14
Lab File ID:	BK39754.D	Injection Time:	17:33
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.39	4.41

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP39069-MB	BK39758.D	07/24/14	18:50	4.39	4.41
OP39069-BS	BK39759.D	07/24/14	19:10	4.39	4.41
OP39069-MS	BK39760.D	07/24/14	19:29	4.39	4.41
OP39069-MSD	BK39761.D	07/24/14	19:48	4.39	4.41
MC32236-13	BK39762.D	07/24/14	20:07	4.39	4.41
ZZZZZZ	BK39763.D	07/24/14	20:26	4.39	4.41
ZZZZZZ	BK39764.D	07/24/14	20:46	4.39	4.41
ZZZZZZ	BK39765.D	07/24/14	21:05	4.39	4.41
ZZZZZZ	BK39766.D	07/24/14	21:25	4.39	4.41
ZZZZZZ	BK39767.D	07/24/14	21:44	4.39	4.41

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: MC32168
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	GBK1290-CC1290	Injection Date:	07/24/14
Lab File ID:	BK39768.D	Injection Time:	22:03
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.39	4.41

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC32168-1	BK39769.D	07/24/14	22:23	4.39	4.41
MC32168-2	BK39770.D	07/24/14	22:42	4.39	4.41
MC32168-3	BK39771.D	07/24/14	23:01	4.39	4.41
MC32168-4	BK39772.D	07/24/14	23:21	4.39	4.41
MC32168-6	BK39773.D	07/24/14	23:40	4.39	4.41
ZZZZZZ	BK39774.D	07/24/14	23:59	4.39	4.41
ZZZZZZ	BK39775.D	07/25/14	00:19	4.39	4.41
ZZZZZZ	BK39776.D	07/25/14	00:38	4.39	4.41
ZZZZZZ	BK39777.D	07/25/14	00:57	4.39	4.41
ZZZZZZ	BK39778.D	07/25/14	01:17	4.39	4.41

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 – 3rd Quarter 2014 Data Review

Laboratory SDG: MC32216

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 8/4/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2013

Sample Identification	Sample Identification
P93D-ROX-071714	P93C-ROX-071714
P93B-ROX-071714	TB-071714-HCL
TB-071714-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 and SVOC LCS recoveries were outside evaluation criteria. The VOC surrogate recovery for toluene-d_8 was outside evaluation criteria in sample P93B-ROX-071714-Run#1. Internal standard area recoveries were outside criteria in several samples. Several samples were diluted due to high levels of VOC target analytes. These issues are addressed further in the appropriate sections below. Additionally, the continuing calibration standard for several analytes exceeded 20 percent difference (%D), and several others exceeded 40%D. Also, the initial calibration verification for dichlorodifluoromethane exceeded 30%D.

The cooler receipt form indicated that one of one cooler was received by the laboratory at a temperature of 1.3ºC, which is outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
OP39037-MB	SVOCs	Di-n-butyl phthalate	0.23 µg/L
OP39038-MB	PAHs	Phenanthrene	0.048 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-071714	SVOCs	Di-n-butyl phthalate	-	**U**
P93D-ROX-071714	PAHs	Phenanthrene	-	**U**
P93C-ROX-071714	SVOCs	Di-n-butyl phthalate	-	**U**
P93C-ROX-071714	PAHs	Phenanthrene	-	**U**
P93B-ROX-071714	SVOCs	Di-n-butyl phthalate	-	**U**
P93B-ROX-071714	PAHs	Phenanthrene	-	**U**

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV1225-BS	VOCs	Acrylonitrile	**133**	70-130
MSV1225-BS	VOCs	Bromomethane	**193**	70-130
MSV1225-BS	VOCs	Chloroethane	**210**	70-130
MSV1225-BS	VOCs	Chloromethane	**189**	70-130
MSV1225-BS	VOCs	1,1-Dichloroethene	**135**	70-130
MSV1225-BS	VOCs	trans-1,2-Dichloroethene	**131**	70-130
MSV1225-BS	VOCs	Methyl tert butyl ether	**132**	70-130
MSV1225-BS	VOCs	Methylene chloride	**131**	70-130
MSV1225-BS	VOCs	Trichlorofluoromethane	**168**	70-130
MSV1225-BS	VOCs	Vinyl acetate	**132**	70-130
MSV1225-BS	VOCs	Vinyl chloride	**174**	70-130
OP39037-BS	SVOCs	4-Nitrophenol	**26**	30-130
OP39037-BS	SVOCs	Phenol	**28**	30-130
OP39037-BS	SVOCs	Hexachlorocyclopentadiene	**24**	40-140

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS MSV1225-BS was also associated with the trip blank. Blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
P93D-ROX-071714	VOCs	Methyl tert butyl ether	**J**
P93D-ROX-071714	SVOCs	4-Nitrophenol	**UJ**
P93D-ROX-071714	SVOCs	Phenol	**UJ**
P93D-ROX-071714	SVOCs	Hexachlorocyclopentadiene	**UJ**
P93C-ROX-071714	VOCs	Methyl tert butyl ether	**J**

Sample ID	Parameter	Analyte	Qualification
P93C-ROX-071714	SVOCs	4-Nitrophenol	**UJ**
P93C-ROX-071714	SVOCs	Phenol	**UJ**
P93C-ROX-071714	SVOCs	Hexachlorocyclopentadiene	**UJ**
P93B-ROX-071714	SVOCs	4-Nitrophenol	**UJ**
P93B-ROX-071714	SVOCs	Phenol	**UJ**
P93B-ROX-071714	SVOCs	Hexachlorocyclopentadiene	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
P93B-ROX-071714-Run#1	VOCs	Toluene-d_8	**66**	70-130

Analytical data that required qualification based on surrogate data are included in the table below.

Sample ID	Parameter	Analyte	Qualification
P93B-ROX-071714	VOCs	All non-detects	**UJ**
P93B-ROX-071714	VOCs	tert-Butylbenzene	**J**
P93B-ROX-071714	VOCs	Ethylbenzene	**J**
P93B-ROX-071714	VOCs	Isopropylbenzene	**J**
P93B-ROX-071714	VOCs	Naphthalene	**J**
P93B-ROX-071714	VOCs	n-Propylbenzene	**J**
P93B-ROX-071714	VOCs	Toluene	**J**
P93B-ROX-071714	VOCs	1,2,4-Trimethylbenzene	**J**
P93B-ROX-071714	VOCs	1,3,5-Trimethylbenzene	**J**
P93B-ROX-071714	VOCs	m,p-Xylene	**J**
P93B-ROX-071714	VOCs	o-Xylene	**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
P93C-ROX-071714	VOCs	1,4-Difluorobenzene	**1365612**	257018-1028070
P93B-ROX-071714	VOCs	Pentafluorobenzene	**832590**	202016-808062
P93B-ROX-071714	VOCs	1,4-Difluorobenzene	**2311394**	257018-1028070
P93B-ROX-071714	VOCs	Chlorobenzene-d_5	**436447**	98769-395074
P93B-ROX-071714	VOCs	Tert butyl alcohol-d_9	**226087**	43401-173602

Analytical data that required qualification based on internal standard data are included in the table below. Analytical data reported as non-detect and associated with IS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Sample P93B-ROX-071714 was previously qualified in Section 6.0 due to surrogate data outside of evaluation criteria; no further qualification of sample P93B-ROX-071714 was required.

Field ID	Parameter	Analyte	Qualification
P93C-ROX-071714	VOCs	Methyl tert butyl ether	**J**

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; analytes were detected in samples that were diluted.

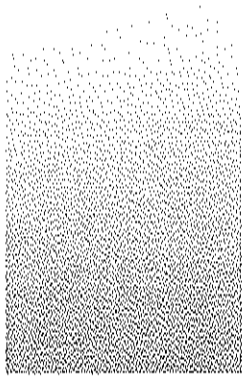
12.0 Additional Qualifications

Were additional qualifications applied?

No

New England ACCUTEST LABORATORIES

08/04/14





Technical Report for

Shell Oil

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana,

Accutest Job Number: MC32216

Sampling Date: 07/17/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: **76**

Reviewed on 8/4/14

Reza Tand
Lab Director

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Client Service contact: Matthew Morrell 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

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Sample Summary

Shell Oil

Job No: MC32216

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC32216-1	07/17/14	11:55	DHCW	07/18/14	AQ	Ground Water	P93D-ROX-071714
MC32216-2	07/17/14	14:35	DHCW	07/18/14	AQ	Ground Water	P93C-ROX-071714
MC32216-3	07/17/14	15:50	DHCW	07/18/14	AQ	Ground Water	P93B-ROX-071714
MC32216-4	07/17/14	00:00	DHCW	07/18/14	AQ	Trip Blank Water	TB-071714-HCL
MC32216-5	07/17/14	00:00	DHCW	07/18/14	AQ	Trip Blank Water	TB-071714-ST

ACCUTEST LABORATORIES

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SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	Job No	MC32216
Site:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central	Report Date	8/1/2014 2:29:42 PM

3 Sample(s) and 2 Trip Blank(s) were collected on 07/17/2014 and were received at Accutest on 07/18/2014 properly preserved, at 1.3 Deg. C and intact. These Samples received an Accutest job number of MC32216. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Sample 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: MSH2253

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32345-12MS, MC32345-12MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix AQ Batch ID: MSV1225

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32120-1MS, MC32120-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MSV1225-BS Recovery(s) for Acrylonitrile, 1,1-Dichloroethene, Methyl Tert Butyl Ether, Methylene chloride, trans-1,2-Dichloroethene are outside control limits. Blank Spike meets program technical requirements.
- MSV1225-BS Recovery(s) for Bromomethane, Chloroethane, Chloromethane, Trichlorofluoromethane, Vinyl Acetate, Vinyl chloride are outside control limits. Associated samples are non-detect for this compound.
- Matrix Spike Recovery(s) for 1,1-Dichloroethene, 2,2-Dichloropropane, 2-Chloroethyl vinyl ether, Acrylonitrile, Benzene, Isopropylbenzene, Methyl Tert Butyl Ether, Methylene chloride, trans-1,2-Dichloroethene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 1,1-Dichloroethene, 2,2-Dichloropropane, Acrylonitrile, Methyl Tert Butyl Ether, trans-1,2-Dichloroethene, 2-Chloroethyl vinyl ether, Benzene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2-Chloroethyl vinyl ether, Benzene are outside control limits for sample MC32120-1MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- MC32120-1MS/MSD for Bromomethane, Chloroethane, Chloromethane, Vinyl chloride: Outside control limits. Associated samples are non-detect for this compound.
- MC32120-1MS/MSD for has internal standard outside control limits. Outside control limits due to possible matrix interference. Confirmed by MS/MSD
- Continuing calibration check standard MSV1225-CC1177 for 1,1-dichloroethene, methylene chloride, acrylonitrile, trans-1,2-dichloroethene, vinyl acetate, 1,1-dichloroethane, 2,2-dichloropropane, carbon tetrachloride, trans-1,3-dichloropropene exceed 20% Difference (response bias high) Associated samples are non-detect for these compounds.
- MC32216-3 for Toluene-D8: Outside control limits due to possible matrix interference. Confirmed by reanalysis.
- MC32216-2, 3 has internal standard outside control limits. Outside control limits due to possible matrix interference. Confirmed by reanalysis.
- Continuing calibration check standard MSV1225-CC1177 for chloromethane, vinyl chloride, bromomethane, chloroethane, trichlorofluoromethane exceed 40% Difference (response bias high) Associated samples are non-detect for these compounds.
- Continuing calibration check standard MSV1225-CC1177 for methyl tert butyl ether exceed 20% Difference.
- Initial calibration verification MSV1177-ICV1177 for dichlorodifluoromethane exceed 30% Difference (response bias high). Associated samples are non-detect for this compound.

Volatiles by GCMS By Method SW846 8260C

Matrix AQ	Batch ID: MSV1225

- MC32120-1MS/MSD for has internal standard outside control limits. Outside control limits due to possible matrix interference. Confirmed by MS/MSD.

Extractables by GCMS By Method SW846 8270D

Matrix AQ	Batch ID: OP39037

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32236-5MS, MC32236-5MSD were used as the QC samples indicated.
- Sample(s) MC32216-1, MC32216-2, MC32216-3 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- OP39037-BS/MS/MSD Recovery(s) for 4-Nitrophenol, Hexachlorocyclopentadiene, Phenol are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for n-Nitrosodimethylamine are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for Benzoic Acid are outside control limits for sample OP39037-MSD. High RPD due to possible matrix interference and/or sample heterogeneity.
- RPD of OP39037-MSD for 4-Nitrophenol, Phenol; Outside control limits. Blank Spike meets program technical requirements.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ	Batch ID: OP39038

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32236-6MS, MC32236-6MSD were used as the QC samples indicated.
- Sample(s) MC32216-1, MC32216-2, MC32216-3 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: OP39069

- 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) MC32236-13MS, MC32236-13MSD were used as the QC samples indicated.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC32216).

Summary of Hits

Job Number: MC32216
Account: Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Collected: 07/17/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC32216-1	P93D-ROX-071714					
Benzene		0.64	0.50	0.32	ug/l	SW846 8260C
Methyl Tert Butyl Ether		1.1	1.0	0.51	ug/l	SW846 8260C
Di-n-butyl phthalate		0.25 JB	5.2	0.18	ug/l	SW846 8270D
Phenanthrene		0.022 JB	0.052	0.013	ug/l	SW846 8270D BY SIM
MC32216-2	P93C-ROX-071714					
Benzene		1550	25	16	ug/l	SW846 8260C
Methyl Tert Butyl Ether		6.1	1.0	0.51	ug/l	SW846 8260C
Phenol		8.7	5.2	0.31	ug/l	SW846 8270D
Di-n-butyl phthalate		0.35 JB	5.2	0.18	ug/l	SW846 8270D
Phenanthrene		0.024 JB	0.052	0.013	ug/l	SW846 8270D BY SIM
MC32216-3	P93B-ROX-071714					
Benzene		175000	500	320	ug/l	SW846 8260C
tert-Butylbenzene		0.42 J	5.0	0.39	ug/l	SW846 8260C
Ethylbenzene		23.6	1.0	0.38	ug/l	SW846 8260C
Isopropylbenzene		22.7	5.0	0.35	ug/l	SW846 8260C
Naphthalene		5.3	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene		29.7	5.0	0.49	ug/l	SW846 8260C
Toluene		12.9	1.0	0.33	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		8.0	5.0	0.32	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		3.7 J	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene		66.2	1.0	0.93	ug/l	SW846 8260C
o-Xylene		4.7	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		70.8	1.0	0.36	ug/l	SW846 8260C
Di-n-butyl phthalate		0.46 JB	5.2	0.18	ug/l	SW846 8270D
Phenanthrene		0.023 JB	0.052	0.013	ug/l	SW846 8270D BY SIM
MC32216-4	TB-071714-HCL					
No hits reported in this sample.						
MC32216-5	TB-071714-ST					
No hits reported in this sample.						

New England ACCUTEST LABORATORIES

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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P93D-ROX-071714		
Lab Sample ID:	MC32216-1	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33200.D	1	07/24/14	AMY	n/a	n/a	MSV1225
Run #2	H67797.D	1	07/28/14	AMY	n/a	n/a	MSH2253

	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	0.64 [a]	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93D-ROX-071714		
Lab Sample ID:	MC32216-1	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.1

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND [a]	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	0.50	ug/l	
100-41-4	Ethylbenzene	ND [a]	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	1.1	1.0	0.51	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND [a]	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 [a]	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 [a]	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND [a]	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND [a]	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-071714		
Lab Sample ID:	MC32216-1	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	84%	103%	70-130%
2037-26-5	Toluene-D8	86%	108%	70-130%
460-00-4	4-Bromofluorobenzene	109%	109%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93D-ROX-071714		
Lab Sample ID:	MC32216-1	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F75051.D	1	07/31/14	WK	07/19/14	OP39037	MSF3304
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.6	ug/l	
95-57-8	2-Chlorophenol	ND	5.2	0.32	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.86	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	0.49	ug/l	
88-75-5	2-Nitrophenol	ND	10	3.0	ug/l	u5
100-02-7	4-Nitrophenol	ND	21	0.56	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.2	ug/l	
108-95-2	Phenol	ND	5.2	0.31	ug/l	u5
95-95-4	2,4,5-Trichlorophenol	ND	10	0.39	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	2.4	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.2	0.33	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.58	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	0.35	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	0.48	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	~~0.25~~ 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:	P93D-ROX-071714		
Lab Sample ID:	MC32216-1	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	0.35	ug/l	
118-74-1	Hexachlorobenzene	ND	5.2	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.2	0.31	ug/l	
78-59-1	Isophorone	ND	5.2	0.47	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	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.2	0.41	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	0.54	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	34%		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	62%		30-130%
321-60-8	2-Fluorobiphenyl	62%		30-130%
1718-51-0	Terphenyl-d14	77%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93D-ROX-071714		
Lab Sample ID:	MC32216-1	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	190936.D	1	07/30/14	MR	07/19/14	OP39038	MSI3385
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.072	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.052	ug/l	
120-12-7	Anthracene	ND	0.10	0.096	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.052	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.030	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.052	0.033	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.028	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.040	ug/l	
218-01-9	Chrysene	ND	0.10	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.033	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.042	ug/l	
86-73-7	Fluorene	ND	0.10	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.032	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.21	0.052	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.077	ug/l	
85-01-8	Phenanthrene	~~0.022~~ U	0.052	0.013	ug/l	JB U
129-00-0	Pyrene	ND	0.10	0.040	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	67%		30-130%
321-60-8	2-Fluorobiphenyl	57%		30-130%
1718-51-0	Terphenyl-d14	66%		30-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93D-ROX-071714		
Lab Sample ID:	MC32216-1	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39774.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290
Run #2							

	Initial Volume	Final Volume
Run #1	36.6 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	120%		36-173%
460-00-4	Bromofluorobenzene (S)	118%		36-173%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93C-ROX-071714		
Lab Sample ID:	MC32216-2	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33201.D	1	07/24/14	AMY	n/a	n/a	MSV1225
Run #2	H67802.D	50	07/28/14	AMY	n/a	n/a	MSH2253

	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	1550 [a]	25	16	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93C-ROX-071714		
Lab Sample ID:	MC32216-2	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL;Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.2

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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	6.1	1.0	0.51	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	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:	P93C-ROX-071714		
Lab Sample ID:	MC32216-2	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%	104%	70-130%
2037-26-5	Toluene-D8	72%	104%	70-130%
460-00-4	4-Bromofluorobenzene	113%	111%	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:	P93C-ROX-071714		
Lab Sample ID:	MC32216-2	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F75052.D	1	07/31/14	WK	07/19/14	OP39037	MSF3304
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.6	ug/l	
95-57-8	2-Chlorophenol	ND	5.2	0.32	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.85	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.41	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.58	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.48	ug/l	
88-75-5	2-Nitrophenol	ND	10	3.0	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.55	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.2	ug/l	UJ
108-95-2	Phenol	8.7	5.2	0.31	ug/l	J
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	~~0.35~~ 4	5.2	0.18	ug/l	JB 4
117-84-0	Di-n-octyl phthalate	ND	5.2	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:	P93C-ROX-071714		
Lab Sample ID:	MC32216-2	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.2

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	UJ
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	39%		15-110%
4165-62-2	Phenol-d5	28%		15-110%
118-79-6	2,4,6-Tribromophenol	80%		15-110%
4165-60-0	Nitrobenzene-d5	69%		30-130%
321-60-8	2-Fluorobiphenyl	67%		30-130%
1718-51-0	Terphenyl-d14	77%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93C-ROX-071714		
Lab Sample ID:	MC32216-2	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90937.D	1	07/30/14	MR	07/19/14	OP39038	MSI3385
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.071	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.051	ug/l	
120-12-7	Anthracene	ND	0.10	0.095	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.052	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.030	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.052	0.033	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.028	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.040	ug/l	
218-01-9	Chrysene	ND	0.10	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.033	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.042	ug/l	
86-73-7	Fluorene	ND	0.10	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.032	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.21	0.051	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.076	ug/l	
85-01-8	Phenanthrene	~~0.024~~ U	0.052	0.013	ug/l	JB U
129-00-0	Pyrene	ND	0.10	0.040	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	75%		30-130%
321-60-8	2-Fluorobiphenyl	64%		30-130%
1718-51-0	Terphenyl-d14	67%		30-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93C-ROX-071714		
Lab Sample ID:	MC32216-2	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39775.D	1	07/25/14	NK	07/22/14	OP39069	GBK1290
Run #2							

	Initial Volume	Final Volume
Run #1	36.5 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	112%		36-173%
460-00-4	Bromofluorobenzene (S)	97%		36-173%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93B-ROX-071714		
Lab Sample ID:	MC32216-3	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33202.D	1	07/24/14	AMY	n/a	n/a	MSV1225
Run #2	H67803.D	1000	07/28/14	AMY	n/a	n/a	MSH2253

	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	UJ
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	UJ
71-43-2	Benzene	175000 a	500	320	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	UJ
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	0.42	5.0	0.39	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	UJ
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:	P93B-ROX-071714		
Lab Sample ID:	MC32216-3	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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	UJ
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	0.50	ug/l	
100-41-4	Ethylbenzene	23.6	1.0	0.38	ug/l	J
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	UJ
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	UJ
98-82-8	Isopropylbenzene	22.7	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	UJ
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	5.3	5.0	0.69	ug/l	J
103-65-1	n-Propylbenzene	29.7	5.0	0.49	ug/l	J
100-42-5	Styrene	ND	5.0	0.85	ug/l	UJ
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	12.9	1.0	0.33	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	UJ
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	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	8.0	5.0	0.32	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	3.7	5.0	0.38	ug/l	J J
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	UJ
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	UJ
	m,p-Xylene	66.2	1.0	0.93	ug/l	J
95-47-6	o-Xylene	4.7	1.0	0.36	ug/l	J
1330-20-7	Xylene (total)	70.8	1.0	0.36	ug/l	J

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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:	P93B-ROX-071714		
Lab Sample ID:	MC32216-3	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.3

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	80%	104%	70-130%
2037-26-5	Toluene-D8	66% b	101%	70-130%
460-00-4	4-Bromofluorobenzene	117%	108%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) Result is from Run# 2
(b) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93B-ROX-071714		
Lab Sample ID:	MC32216-3	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F75053.D	1	07/31/14	WK	07/19/14	OP39037	MSF3304
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.6	ug/l	
95-57-8	2-Chlorophenol	ND	5.2	0.32	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.85	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.41	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.58	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.48	ug/l	
88-75-5	2-Nitrophenol	ND	10	3.0	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.55	ug/l	UJ
87-86-5	Pentachlorophenol	ND	10	1.2	ug/l	
108-95-2	Phenol	ND	5.2	0.31	ug/l	UJ
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	~~0.46~~ U	5.2	0.18	ug/l	JB U
117-84-0	Di-n-octyl phthalate	ND	5.2	0.29	ug/l	

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Report of Analysis

Client Sample ID:	P93B-ROX-071714		
Lab Sample ID:	MC32216-3	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.3

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.2	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	U
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	37%		15-110%
4165-62-2	Phenol-d5	26%		15-110%
118-79-6	2,4,6-Tribromophenol	80%		15-110%
4165-60-0	Nitrobenzene-d5	67%		30-130%
321-60-8	2-Fluorobiphenyl	69%		30-130%
1718-51-0	Terphenyl-d14	76%		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-071714		
Lab Sample ID:	MC32216-3	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90938.D	1	07/30/14	MR	07/19/14	OP39038	MSI3385
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.071	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.051	ug/l	
120-12-7	Anthracene	ND	0.10	0.095	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.052	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.030	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.052	0.033	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.028	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.040	ug/l	
218-01-9	Chrysene	ND	0.10	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.033	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.042	ug/l	
86-73-7	Fluorene	ND	0.10	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.032	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.21	0.051	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.076	ug/l	
85-01-8	Phenanthrene	~~0.023~~ U	0.052	0.013	ug/l	JB U
129-00-0	Pyrene	ND	0.10	0.040	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	74%		30-130%
321-60-8	2-Fluorobiphenyl	63%		30-130%
1718-51-0	Terphenyl-d14	65%		30-130%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93B-ROX-071714		
Lab Sample ID:	MC32216-3	Date Sampled:	07/17/14
Matrix:	AQ - Ground Water	Date Received:	07/18/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39776.D	1	07/25/14	NK	07/22/14	OP39069	GBK1290
Run #2							

	Initial Volume	Final Volume
Run #1	37.0 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	99%		36-173%
460-00-4	Bromofluorobenzene (S)	112%		36-173%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-071714-HCL		
Lab Sample ID:	MC32216-4	Date Sampled:	07/17/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33189.D	1	07/24/14	AMY	n/a	n/a	MSV1225
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-071714-HCL		
Lab Sample ID:	MC32216-4	Date Sampled:	07/17/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.4

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-071714-HCL		
Lab Sample ID:	MC32216-4	Date Sampled:	07/17/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.4

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	125%		70-130%
2037-26-5	Toluene-D8	95%		70-130%
460-00-4	4-Bromofluorobenzene	112%		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-071714-ST		
Lab Sample ID:	MC32216-5	Date Sampled:	07/17/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/18/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39777.D	1	07/25/14	NK	07/22/14	OP39069	GBK1290
Run #2							

	Initial Volume	Final Volume
Run #1	36.5 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	80%		36-173%
460-00-4	Bromofluorobenzene (S)	79%		36-173%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

New England ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

Shell Oil Products Chain Of Custody Record

URS

LAB (LOCATION)
☐ KMCO (_____)
☐ CASTROVILLE (Test America Inc. 1345 Vanguard Dr W Middleborough, MA 01752 (508-481-6200))
☐ OTHER (_____)
☐ SPL (_____)
Lab Vendor #

Please Check Appropriate Box:
☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA MARCH ☐ CONSULTANT ☐ USES
☐ SHELL PIPELINE ☐ OTHER _____

Print Bill To Contact Name: Bob Bolton
PO #
INCIDENT # (ENV SERVICES): 0 7 2 1 8 4 4 0
SAP #: 3 4 0 0 8 1
☐ CHECK IF DUPLICATE # APPLIES
DATE: 7/17/14
PAGE: 1 of 1

COMPANY NAME: URS CORPORATION
PROJECT
SITE ADDRESS (STREET, CITY): 800 South Cordell Ave, ROXANA
IL
GLOBAL ID NO.
ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110
PHONE NO.
E-MAIL
(TANK/LAST PERIOD) Roxana Quarterly GW / 21602973.03003
REPORT/INVOICE TO (NAME): Elizabeth Kunkel, Wendy Pennington, Bob Bolton, Lindsay Rollinow
TELEPHONE: 314-429-0100
FAX: 314-429-0452
E-MAIL ADDRESS: bob.bolton@urs.com; elizabeth.kunkel@urs.com; wendy.pennington@urs.com; lindsay.rollinow@urs.com
CONSULTANT/CONTRACTOR: D. Haxel, C. Williams
LAB USE ONLY: MC32216
TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND
☐ EA - INVOICE REPORT FORMAT ☐ EDF ARCHIVE
REQUESTED ANALYSIS
DETECTION LIMITS: ☐ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☑ OTHER (SPECIFY) LOD
TEMPERATURE ON RECEIPT C°: Cooler #1 Cooler #2 Cooler #3
FIELD NOTES:
TEMPERATURE ON RECEIPT C°

SPECIAL INSTRUCTIONS OR NOTES:
- Please include "J" values on Reports
- Please provide sample receipt upon login.

☑ LOWER CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ FORMS NEEDED
☑ RECEIPT NOTIFICATION REQUESTED
☐ PROVIDE EDD TYPE

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	PRESERVATIVE H2SO4	PRESERVATIVE HNO3	PRESERVATIVE NONE	PRESERVATIVE OTHER	NO. OF CONT.	VOC 8260C SL+TICS	VCC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	P93D-ROX-071714	7/17/14	1155	water	2			2	2	6	X	X	X	X	2.0	
-2	P93C-ROX-071714	7/17/14	1435		↓			↓	↓	↓	X	X	X	X	↓	
-3	P93D-ROX-071714	7/17/14	1550								X	X	X	X		
-4	TB-071714-HCL	7/17/14	0000							2	X					
-5	TB-071714-ST	7/17/14	0000					2	2			X				
																19CC, 4M3

Relinquished (Signature)	Received (Signature)	Date	Time
FED EX	FED EX	7-17-14	1800
Relinquished (Signature)	Received (Signature)	Date	Time
FED EX		7-18-14	930
Relinquished (Signature)	Received (Signature)	Date	Time

1.3°C

MC32216: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC32216 Client: URS Immediate Client Services Action Required: No

Date / Time Received: 7/18/2014 Delivery Method: Client Service Action Required at Login: No

Project: 900 SOUTH CENTRAL No. Coolers: 1 Airbill #'s:

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☑		☐	☐
2. Trip Blank listed on COC:	☑		☐	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:508.481.6200
495 Technology Center West, Bldg One
F: 508.481.7753
Marlborough, MA
www.accutest.com

MC32216: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC32216

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC32216-1 Collected: 17-JUL-14 11:55 By: DHCW Received: 18-JUL-14 By: P93D-ROX-071714						
MC32216-1	SW846 8260C	24-JUL-14 18:20	AMY			V8260SL+
MC32216-1	SW846 8011	24-JUL-14 23:59	NK	22-JUL-14	MEW	V8011SL
MC32216-1	SW846 8260C	28-JUL-14 17:56	AMY			V8260SL+
MC32216-1	SW846 8270D BY SIM	30-JUL-14 11:32	MR	19-JUL-14	FC	B8270SIMPAH
MC32216-1	SW846 8270D	31-JUL-14 13:14	WK	19-JUL-14	FC	AB8270SL+
MC32216-2 Collected: 17-JUL-14 14:35 By: DHCW Received: 18-JUL-14 By: P93C-ROX-071714						
MC32216-2	SW846 8260C	24-JUL-14 18:46	AMY			V8260SL+
MC32216-2	SW846 8011	25-JUL-14 00:19	NK	22-JUL-14	MEW	V8011SL
MC32216-2	SW846 8260C	28-JUL-14 20:18	AMY			V8260SL+
MC32216-2	SW846 8270D BY SIM	30-JUL-14 11:55	MR	19-JUL-14	FC	B8270SIMPAH
MC32216-2	SW846 8270D	31-JUL-14 13:38	WK	19-JUL-14	FC	AB8270SL+
MC32216-3 Collected: 17-JUL-14 15:50 By: DHCW Received: 18-JUL-14 By: P93B-ROX-071714						
MC32216-3	SW846 8260C	24-JUL-14 19:11	AMY			V8260SL+
MC32216-3	SW846 8011	25-JUL-14 00:38	NK	22-JUL-14	MEW	V8011SL
MC32216-3	SW846 8260C	28-JUL-14 20:46	AMY			V8260SL+
MC32216-3	SW846 8270D BY SIM	30-JUL-14 12:18	MR	19-JUL-14	FC	B8270SIMPAH
MC32216-3	SW846 8270D	31-JUL-14 14:01	WK	19-JUL-14	FC	AB8270SL+
MC32216-4 Collected: 17-JUL-14 00:00 By: DHCW Received: 18-JUL-14 By: TB-071714-HCL						
MC32216-4	SW846 8260C	24-JUL-14 13:32	AMY			V8260SL+
MC32216-5 Collected: 17-JUL-14 00:00 By: DHCW Received: 18-JUL-14 By: TB-071714-ST						
MC32216-5	SW846 8011	25-JUL-14 00:57	NK	22-JUL-14	MEW	V8011SL

Accutest Internal Chain of Custody

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Received: 07/18/14

Sample,Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC32216-1.2	Walk In Ref #22	Alireza Zeighami	07/19/14 15:21	Retrieve from Storage
MC32216-1.2	Alireza Zeighami	Walk In Ref #22	07/19/14 15:54	Return to Storage
MC32216-1.2	Walk In Ref #22	Michael DiBuono	07/19/14 17:30	Retrieve from Storage
MC32216-1.3	VOC Ref #4	Amy Min Yang	07/28/14 12:47	Retrieve from Storage
MC32216-1.3	Amy Min Yang	GCMSH	07/28/14 12:47	Load on Instrument
MC32216-1.3	GCMSH	Amy Min Yang	07/29/14 11:03	Unload from Instrument
MC32216-1.3	Amy Min Yang	VOC Ref #4	07/29/14 11:03	Return to Storage
MC32216-1.4	VOC Ref #4	Amy Min Yang	07/24/14 11:37	Retrieve from Storage
MC32216-1.4	Amy Min Yang	GCMSV	07/24/14 11:37	Load on Instrument
MC32216-1.5	VOC Ref #4	Marc Tahtamoni	07/22/14 14:29	Retrieve from Storage
MC32216-2.2	Walk In Ref #22	Alireza Zeighami	07/19/14 15:21	Retrieve from Storage
MC32216-2.2	Alireza Zeighami	Walk In Ref #22	07/19/14 15:54	Return to Storage
MC32216-2.2	Walk In Ref #22	Michael DiBuono	07/19/14 17:30	Retrieve from Storage
MC32216-2.3	VOC Ref #4	Amy Min Yang	07/24/14 11:37	Retrieve from Storage
MC32216-2.3	Amy Min Yang	GCMSV	07/24/14 11:37	Load on Instrument
MC32216-2.4	VOC Ref #4	Amy Min Yang	07/28/14 12:47	Retrieve from Storage
MC32216-2.4	Amy Min Yang	GCMSH	07/28/14 12:47	Load on Instrument
MC32216-2.4	GCMSH	Amy Min Yang	07/29/14 11:03	Unload from Instrument
MC32216-2.4	Amy Min Yang	VOC Ref #4	07/29/14 11:03	Return to Storage
MC32216-2.6	VOC Ref #4	Marc Tahtamoni	07/22/14 14:29	Retrieve from Storage
MC32216-3.2	Walk In Ref #22	Alireza Zeighami	07/19/14 15:21	Retrieve from Storage
MC32216-3.2	Alireza Zeighami	Walk In Ref #22	07/19/14 15:54	Return to Storage
MC32216-3.2	Walk In Ref #22	Michael DiBuono	07/19/14 17:30	Retrieve from Storage
MC32216-3.3	VOC Ref #4	Amy Min Yang	07/28/14 12:47	Retrieve from Storage
MC32216-3.3	Amy Min Yang	GCMSH	07/28/14 12:47	Load on Instrument
MC32216-3.3	GCMSH	Amy Min Yang	07/29/14 11:03	Unload from Instrument
MC32216-3.3	Amy Min Yang	VOC Ref #4	07/29/14 11:03	Return to Storage
MC32216-3.4	VOC Ref #4	Amy Min Yang	07/24/14 11:37	Retrieve from Storage
MC32216-3.4	Amy Min Yang	GCMSV	07/24/14 11:37	Load on Instrument
MC32216-3.6	VOC Ref #4	Marc Tahtamoni	07/22/14 14:29	Retrieve from Storage
MC32216-4.1	VOC Ref #4	Amy Min Yang	07/24/14 11:37	Retrieve from Storage
MC32216-4.1	Amy Min Yang	GCMSV	07/24/14 11:37	Load on Instrument

Accutest Internal Chain of Custody

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Received: 07/18/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC32216-5.1	VOC Ref #4	Marc Tahtamoni	07/22/14 14:29	Retrieve from Storage

5.3

New England ACCUTEST LABORATORIES

GC/MS Volatiles

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1225-MB	V33185.D	1	07/24/14	AMY	n/a	n/a	MSV1225

The QC reported here applies to the following samples: Method: SW846 8260C

MC32216-1, MC32216-2, MC32216-3, MC32216-4

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	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	0.70	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1225-MB	V33185.D	1	07/24/14	AMY	n/a	n/a	MSV1225

The QC reported here applies to the following samples: Method: SW846 8260C

MC32216-1, MC32216-2, MC32216-3, MC32216-4

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	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

Method Blank Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1225-MB	V33185.D	1	07/24/14	AMY	n/a	n/a	MSV1225

The QC reported here applies to the following samples: Method: SW846 8260C

MC32216-1, MC32216-2, MC32216-3, MC32216-4

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	114%	70-130%
2037-26-5	Toluene-D8	87%	70-130%
460-00-4	4-Bromofluorobenzene	102%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSH2253-MB	H67784.D	1	07/28/14	AMY	n/a	n/a	MSH2253

6.1.2

The QC reported here applies to the following samples: Method: SW846 8260C

MC32216-1, MC32216-2, MC32216-3

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.32	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	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	106%	70-130%
2037-26-5	Toluene-D8	107%	70-130%
460-00-4	4-Bromofluorobenzene	109%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1225-BS	V33182.D	1	07/24/14	AMY	n/a	n/a	MSV1225

The QC reported here applies to the following samples: Method: SW846 8260C

MC32216-1, MC32216-2, MC32216-3, MC32216-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	43.4	87	70-130
107-02-8	Acrolein	250	302	121	70-130
107-13-1	Acrylonitrile	50	66.6	133* a	70-130
71-43-2	Benzene	50	54.4	109	70-130
108-86-1	Bromobenzene	50	50.2	100	70-130
74-97-5	Bromochloromethane	50	53.0	106	70-130
75-27-4	Bromodichloromethane	50	54.1	108	70-130
75-25-2	Bromoform	50	49.8	100	70-130
74-83-9	Bromomethane	50	96.7	193* b	70-130
78-93-3	2-Butanone (MEK)	50	40.4	81	70-130
104-51-8	n-Butylbenzene	50	54.7	109	70-130
135-98-8	sec-Butylbenzene	50	58.1	116	70-130
98-06-6	tert-Butylbenzene	50	51.8	104	70-130
75-15-0	Carbon disulfide	50	60.0	120	70-130
56-23-5	Carbon tetrachloride	50	61.1	122	70-130
108-90-7	Chlorobenzene	50	50.3	101	70-130
75-00-3	Chloroethane	50	105	210* b	70-130
110-75-8	2-Chloroethyl vinyl ether	50	40.9	82	70-130
67-66-3	Chloroform	50	54.5	109	70-130
74-87-3	Chloromethane	50	94.7	189* b	70-130
95-49-8	o-Chlorotoluene	50	55.1	110	70-130
106-43-4	p-Chlorotoluene	50	55.4	111	70-130
124-48-1	Dibromochloromethane	50	47.7	95	70-130
95-50-1	1,2-Dichlorobenzene	50	51.2	102	70-130
541-73-1	1,3-Dichlorobenzene	50	51.4	103	70-130
106-46-7	1,4-Dichlorobenzene	50	49.4	99	70-130
75-71-8	Dichlorodifluoromethane	50	55.8	112	70-130
75-34-3	1,1-Dichloroethane	50	64.4	129	70-130
107-06-2	1,2-Dichloroethane	50	57.1	114	70-130
75-35-4	1,1-Dichloroethene	50	67.4	135* a	70-130
156-59-2	cis-1,2-Dichloroethene	50	55.5	111	70-130
156-60-5	trans-1,2-Dichloroethene	50	65.4	131* a	70-130
78-87-5	1,2-Dichloropropane	50	50.6	101	70-130
142-28-9	1,3-Dichloropropane	50	50.2	100	70-130
594-20-7	2,2-Dichloropropane	50	64.4	129	70-130
563-58-6	1,1-Dichloropropene	50	55.5	111	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1225-BS	V33182.D	1	07/24/14	AMY	n/a	n/a	MSV1225

6.2.1

The QC reported here applies to the following samples: Method: SW846 8260C

MC32216-1, MC32216-2, MC32216-3, MC32216-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	54.9	110	70-130
10061-02-6	trans-1,3-Dichloropropene	50	61.0	122	70-130
123-91-1	1,4-Dioxane	250	273	109	70-130
97-63-2	Ethyl methacrylate	50	43.7	87	77-137
100-41-4	Ethylbenzene	50	52.8	106	70-130
87-68-3	Hexachlorobutadiene	50	44.8	90	70-130
591-78-6	2-Hexanone	50	40.0	80	70-130
98-82-8	Isopropylbenzene	50	57.5	115	70-130
99-87-6	p-Isopropyltoluene	50	55.9	112	70-130
1634-04-4	Methyl Tert Butyl Ether	50	65.9	132* a	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	58.0	116	70-130
74-95-3	Methylene bromide	50	51.2	102	70-130
75-09-2	Methylene chloride	50	65.6	131* a	70-130
91-20-3	Naphthalene	50	41.2	82	70-130
103-65-1	n-Propylbenzene	50	57.7	115	70-130
100-42-5	Styrene	50	49.7	99	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	51.8	104	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	54.1	108	70-130
127-18-4	Tetrachloroethene	50	47.9	96	70-130
108-88-3	Toluene	50	53.0	106	70-130
87-61-6	1,2,3-Trichlorobenzene	50	43.6	87	70-130
120-82-1	1,2,4-Trichlorobenzene	50	44.7	89	70-130
71-55-6	1,1,1-Trichloroethane	50	56.5	113	70-130
79-00-5	1,1,2-Trichloroethane	50	51.3	103	70-130
79-01-6	Trichloroethene	50	47.9	96	70-130
75-69-4	Trichlorofluoromethane	50	83.8	168* b	70-130
96-18-4	1,2,3-Trichloropropane	50	55.6	111	70-130
95-63-6	1,2,4-Trimethylbenzene	50	54.7	109	70-130
108-67-8	1,3,5-Trimethylbenzene	50	54.2	108	70-130
108-05-4	Vinyl Acetate	50	66.0	132* b	70-130
75-01-4	Vinyl chloride	50	87.0	174* b	70-130
	m,p-Xylene	100	102	102	70-130
95-47-6	o-Xylene	50	53.4	107	70-130
1330-20-7	Xylene (total)	150	156	104	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1225-BS	V33182.D	1	07/24/14	AMY	n/a	n/a	MSV1225

The QC reported here applies to the following samples: Method: SW846 8260C

MC32216-1, MC32216-2, MC32216-3, MC32216-4

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	99%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.
(b) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSH2253-BS	H67782.D	1	07/28/14	AMY	n/a	n/a	MSH2253

6.2.2

The QC reported here applies to the following samples: Method: SW846 8260C

MC32216-1, MC32216-2, MC32216-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	52.3	105	70-130
78-87-5	1,2-Dichloropropane	50	58.9	118	70-130
100-41-4	Ethylbenzene	50	45.7	91	70-130
91-20-3	Naphthalene	50	37.7	75	70-130
95-63-6	1,2,4-Trimethylbenzene	50	46.7	93	70-130
	m,p-Xylene	100	91.0	91	70-130
95-47-6	o-Xylene	50	44.9	90	70-130
1330-20-7	Xylene (total)	150	136	91	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	113%	70-130%
2037-26-5	Toluene-D8	108%	70-130%
460-00-4	4-Bromofluorobenzene	97%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32120-1MS	V33203.D	5	07/24/14	AMY	n/a	n/a	MSV1225
MC32120-1MSD	V33204.D	5	07/24/14	AMY	n/a	n/a	MSV1225
MC32120-1	V33192.D	1	07/24/14	AMY	n/a	n/a	MSV1225

The QC reported here applies to the following samples: Method: SW846 8260C

MC32216-1, MC32216-2, MC32216-3, MC32216-4

CAS No.	Compound	MC32120-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	298	119	250	304	122	2	70-130/30
107-02-8	Acrolein	ND		1250	1180	94	1250	1160	93	2	70-130/30
107-13-1	Acrylonitrile	ND		250	440	176* [a]	250	430	172* [a]	2	70-130/30
71-43-2	Benzene	5.8		250	772	306* [a]	250	518	205* [a]	39* [b]	70-130/30
108-86-1	Bromobenzene	ND		250	271	108	250	262	105	3	70-130/30
74-97-5	Bromochloromethane	ND		250	262	105	250	250	100	5	70-130/30
75-27-4	Bromodichloromethane	ND		250	256	102	250	249	100	3	70-130/30
75-25-2	Bromoform	ND		250	249	100	250	249	100	0	70-130/30
74-83-9	Bromomethane	ND		250	342	137* [c]	250	341	136* [c]	0	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	223	89	250	218	87	2	70-130/30
104-51-8	n-Butylbenzene	ND		250	302	121	250	296	118	2	70-130/30
135-98-8	sec-Butylbenzene	ND		250	314	126	250	303	121	4	70-130/30
98-06-6	tert-Butylbenzene	ND		250	290	116	250	279	112	4	70-130/30
75-15-0	Carbon disulfide	ND		250	311	124	250	303	121	3	70-130/30
56-23-5	Carbon tetrachloride	ND		250	280	112	250	284	114	1	70-130/30
108-90-7	Chlorobenzene	ND		250	251	100	250	242	97	4	70-130/30
75-00-3	Chloroethane	ND		250	345	138* [c]	250	346	138* [c]	0	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	18.7	7* [a]	250	ND	0* [a]	200* [b]	70-130/30
67-66-3	Chloroform	ND		250	266	106	250	259	104	3	70-130/30
74-87-3	Chloromethane	ND		250	333	133* [c]	250	327	131* [c]	2	70-130/30
95-49-8	o-Chlorotoluene	ND		250	298	119	250	291	116	2	70-130/30
106-43-4	p-Chlorotoluene	ND		250	295	118	250	286	114	3	70-130/30
124-48-1	Dibromochloromethane	ND		250	234	94	250	231	92	1	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	262	105	250	256	102	2	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	272	109	250	263	105	3	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	264	106	250	256	102	3	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	211	84	250	216	86	2	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	326	130	250	316	126	3	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	247	99	250	239	96	3	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	350	140* [a]	250	344	138* [a]	2	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	307	123	250	292	117	5	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	348	139* [a]	250	334	134* [a]	4	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	260	104	250	250	100	4	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	257	103	250	251	100	2	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	346	138* [a]	250	341	136* [a]	1	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	298	119	250	292	117	2	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32120-1MS	V33203.D	5	07/24/14	AMY	n/a	n/a	MSV1225
MC32120-1MSD	V33204.D	5	07/24/14	AMY	n/a	n/a	MSV1225
MC32120-1	V33192.D	1	07/24/14	AMY	n/a	n/a	MSV1225

The QC reported here applies to the following samples: Method: SW846 8260C

MC32216-1, MC32216-2, MC32216-3, MC32216-4

CAS No.	Compound	MC32120-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	290	116	250	283	113	2	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	307	123	250	306	122	0	70-130/30
123-91-1	1,4-Dioxane	ND		1250	1300	104	1250	1410	113	8	70-130/30
97-63-2	Ethyl methacrylate	ND		250	230	92	250	226	90	2	72-139/30
100-41-4	Ethylbenzene	8.0		250	285	111	250	277	108	3	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	234	94	250	234	94	0	70-130/30
591-78-6	2-Hexanone	ND		250	193	77	250	186	74	4	70-130/30
98-82-8	Isopropylbenzene	0.53	J	250	330	132* [a]	250	322	129	2	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	303	121	250	293	117	3	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	391	156* [a]	250	383	153* [a]	2	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	242	97	250	231	92	5	70-130/30
74-95-3	Methylene bromide	ND		250	238	95	250	229	92	4	70-130/30
75-09-2	Methylene chloride	ND		250	335	134* [a]	250	324	130	3	70-130/30
91-20-3	Naphthalene	4.5	J	250	214	84	250	224	88	5	70-130/30
103-65-1	n-Propylbenzene	0.98	J	250	308	123	250	299	119	3	70-130/30
100-42-5	Styrene	ND		250	257	103	250	251	100	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	254	102	250	251	100	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	282	113	250	276	110	2	70-130/30
127-18-4	Tetrachloroethene	ND		250	249	100	250	240	96	4	70-130/30
108-88-3	Toluene	2.4		250	255	101	250	249	99	2	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	204	82	250	216	86	6	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	233	93	250	235	94	1	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	286	114	250	284	114	1	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	228	91	250	223	89	2	70-130/30
79-01-6	Trichloroethene	ND		250	253	101	250	243	97	4	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	304	122	250	303	121	0	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	291	116	250	286	114	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	13.2		250	309	118	250	301	115	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	3.2	J	250	305	121	250	296	117	3	70-130/30
108-05-4	Vinyl Acetate	ND		250	298	119	250	288	115	3	70-130/30
75-01-4	Vinyl chloride	ND		250	348	139* [c]	250	343	137* [c]	1	70-130/30
	m,p-Xylene	37.1		500	577	108	500	561	105	3	70-130/30
95-47-6	o-Xylene	4.1		250	289	114	250	282	111	2	70-130/30
1330-20-7	Xylene (total)	41.2		750	866	110	750	843	107	3	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32120-1MS	V33203.D	5	07/24/14	AMY	n/a	n/a	MSV1225
MC32120-1MSD	V33204.D	5	07/24/14	AMY	n/a	n/a	MSV1225
MC32120-1	V33192.D	1	07/24/14	AMY	n/a	n/a	MSV1225

The QC reported here applies to the following samples: Method: SW846 8260C

MC32216-1, MC32216-2, MC32216-3, MC32216-4

CAS No.	Surrogate Recoveries	MS	MSD	MC32120-1	Limits
1868-53-7	Dibromofluoromethane	91%	90%	92%	70-130%
2037-26-5	Toluene-D8	88%	90%	90%	70-130%
460-00-4	4-Bromofluorobenzene	101%	100%	104%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample non-homogeneity.
(c) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32345-12MS	H67793.D	5	07/28/14	AMY	n/a	n/a	MSH2253
MC32345-12MSD	H67794.D	5	07/28/14	AMY	n/a	n/a	MSH2253
MC32345-12	H67787.D	1	07/28/14	AMY	n/a	n/a	MSH2253

The QC reported here applies to the following samples: Method: SW846 8260C

MC32216-1, MC32216-2, MC32216-3

CAS No.	Compound	MC32345-12 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		250	274	110	250	252	101	8	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	298	119	250	286	114	4	70-130/30
100-41-4	Ethylbenzene	ND		250	245	98	250	225	90	9	70-130/30
91-20-3	Naphthalene	ND		250	191	76	250	180	72	6	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	262	105	250	238	95	10	70-130/30
	m,p-Xylene	ND		500	484	97	500	447	89	8	70-130/30
95-47-6	o-Xylene	ND		250	232	93	250	219	88	6	70-130/30
1330-20-7	Xylene (total)	ND		750	715	95	750	666	89	7	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC32345-12 Limits	
1868-53-7	Dibromofluoromethane	107%	114%	108%	70-130%
2037-26-5	Toluene-D8	108%	107%	105%	70-130%
460-00-4	4-Bromofluorobenzene	102%	101%	107%	70-130%

* = Outside of Control Limits.

6.3.2

Volatile Internal Standard Area Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSH2253-CC2244	Injection Date:	07/28/14
Lab File ID:	H67780.D	Injection Time:	09:00
Instrument ID:	GCMSH	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	294744	8.63	533886	9.49	300348	12.74	228339	15.31	88843	6.20
Upper Limit [a]	589488	9.13	1067772	9.99	600696	13.24	456678	15.81	177686	6.70
Lower Limit [b]	147372	8.13	266943	8.99	150174	12.24	114170	14.81	44422	5.70
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSH2253-BS	304899	8.62	536024	9.49	306658	12.74	228719	15.31	98152	6.21
MSH2253-MB	268663	8.63	471219	9.49	241486	12.75	150694	15.31	87001	6.21
ZZZZZZ	263063	8.63	456580	9.49	233001	12.74	144603	15.31	71804	6.21
ZZZZZZ	256418	8.63	445302	9.49	228171	12.74	141249	15.31	70439	6.21
MC32345-12	250548	8.63	429036	9.49	216846	12.75	137196	15.31	71833	6.22
ZZZZZZ	247608	8.62	417864	9.49	214691	12.75	137103	15.31	68530	6.20
ZZZZZZ	235052	8.63	405529	9.49	205604	12.74	126043	15.31	63001	6.22
ZZZZZZ	231228	8.63	405038	9.49	206650	12.75	124575	15.31	66024	6.21
ZZZZZZ	226010	8.63	401713	9.49	205241	12.75	126553	15.32	63952	6.20
ZZZZZZ	258797	8.63	445865	9.49	247409	12.74	208672	15.31	78454	6.20
MC32345-12MS	304963	8.63	532448	9.49	300641	12.74	204387	15.31	97583	6.21
MC32345-12MSD	316084	8.63	568755	9.49	318944	12.74	221552	15.31	104569	6.21
ZZZZZZ	305107	8.63	534626	9.49	282536	12.75	184972	15.31	101011	6.21
ZZZZZZ	314570	8.63	555868	9.49	292164	12.75	180723	15.31	98536	6.20
ZZZZZZ	280176	8.63	493711	9.50	253542	12.75	171091	15.31	99390	6.21
ZZZZZZ	268637	8.63	460356	9.49	240619	12.75	174317	15.31	89117	6.20
MC32216-1	296253	8.63	521450	9.49	284156	12.74	188651	15.31	90455	6.21
ZZZZZZ	321131	8.62	564865	9.49	288165	12.75	180818	15.31	91478	6.20
ZZZZZZ	301271	8.63	545812	9.49	271938	12.74	167134	15.32	87769	6.22
ZZZZZZ	283169	8.63	513224	9.49	254033	12.75	154113	15.31	83025	6.21
ZZZZZZ	267237	8.62	493787	9.49	246333	12.75	152710	15.32	77929	6.20
MC32216-2	258034	8.63	455220	9.49	227742	12.74	139705	15.31	74985	6.20
MC32216-3	249145	8.63	453306	9.49	217177	12.75	138775	15.31	69432	6.21

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

6.4.1

Volatile Internal Standard Area Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSV1225-CC1177	Injection Date:	07/24/14
Lab File ID:	V33182.D	Injection Time:	10:17
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	404031	6.57	514035	7.75	197537	11.09	255363	13.30	86801	3.51
Upper Limit [a]	808062	7.07	1028070	8.25	395074	11.59	510726	13.80	173602	4.01
Lower Limit [b]	202016	6.07	257018	7.25	98769	10.59	127682	12.80	43401	3.01

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1225-BS	404031	6.57	514035	7.75	197537	11.09	255363	13.30	86801	3.51
MSV1225-MB	423518	6.57	566497	7.75	207436	11.09	205531	13.30	98754	3.51
ZZZZZZ	314218	6.57	438886	7.75	188813	11.09	192114	13.30	77336	3.52
ZZZZZZ	290479	6.57	404629	7.75	165759	11.09	174831	13.30	70296	3.51
ZZZZZZ	288880	6.57	411369	7.75	166077	11.09	174974	13.30	70249	3.52
MC32216-4	276747	6.57	389072	7.75	163374	11.09	175404	13.30	71119	3.52
MC32120-1	607385	6.57	785192	7.75	234551	11.09	264980	13.30	222818[c]	3.52
ZZZZZZ	486512	6.57	549775	7.75	250156	11.09	237478	13.30	144045	3.53
ZZZZZZ	1143587[d]	6.57	1377476[d]	7.75	498634[d]	11.09	799272[d]	13.30	468647[d]	3.54
ZZZZZZ	1136706[d]	6.58	2013116[d]	7.76	850560[d]	11.09	1163371[d]	13.30	414495[d]	3.54
ZZZZZZ	785543	6.57	1497250[d]	7.75	414808[d]	11.09	403343	13.30	234913[d]	3.53
ZZZZZZ	790139	6.65	2282079[d]	7.78	446668[d]	11.09	664914[d]	13.30	161146	3.54
ZZZZZZ	747101	6.81	2775199[d]	7.87	605272[d]	11.10	665352[d]	13.30	279915[d]	3.55
ZZZZZZ	699213	6.83	2878266[d]	7.87	658120[d]	11.10	714187[d]	13.30	263249[d]	3.55
MC32216-1	620812	6.57	964822	7.75	360517	11.09	339994	13.30	168558	3.51
MC32216-2	617075	6.57	1365612[d]	7.75	342437	11.09	326577	13.30	161394	3.52
MC32216-3	832590[d]	6.61	2311394[d]	7.77	436447[d]	11.09	367710	13.30	226087[d]	3.53
MC32120-1MS	755293	6.57	1031451[e]	7.75	345043	11.09	415260	13.30	199822[e]	3.51
MC32120-1MSD	725008	6.57	972624	7.75	331686	11.09	399515	13.30	192608[e]	3.51
ZZZZZZ	529363	6.56	745611	7.75	261178	11.08	274494	13.30	144217	3.51
ZZZZZZ	503161	6.57	712256	7.75	249186	11.08	266369	13.30	138063	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.
(c) Outside control limits. Target analytes not associated with this internal standard.
(d) Outside control limits due to possible matrix interference. Confirmed by reanalysis.
(e) Outside control limits due to possible matrix interference. Confirmed by MS/MSD.

6.4.2

Volatile Surrogate Recovery Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC32216-1	H67797.D	103	108	109
MC32216-1	V33200.D	84	86	109
MC32216-2	H67802.D	104	104	111
MC32216-2	V33201.D	86	72	113
MC32216-3	H67803.D	104	101	108
MC32216-3	V33202.D	80	66* [a]	117
MC32216-4	V33189.D	125	95	112
MC32120-1MS	V33203.D	91	88	101
MC32120-1MSD	V33204.D	90	90	100
MC32345-12MS	H67793.D	107	108	102
MC32345-12MSD	H67794.D	114	107	101
MSH2253-BS	H67782.D	113	108	97
MSH2253-MB	H67784.D	106	107	109
MSV1225-BS	V33182.D	100	101	99
MSV1225-MB	V33185.D	114	87	102

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

(a) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

6.5.1

New England ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39037-MB	F75046.D	1	07/31/14	WK	07/19/14	OP39037	MSF3304

The QC reported here applies to the following samples: Method: SW846 8270D

MC32216-1, MC32216-2, MC32216-3

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	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	0.23	5.0	0.17	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

Method Blank Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39037-MB	F75046.D	1	07/31/14	WK	07/19/14	OP39037	MSF3304

The QC reported here applies to the following samples: Method: SW846 8270D

MC32216-1, MC32216-2, MC32216-3

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	40%	15-110%
4165-62-2	Phenol-d5	28%	15-110%
118-79-6	2,4,6-Tribromophenol	83%	15-110%
4165-60-0	Nitrobenzene-d5	70%	30-130%
321-60-8	2-Fluorobiphenyl	68%	30-130%
1718-51-0	Terphenyl-d14	80%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

Method Blank Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39038-MB	I90931.D	1	07/30/14	MR	07/19/14	OP39038	MSI3385

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC32216-1, MC32216-2, MC32216-3

7.1.2

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	0.048	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	75%	30-130%
321-60-8	2-Fluorobiphenyl	64%	30-130%
1718-51-0	Terphenyl-d14	69%	30-130%

Blank Spike Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39037-BS	F75047.D	1	07/31/14	WK	07/19/14	OP39037	MSF3304

The QC reported here applies to the following samples: Method: SW846 8270D

MC32216-1, MC32216-2, MC32216-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	33.1	66	30-130
95-57-8	2-Chlorophenol	50	31.5	63	30-130
59-50-7	4-Chloro-3-methyl phenol	50	35.9	72	30-130
120-83-2	2,4-Dichlorophenol	50	36.3	73	30-130
105-67-9	2,4-Dimethylphenol	50	30.5	61	30-130
51-28-5	2,4-Dinitrophenol	50	30.7	61	30-130
534-52-1	4,6-Dinitro-o-cresol	50	34.7	69	30-130
95-48-7	2-Methylphenol	50	28.4	57	30-130
	3&4-Methylphenol	100	53.7	54	30-130
88-75-5	2-Nitrophenol	50	35.9	72	30-130
100-02-7	4-Nitrophenol	50	13.2	26* a	30-130
87-86-5	Pentachlorophenol	50	50.3	101	30-130
108-95-2	Phenol	50	14.1	28* a	30-130
95-95-4	2,4,5-Trichlorophenol	50	43.8	88	30-130
88-06-2	2,4,6-Trichlorophenol	50	40.7	81	30-130
62-53-3	Aniline	50	29.0	58	40-140
101-55-3	4-Bromophenyl phenyl ether	50	42.1	84	40-140
85-68-7	Butyl benzyl phthalate	50	45.7	91	40-140
100-51-6	Benzyl Alcohol	50	37.0	74	40-140
91-58-7	2-Chloronaphthalene	50	41.2	82	40-140
106-47-8	4-Chloroaniline	50	39.2	78	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	29.8	60	40-140
111-44-4	bis(2-Chloroethyl)ether	50	38.3	77	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	44.0	88	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	40.7	81	40-140
122-66-7	1,2-Diphenylhydrazine	50	40.5	81	40-140
121-14-2	2,4-Dinitrotoluene	50	44.2	88	40-140
606-20-2	2,6-Dinitrotoluene	50	38.7	77	40-140
91-94-1	3,3'-Dichlorobenzidine	50	48.6	97	40-140
132-64-9	Dibenzofuran	50	39.4	79	40-140
84-74-2	Di-n-butyl phthalate	50	43.3	87	40-140
117-84-0	Di-n-octyl phthalate	50	45.7	91	40-140
84-66-2	Diethyl phthalate	50	46.1	92	40-140
131-11-3	Dimethyl phthalate	50	45.6	91	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	44.9	90	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: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39037-BS	F75047.D	1	07/31/14	WK	07/19/14	OP39037	MSF3304

The QC reported here applies to the following samples: Method: SW846 8270D

MC32216-1, MC32216-2, MC32216-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	12.2	24* a	40-140
67-72-1	Hexachloroethane	50	23.4	47	40-140
78-59-1	Isophorone	50	36.6	73	40-140
88-74-4	2-Nitroaniline	50	44.4	89	40-140
99-09-2	3-Nitroaniline	50	43.6	87	40-140
100-01-6	4-Nitroaniline	50	43.3	87	40-140
98-95-3	Nitrobenzene	50	34.5	69	40-140
62-75-9	n-Nitrosodimethylamine	50	23.5	47	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	42.5	85	40-140
86-30-6	N-Nitrosodiphenylamine	50	38.5	77	40-140
110-86-1	Pyridine	50	22.7	45	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	38%	15-110%
4165-62-2	Phenol-d5	28%	15-110%
118-79-6	2,4,6-Tribromophenol	86%	15-110%
4165-60-0	Nitrobenzene-d5	69%	30-130%
321-60-8	2-Fluorobiphenyl	73%	30-130%
1718-51-0	Terphenyl-d14	77%	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: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39038-BS	I90932.D	1	07/30/14	MR	07/19/14	OP39038	MSI3385

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC32216-1, MC32216-2, MC32216-3

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	30.3	61	40-140
120-12-7	Anthracene	50	35.2	70	40-140
56-55-3	Benzo(a)anthracene	50	36.6	73	40-140
50-32-8	Benzo(a)pyrene	50	35.2	70	40-140
205-99-2	Benzo(b)fluoranthene	50	38.3	77	40-140
191-24-2	Benzo(g,h,i)perylene	50	39.0	78	40-140
207-08-9	Benzo(k)fluoranthene	50	33.3	67	40-140
218-01-9	Chrysene	50	33.9	68	40-140
53-70-3	Dibenzo(a,h)anthracene	50	37.7	75	40-140
206-44-0	Fluoranthene	50	32.4	65	40-140
86-73-7	Fluorene	50	35.0	70	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	38.2	76	40-140
90-12-0	1-Methylnaphthalene	50	32.2	64	40-140
91-57-6	2-Methylnaphthalene	50	32.5	65	40-140
85-01-8	Phenanthrene	50	35.9	72	40-140
129-00-0	Pyrene	50	31.6	63	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	75%	30-130%
321-60-8	2-Fluorobiphenyl	67%	30-130%
1718-51-0	Terphenyl-d14	69%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39037-MS	F75048.D	1	07/31/14	WK	07/19/14	OP39037	MSF3304
OP39037-MSD	F75049.D	1	07/31/14	WK	07/19/14	OP39037	MSF3304
MC32236-5	F75050.D	1	07/31/14	WK	07/19/14	OP39037	MSF3304

The QC reported here applies to the following samples: Method: SW846 8270D

MC32216-1, MC32216-2, MC32216-3

CAS No.	Compound	MC32236-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	23.1	46	50	29.8	60	25* [a]	30-130/20
95-57-8	2-Chlorophenol	ND		50	28.0	56	50	31.6	63	12	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	33.4	67	50	36.4	73	9	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	34.4	69	50	36.5	73	6	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	28.2	56	50	32.1	64	13	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	28.0	56	50	31.5	63	12	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	32.1	64	50	35.2	70	9	30-130/20
95-48-7	2-Methylphenol	ND		50	24.3	49	50	28.9	58	17	30-130/20
	3&4-Methylphenol	ND		100	44.2	44	100	53.0	53	18	30-130/20
88-75-5	2-Nitrophenol	ND		50	34.2	68	50	34.6	69	1	30-130/20
100-02-7	4-Nitrophenol	ND		50	8.5	17* [b]	50	13.4	27* [b]	45* [b]	30-130/20
87-86-5	Pentachlorophenol	ND		50	48.5	97	50	52.4	105	8	30-130/20
108-95-2	Phenol	ND		50	9.9	20* [b]	50	13.3	27* [b]	29* [b]	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	42.5	85	50	44.7	89	5	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	39.6	79	50	42.2	84	6	30-130/20
62-53-3	Aniline	ND		50	26.5	53	50	28.0	56	6	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	39.6	79	50	43.4	87	9	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	41.4	83	50	45.5	91	9	40-140/20
100-51-6	Benzyl Alcohol	ND		50	30.5	61	50	33.9	68	11	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	38.3	77	50	39.5	79	3	40-140/20
106-47-8	4-Chloroaniline	ND		50	37.5	75	50	37.6	75	0	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	27.8	56	50	29.5	59	6	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	35.7	71	50	38.7	77	8	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	41.9	84	50	44.5	89	6	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	37.6	75	50	40.6	81	8	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	38.9	78	50	41.6	83	7	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	40.1	80	50	44.4	89	10	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	36.3	73	50	38.9	78	7	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	46.1	92	50	48.0	96	4	40-140/20
132-64-9	Dibenzofuran	ND		50	37.0	74	50	39.5	79	7	40-140/20
84-74-2	Di-n-butyl phthalate	0.24	J	50	41.0	82	50	43.4	86	6	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	42.0	84	50	44.6	89	6	40-140/20
84-66-2	Diethyl phthalate	ND		50	43.1	86	50	47.1	94	9	40-140/20
131-11-3	Dimethyl phthalate	ND		50	42.1	84	50	45.5	91	8	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	41.5	83	50	45.0	90	8	40-140/20
118-74-1	Hexachlorobenzene	ND		50	39.4	79	50	42.1	84	7	40-140/20

* = Outside of Control Limits.

7.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39037-MS	F75048.D	1	07/31/14	WK	07/19/14	OP39037	MSF3304
OP39037-MSD	F75049.D	1	07/31/14	WK	07/19/14	OP39037	MSF3304
MC32236-5	F75050.D	1	07/31/14	WK	07/19/14	OP39037	MSF3304

The QC reported here applies to the following samples: Method: SW846 8270D

MC32216-1, MC32216-2, MC32216-3

7.3.1

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CAS No.	Compound	MC32236-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	11.2	22* [b]	50	10.1	20* [b]	10	40-140/20
67-72-1	Hexachloroethane	ND		50	22.4	45	50	21.6	43	4	40-140/20
78-59-1	Isophorone	ND		50	35.1	70	50	35.6	71	1	40-140/20
88-74-4	2-Nitroaniline	ND		50	41.0	82	50	43.8	88	7	40-140/20
99-09-2	3-Nitroaniline	ND		50	41.0	82	50	43.6	87	6	40-140/20
100-01-6	4-Nitroaniline	ND		50	39.2	78	50	43.1	86	9	40-140/20
98-95-3	Nitrobenzene	ND		50	32.3	65	50	33.4	67	3	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	19.6	39* [c]	50	23.0	46	16	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	39.3	79	50	42.2	84	7	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	36.0	72	50	38.7	77	7	40-140/20
110-86-1	Pyridine	ND		50	21.5	43	50	22.2	44	3	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC32236-5	Limits
367-12-4	2-Fluorophenol	28%	36%	32%	15-110%
4165-62-2	Phenol-d5	19%	27%	23%	15-110%
118-79-6	2,4,6-Tribromophenol	75%	85%	75%	15-110%
4165-60-0	Nitrobenzene-d5	65%	68%	56%	30-130%
321-60-8	2-Fluorobiphenyl	68%	72%	55%	30-130%
1718-51-0	Terphenyl-d14	72%	79%	75%	30-130%

(a) High RPD due to possible matrix interference and/or sample heterogeneity.
(b) Outside control limits. Blank Spike meets program technical requirements.
(c) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39038-MS	I90933.D	1	07/30/14	MR	07/19/14	OP39038	MSI3385
OP39038-MSD	I90934.D	1	07/30/14	MR	07/19/14	OP39038	MSI3385
MC32236-6	I90935.D	1	07/30/14	MR	07/19/14	OP39038	MSI3385

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC32216-1, MC32216-2, MC32216-3

7.3.2

7

CAS No.	Compound	MC32236-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	33.5	67	50	34.9	70	4	40-140/20
208-96-8	Acenaphthylene	ND		50	29.0	58	50	30.2	60	4	40-140/20
120-12-7	Anthracene	ND		50	32.9	66	50	36.0	72	9	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	33.5	67	50	36.6	73	9	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	32.5	65	50	35.5	71	9	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	32.8	66	50	36.5	73	11	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	35.7	71	50	39.0	78	9	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	32.7	65	50	35.7	71	9	40-140/20
218-01-9	Chrysene	ND		50	31.1	62	50	34.2	68	9	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	34.5	69	50	37.7	75	9	40-140/20
206-44-0	Fluoranthene	ND		50	30.1	60	50	33.1	66	9	40-140/20
86-73-7	Fluorene	ND		50	34.0	68	50	36.9	74	8	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	34.8	70	50	38.1	76	9	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	30.8	62	50	30.7	61	0	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	31.3	63	50	30.7	61	2	40-140/20
85-01-8	Phenanthrene	0.022	J	50	33.9	68	50	37.1	74	9	40-140/20
129-00-0	Pyrene	ND		50	29.2	58	50	32.1	64	9	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC32236-6	Limits
4165-60-0	Nitrobenzene-d5	69%	72%	63%	30-130%
321-60-8	2-Fluorobiphenyl	64%	66%	52%	30-130%
1718-51-0	Terphenyl-d14	64%	70%	65%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSF3304-CC3270	Injection Date:	07/31/14
Lab File ID:	F75041.D	Injection Time:	09:23
Instrument ID:	GCMSF	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	114945	3.08	424187	4.11	279093	5.60	519265	6.84	643214	9.13	590783	10.57
Upper Limit [a]	229890	3.58	848374	4.61	558186	6.10	1038530	7.34	1286428	9.63	1181566	11.07
Lower Limit [b]	57473	2.58	212094	3.61	139547	5.10	259633	6.34	321607	8.63	295392	10.07
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
ZZZZZZ	116231	3.08	406906	4.11	264712	5.60	484980	6.84	543200	9.13	536029	10.56
ZZZZZZ	116621	3.08	422669	4.11	270579	5.60	512052	6.84	639125	9.13	641997	10.57
ZZZZZZ	128728	3.08	463504	4.11	300378	5.60	556933	6.84	663956	9.13	689720	10.57
ZZZZZZ	123687	3.08	440529	4.11	288430	5.60	542807	6.84	678180	9.14	723727	10.58
OP39037-MB	142970	3.08	517794	4.11	342675	5.60	645527	6.84	780155	9.13	805648	10.57
OP39037-BS	173227	3.08	616988	4.11	407127	5.60	769937	6.85	953209	9.14	935390	10.57
OP39037-MS	166331	3.08	592903	4.11	391561	5.60	722362	6.84	901640	9.14	876987	10.57
OP39037-MSD	136419	3.08	497061	4.11	321897	5.60	610608	6.84	756477	9.13	747861	10.57
MC32236-5	152784	3.08	550765	4.11	370035	5.60	689239	6.84	824039	9.13	845987	10.56
MC32216-1	138904	3.08	502637	4.11	336974	5.60	626633	6.84	751087	9.13	768452	10.56
MC32216-2	140734	3.08	514094	4.11	348862	5.60	648063	6.84	790098	9.13	821112	10.57
MC32216-3	141853	3.08	508193	4.11	333457	5.60	627757	6.84	752376	9.13	768941	10.57
OP39136-MB	136787	3.08	493374	4.11	331485	5.60	619768	6.84	754876	9.13	758408	10.56
OP39136-BS	148860	3.08	531987	4.11	355974	5.60	669084	6.84	822237	9.14	805243	10.57
OP39136-MS	150584	3.08	540233	4.11	356711	5.60	644601	6.84	818927	9.14	793606	10.57
OP39136-MSD	144655	3.08	524390	4.11	346918	5.60	655470	6.84	812319	9.13	795151	10.57
MC32300-2	142869	3.08	503943	4.11	334036	5.60	621932	6.84	723065	9.13	744747	10.56
ZZZZZZ	164320	3.09	574283	4.12	379593	5.64	742669	6.85	896832	9.14	948511	10.58
OP39144-LB	132549	3.08	479162	4.11	318361	5.59	591337	6.84	715997	9.13	758382	10.56
OP39144-MB	132549	3.08	479162	4.11	318361	5.59	591337	6.84	715997	9.13	758382	10.56
OP39144-BS	132296	3.08	477008	4.11	312615	5.60	583532	6.84	720939	9.13	736004	10.57
OP39144-MS	142326	3.08	506678	4.11	334273	5.60	616654	6.84	764476	9.13	774364	10.57
OP39144-MSD	150114	3.08	533070	4.11	348006	5.60	664945	6.84	831908	9.13	830082	10.57
MC32380-3	136260	3.08	483052	4.11	322091	5.60	599051	6.84	735157	9.13	761357	10.56
ZZZZZZ	134707	3.08	471776	4.11	312375	5.60	591704	6.84	719219	9.13	741754	10.56
ZZZZZZ	138585	3.08	487567	4.11	323207	5.60	608009	6.84	728801	9.13	763472	10.56
ZZZZZZ	130222	3.08	465187	4.11	306386	5.60	583888	6.84	704147	9.13	734290	10.56
ZZZZZZ	144608	3.09	122780*	4.14	362322	5.62	686725	6.84	836308	9.13	885722	10.57

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

7.4.1

Semivolatile Internal Standard Area Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSF3304-CC3270	Injection Date:	07/31/14
Lab File ID:	F75041.D	Injection Time:	09:23
Instrument ID:	GCMSF	Method:	SW846 8270D

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT	IS 3 AREA	IS 3 RT	IS 4 AREA	IS 4 RT	IS 5 AREA	IS 5 RT	IS 6 AREA	IS 6 RT

(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

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Semivolatile Internal Standard Area Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSI3385-CC3320	Injection Date:	07/30/14
Lab File ID:	I90927.D	Injection Time:	08:04
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	366197	4.31	766702	5.37	390836	6.91	659326	8.32	417805	11.09	1127728	12.59
Upper Limit [a]	732394	4.81	1533404	5.87	781672	7.41	1318652	8.82	835610	11.59	2255456	13.09
Lower Limit [b]	183099	3.81	383351	4.87	195418	6.41	329663	7.82	208903	10.59	563864	12.09
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP39142-MB	423753	4.31	888448	5.37	454690	6.91	768166	8.31	501548	11.09	1342668	12.60
OP39142-BS	415417	4.31	881136	5.37	445287	6.91	752951	8.32	483146	11.09	1291076	12.60
ZZZZZZ	418921	4.31	868869	5.37	439428	6.91	743663	8.32	481851	11.09	1311800	12.60
OP39038-MB	377379	4.31	792985	5.37	404800	6.91	682320	8.31	438726	11.09	1177052	12.59
OP39038-BS	419689	4.31	891340	5.37	453450	6.91	761734	8.32	489521	11.09	1300982	12.60
OP39038-MS	402617	4.31	854860	5.37	435153	6.91	731876	8.32	473011	11.09	1262035	12.60
OP39038-MSD	351938	4.31	749128	5.37	380858	6.91	638001	8.32	409032	11.09	1093892	12.60
MC32236-6	393546	4.31	833720	5.37	424407	6.91	716647	8.31	458109	11.09	1242417	12.59
MC32216-1	358303	4.31	755114	5.37	386750	6.91	651254	8.31	415934	11.09	1146008	12.59
MC32216-2	363592	4.31	768352	5.37	385928	6.91	648040	8.31	414998	11.09	1142713	12.59
MC32216-3	359463	4.31	747823	5.37	381772	6.91	639895	8.31	409097	11.09	1125122	12.60
OP39046-MB	367173	4.31	773778	5.37	394602	6.91	663643	8.31	426128	11.09	1157078	12.59
OP39046-BS	382647	4.31	810720	5.37	411715	6.91	690238	8.32	441297	11.09	1180085	12.60
OP39046-MS	411985	4.31	873253	5.37	442159	6.91	740460	8.32	481710	11.09	1282445	12.60
OP39046-MSD	406040	4.31	868448	5.37	437430	6.91	726394	8.32	466188	11.09	1240919	12.60
MC32236-8	329797	4.31	694934	5.37	355420	6.91	595720	8.31	379190	11.09	1026449	12.59
ZZZZZZ	385453	4.31	804421	5.37	410983	6.91	671119	8.32	425623	11.09	1155046	12.60
ZZZZZZ	398957	4.31	828157	5.37	421345	6.91	687529	8.32	430054	11.09	1161884	12.60
ZZZZZZ	372691	4.31	791493	5.37	394572	6.91	649723	8.32	402431	11.09	1092472	12.60
ZZZZZZ	398386	4.31	833173	5.37	412672	6.91	665692	8.32	413842	11.09	1114420	12.60

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.4.2

Semivolatile Surrogate Recovery Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC32216-1	F75051.D	34	24	78	62	62	77
MC32216-2	F75052.D	39	28	80	69	67	77
MC32216-3	F75053.D	37	26	80	67	69	76
OP39037-BS	F75047.D	38	28	86	69	73	77
OP39037-MB	F75046.D	40	28	83	70	68	80
OP39037-MS	F75048.D	28	19	75	65	68	72
OP39037-MSD	F75049.D	36	27	85	68	72	79

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: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC32216-1	I90936.D	67	57	66
MC32216-2	I90937.D	75	64	67
MC32216-3	I90938.D	74	63	65
OP39038-BS	I90932.D	75	67	69
OP39038-MB	I90931.D	75	64	69
OP39038-MS	I90933.D	69	64	64
OP39038-MSD	I90934.D	72	66	70

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

7.5.2

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GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL;Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39069-MB	BK39758.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290

The QC reported here applies to the following samples: Method: SW846 8011

MC32216-1, MC32216-2, MC32216-3, MC32216-5

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	111%	36-173%
460-00-4	Bromofluorobenzene (S)	109%	36-173%

8.11.1

Blank Spike Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39069-BS	BK39759.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290

The QC reported here applies to the following samples: Method: SW846 8011

MC32216-1, MC32216-2, MC32216-3, MC32216-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.142	0.11	78	60-140
106-93-4	1,2-Dibromoethane	0.142	0.11	78	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	127%	36-173%
460-00-4	Bromofluorobenzene (S)	118%	36-173%

* = Outside of Control Limits.

8.2.1

8

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39069-MS	BK39760.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290
OP39069-MSD	BK39761.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290
MC32236-13	BK39762.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290

The QC reported here applies to the following samples: Method: SW846 8011

MC32216-1, MC32216-2, MC32216-3, MC32216-5

CAS No.	Compound	MC32236-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.142	0.10	71	0.142	0.10	71	0	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.142	0.11	78	0.142	0.11	78	0	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC32236-13	Limits
460-00-4	Bromofluorobenzene (S)	130%	117%	121%	36-173%
460-00-4	Bromofluorobenzene (S)	120%	111%	116%	36-173%

* = Outside of Control Limits.

8.3.1

Volatile Surrogate Recovery Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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]
MC32216-1	BK39774.D	120	118
MC32216-2	BK39775.D	112	97
MC32216-3	BK39776.D	99	112
MC32216-5	BK39777.D	80	79
OP39069-BS	BK39759.D	127	118
OP39069-MB	BK39758.D	111	109
OP39069-MS	BK39760.D	130	120
OP39069-MSD	BK39761.D	117	111

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	GBK1290-ICC1290	Injection Date:	07/24/14
Lab File ID:	BK39754.D	Injection Time:	17:33
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.39	4.41

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP39069-MB	BK39758.D	07/24/14	18:50	4.39	4.41
OP39069-BS	BK39759.D	07/24/14	19:10	4.39	4.41
OP39069-MS	BK39760.D	07/24/14	19:29	4.39	4.41
OP39069-MSD	BK39761.D	07/24/14	19:48	4.39	4.41
MC32236-13	BK39762.D	07/24/14	20:07	4.39	4.41
ZZZZZZ	BK39763.D	07/24/14	20:26	4.39	4.41
ZZZZZZ	BK39764.D	07/24/14	20:46	4.39	4.41
ZZZZZZ	BK39765.D	07/24/14	21:05	4.39	4.41
ZZZZZZ	BK39766.D	07/24/14	21:25	4.39	4.41
ZZZZZZ	BK39767.D	07/24/14	21:44	4.39	4.41

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: MC32216
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	GBK1290-CC1290	Injection Date:	07/24/14
Lab File ID:	BK39768.D	Injection Time:	22:03
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.39	4.41

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BK39769.D	07/24/14	22:23	4.39	4.41
ZZZZZZ	BK39770.D	07/24/14	22:42	4.39	4.41
ZZZZZZ	BK39771.D	07/24/14	23:01	4.39	4.41
ZZZZZZ	BK39772.D	07/24/14	23:21	4.39	4.41
ZZZZZZ	BK39773.D	07/24/14	23:40	4.39	4.41
MC32216-1	BK39774.D	07/24/14	23:59	4.39	4.41
MC32216-2	BK39775.D	07/25/14	00:19	4.39	4.41
MC32216-3	BK39776.D	07/25/14	00:38	4.39	4.41
MC32216-5	BK39777.D	07/25/14	00:57	4.39	4.41
ZZZZZZ	BK39778.D	07/25/14	01:17	4.39	4.41

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 – 3rd Quarter 2014 Data Review

Laboratory SDG: MC32243

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 8/6/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2013

Sample Identification	Sample Identification
P93A-ROX-071814	P93A-ROX-071814-Dup
P58-ROX-071814	P114-ROX-071814
TB-ROX-071814-HCL	TB-ROX-071814-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 samples were re-analyzed 3 days outside of the holding time criteria. SVOCs and PAHs were detected in the method blank. VOC and SVOC LCS recoveries were outside evaluation criteria. The VOC surrogate recovery for 4-bromofluorobenzene was outside evaluation criteria in sample P114-ROX-071814-Run#2. Several samples were diluted due to high levels of VOC target analytes. These issues are addressed further in the appropriate sections below. Also, the initial calibration verification for 1,4-dioxane and carbon disulfide exceeded 30%D.

The cooler receipt form indicated that two of two coolers were received by the laboratory at temperatures of 1.1ºC and 1.7ºC, which are outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required. Additionally, the cooler receipt form indicated the sample time of field duplicate pair P93A-ROX-071814/P93A-ROX-071814-Dup had been inadvertently duplicated on the COC by the field samplers. Upon receipt, the laboratory added the sample time based on sample labels; no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

No, 1,4-dioxane in field duplicate pair P93A-ROX-071814/P93A-ROX-071814-Dup and samples P58-ROX-071814 and P114-ROX-071814 were re-analyzed 3 days outside of the holding time criteria (14 days). Trip blank TB-ROX-071814-HCL was also 3 days outside of the extraction holding time criteria (14 days). Blanks are quality control samples and are not qualified.

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
P93A-ROX-071814	VOCs	1,4-Dioxane	**UJ**
P93A-ROX-071814-Dup	VOCs	1,4-Dioxane	**UJ**
P58-ROX-071814	VOCs	1,4-Dioxane	**UJ**
P114-ROX-071814	VOCs	1,4-Dioxane	**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
OP39045-MB	SVOCs	Di-n-butyl phthalate	0.27 µg/L
OP39045-MB	SVOCs	Diethyl phthalate	0.25 µg/L
OP39046-MB	PAHs	Phenanthrene	0.029 µg/L

Qualifications due to blank contamination are included in the table below. Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not required qualification.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
P93A-ROX-071814	SVOCs	Di-n-butyl phthalate	-	**U**
P93A-ROX-071814	SVOCs	Diethyl phthalate	-	**U**
P93A-ROX-071814-Dup	SVOCs	Di-n-butyl phthalate	-	**U**
P58-ROX-071814	SVOCs	Di-n-butyl phthalate	-	**U**
P114-ROX-071814	SVOCs	Di-n-butyl phthalate	-	**U**
P114-ROX-071814	PAHs	Phenanthrene	0.12 µg/L	**U**

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS/LCSD ID	Parameter	Analyte	LCS/LCSD Recovery	RPD	LCS/LCSD /RPD Criteria
MSV1226-BS	VOCs	Carbon disulfide	**131**	NA	70-130
MSU957-BS/BSD	VOCs	1,4-Dioxane	**172/135**	24	70-130/25
OP39045-BS	SVOCs	Benzoic acid	**25**	NA	30-130
OP39045-BS	SVOCs	2,4-Dinitrophenol	**28**	NA	30-130
OP39045-BS	SVOCs	Hexachlorocyclopentadiene	**31**	NA	40-140

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS MSV1226-BS and LCS/LCSD MSU957-BSBSD were also associated with the trip

blank. Blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
P93A-ROX-071814	SVOCs	Benzoic acid	**UJ**
P93A-ROX-071814	SVOCs	2,4-Dinitrophenol	**UJ**
P93A-ROX-071814	SVOCs	Hexachlorocyclopentadiene	**UJ**
P93A-ROX-071814-Dup	SVOCs	Benzoic acid	**UJ**
P93A-ROX-071814-Dup	SVOCs	2,4-Dinitrophenol	**UJ**
P93A-ROX-071814-Dup	SVOCs	Hexachlorocyclopentadiene	**UJ**
P58-ROX-071814	SVOCs	Benzoic acid	**UJ**
P58-ROX-071814	SVOCs	2,4-Dinitrophenol	**UJ**
P58-ROX-071814	SVOCs	Hexachlorocyclopentadiene	**UJ**
P114-ROX-071814	SVOCs	Benzoic acid	**UJ**
P114-ROX-071814	SVOCs	2,4-Dinitrophenol	**UJ**
P114-ROX-071814	SVOCs	Hexachlorocyclopentadiene	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
P114-ROX-071814-Run#2	VOCs	4-Bromofluorobenzene	**211**	70-130

Analytical data reported as non-detect and associated with surrogate recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. No qualification of data was required.

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
P93A-ROX-071814	P93A-ROX-071814-Dup

Were field duplicates within evaluation criteria?

Yes

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

No

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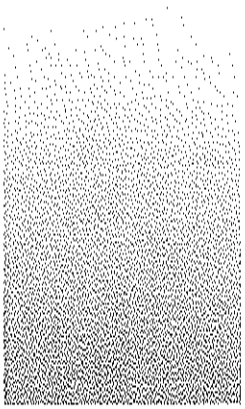
08/05/14





Technical Report for

Shell Oil

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana,

21562973.03003

Accutest Job Number: MC32243

Sampling Date: 07/18/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: **88**

Reviewed on 8/6/14

Reza Tand
Lab Director

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Client Service contact: Matthew Morrell 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

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Sample Summary

Shell Oil

Job No: MC32243

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Project No: 21562973.03003

Sample Number	Collected Date	Time By	Received	Matrix Code	Matrix Type	Client Sample ID
MC32243-1	07/18/14	10:40 DHCW	07/19/14	AQ	Ground Water	P93A-ROX-071814
MC32243-2	07/18/14	10:40 DHCW	07/19/14	AQ	Ground Water	P93A-ROX-071814-DUP
MC32243-3	07/18/14	11:45 DHCW	07/19/14	AQ	Ground Water	P58-ROX-071814
MC32243-4	07/18/14	15:55 DHCW	07/19/14	AQ	Ground Water	P114-ROX-071814
MC32243-5	07/18/14	00:00 DHCW	07/19/14	AQ	Trip Blank Water	TB-ROX-071814-HCL
MC32243-6	07/18/14	00:00 DHCW	07/19/14	AQ	Trip Blank Water	TB-ROX-071814-ST

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2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC32243
Site:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central	**Report Date**	8/5/2014 3:50:46 PM

4 Sample(s) and 2 Trip Blank(s) were collected on 07/18/2014 and were received at Accutest on 07/19/2014 properly preserved, at 1.1 Deg. C and intact. These Samples received an Accutest job number of MC32243. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Sample 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:** MSU957

- Sample(s) MC32460-4MS, MC32460-4MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MC32243-1, MC32243-2, MC32243-3, MC32243-4, MC32243-5: Samples were re-run outside holding time.
- RPD(s) for MSD for 1,4-Dioxane are outside control limits for sample MC32460-4MSD. Associated samples are non-detect for this compound.
- MSU957-BS, MSU957-BSD, MC32460-4MSD for 1,4-Dioxane: Outside control limits. Associated samples are non-detect for this compound.
- MC32243-4 for 4-Bromofluorobenzene: Outside control limits. Associated target analytes are non-detect.
- Initial calibration verification MSU957-ICV957 for 1,4-dioxane 30% Difference.

Matrix AQ **Batch ID:** MSV1226

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32242-2MS, MC32242-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MSV1226-BS, MC32242-2MS, MC32242-2MSD Recovery(s) for Carbon disulfide are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2-Butanone (MEK), 2-Chloroethyl vinyl ether, 2-Hexanone, Acetone are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 2-Chloroethyl vinyl ether, 2-Hexanone, Acetone are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Initial calibration verification MSV1226-ICV1226 for carbon disulfide exceeds 30% Difference (response bias high). Associated samples are non-detect for this compound.
- MC32242-2MS/MSD has internal standards outside control limits. Outside control limits due to possible matrix interference.

Extractables by GCMS By Method SW846 8270D

Matrix AQ	Batch ID: OP39045

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32236-7MS, MC32236-7MSD were used as the QC samples indicated.
- Sample(s) MC32243-1, MC32243-2, MC32243-3, MC32243-4 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, Benzoic Acid, Hexachlorocyclopentadiene are outside control limits. Blank Spike meets program technical requirements.
- OP39045-MS Recovery(s) for Benzyl Alcohol, Pyridine are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- OP39045-MSD for Benzyl Alcohol: Outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2,4-Dinitrophenol are outside control limits for sample OP39045-MSD. Blank Spike meets program technical requirements.
- OP39045-MS for Benzoic Acid, Hexachlorocyclopentadiene: Outside control limits. Blank Spike meets program technical requirements.
- OP39045-MSD for Benzoic Ac id, Hexachlorocyclopentadiene, 2,4-Dinitrophenol: Outside control limits. Blank Spike meets program technical requirements.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ	Batch ID: OP39046

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC32236-8MS, MC32236-8MSD were used as the QC samples indicated.
- Sample(s) MC32243-1, MC32243-2, MC32243-4 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: OP39069

- 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) MC32236-13MS, MC32236-13MSD were used as the QC samples indicated.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC32243).

Summary of Hits

Job Number: MC32243
Account: Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Collected: 07/18/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC32243-1	P93A-ROX-071814					
Benzene		170000	500	320	ug/l	SW846 8260C
Phenol		35.5	5.7	0.34	ug/l	SW846 8270D
Di-n-butyl phthalate		0.77 JB	5.7	0.20	ug/l	SW846 8270D
Diethyl phthalate		0.37 JB	5.7	0.23	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		4.1	2.3	0.38	ug/l	SW846 8270D
Nitrobenzene		5.9	5.7	0.44	ug/l	SW846 8270D
Acenaphthene		0.17	0.11	0.078	ug/l	SW846 8270D BY SIM
Fluorene		0.24	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		8.4	0.23	0.057	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		5.3	0.23	0.084	ug/l	SW846 8270D BY SIM
Phenanthrene		0.17 B	0.057	0.014	ug/l	SW846 8270D BY SIM
MC32243-2	P93A-ROX-071814-DUP					
Benzene		174000	500	320	ug/l	SW846 8260C
Phenol		39.6	5.7	0.35	ug/l	SW846 8270D
Di-n-butyl phthalate		0.41 JB	5.7	0.20	ug/l	SW846 8270D
Nitrobenzene		5.2 J	5.7	0.45	ug/l	SW846 8270D
Acenaphthene		0.16	0.11	0.079	ug/l	SW846 8270D BY SIM
Fluorene		0.25	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		9.5	0.23	0.057	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		6.2	0.23	0.085	ug/l	SW846 8270D BY SIM
Phenanthrene		0.17 B	0.057	0.014	ug/l	SW846 8270D BY SIM
MC32243-3	P58-ROX-071814					
Benzene		406000	1000	630	ug/l	SW846 8260C
3&4-Methylphenol		12.0	11	0.51	ug/l	SW846 8270D
Phenol		173	27	1.7	ug/l	SW846 8270D
Dibenzofuran		1.8 J	2.2	0.28	ug/l	SW846 8270D
Di-n-butyl phthalate		0.32 JB	5.5	0.19	ug/l	SW846 8270D
Acenaphthene		0.67	0.11	0.076	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.21	0.11	0.054	ug/l	SW846 8270D BY SIM
Benzo(a)anthracene		0.083	0.055	0.021	ug/l	SW846 8270D BY SIM
Benzo(a)pyrene		0.086 J	0.11	0.032	ug/l	SW846 8270D BY SIM
Benzo(b)fluoranthene		0.045 J	0.055	0.035	ug/l	SW846 8270D BY SIM
Benzo(g,h,i)perylene		0.035 J	0.11	0.030	ug/l	SW846 8270D BY SIM
Chrysene		0.15	0.11	0.026	ug/l	SW846 8270D BY SIM
Fluoranthene		0.062 J	0.11	0.045	ug/l	SW846 8270D BY SIM
Fluorene		1.2	0.11	0.11	ug/l	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		0.50	0.11	0.034	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		41.2	0.22	0.055	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		55.4	0.22	0.082	ug/l	SW846 8270D BY SIM

Summary of Hits

Job Number: MC32243
Account: Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Collected: 07/18/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Phenanthrene		0.92	0.055	0.014	ug/l	SW846 8270D BY SIM
Pyrene		0.22	0.11	0.042	ug/l	SW846 8270D BY SIM
MC32243-4	P114-ROX-071814					
Methyl Tert Butyl Ether		3.7	1.0	0.51	ug/l	SW846 8260C
Di-n-butyl phthalate		0.28 JB	5.1	0.18	ug/l	SW846 8270D
Acenaphthene		0.082 J	0.10	0.070	ug/l	SW846 8270D BY SIM
Phenanthrene		0.12 B	0.051	0.013	ug/l	SW846 8270D BY SIM
MC32243-5	TB-ROX-071814-HCL					
No hits reported in this sample.						
MC32243-6	TB-ROX-071814-ST					
No hits reported in this sample.						

New England ACCUTEST LABORATORIES

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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P93A-ROX-071814		
Lab Sample ID:	MC32243-1	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U21545.D	500	08/04/14	AMY	n/a	n/a	MSU957
Run #2	V33468.D	1000	08/01/14	AMY	n/a	n/a	MSV1226

	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 [a]	10000	2500	ug/l	
107-02-8	Acrolein	ND [a]	25000	6000	ug/l	
107-13-1	Acrylonitrile	ND [a]	5000	2100	ug/l	
71-43-2	Benzene	170000 [a]	500	320	ug/l	
108-86-1	Bromobenzene	ND [a]	5000	350	ug/l	
74-97-5	Bromochloromethane	ND [a]	5000	570	ug/l	
75-27-4	Bromodichloromethane	ND [a]	1000	340	ug/l	
75-25-2	Bromoform	ND [a]	1000	610	ug/l	
74-83-9	Bromomethane	ND [a]	2000	1800	ug/l	
78-93-3	2-Butanone (MEK)	ND [a]	5000	2500	ug/l	
104-51-8	n-Butylbenzene	ND [a]	5000	1100	ug/l	
135-98-8	sec-Butylbenzene	ND [a]	5000	420	ug/l	
98-06-6	tert-Butylbenzene	ND [a]	5000	390	ug/l	
75-15-0	Carbon disulfide	ND [a]	5000	460	ug/l	
56-23-5	Carbon tetrachloride	ND [a]	1000	530	ug/l	
108-90-7	Chlorobenzene	ND [a]	1000	430	ug/l	
75-00-3	Chloroethane	ND [a]	2000	530	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND [a]	5000	3300	ug/l	
67-66-3	Chloroform	ND [a]	1000	410	ug/l	
74-87-3	Chloromethane	ND [a]	2000	1100	ug/l	
95-49-8	o-Chlorotoluene	ND [a]	5000	380	ug/l	
106-43-4	p-Chlorotoluene	ND [a]	5000	450	ug/l	
124-48-1	Dibromochloromethane	ND [a]	1000	380	ug/l	
95-50-1	1,2-Dichlorobenzene	ND [a]	1000	320	ug/l	
541-73-1	1,3-Dichlorobenzene	ND [a]	1000	560	ug/l	
106-46-7	1,4-Dichlorobenzene	ND [a]	1000	360	ug/l	
75-71-8	Dichlorodifluoromethane	ND [a]	2000	710	ug/l	
75-34-3	1,1-Dichloroethane	ND [a]	1000	360	ug/l	
107-06-2	1,2-Dichloroethane	ND [a]	1000	500	ug/l	
75-35-4	1,1-Dichloroethene	ND [a]	1000	610	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND [a]	1000	840	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND [a]	1000	510	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:	P93A-ROX-071814		
Lab Sample ID:	MC32243-1	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND [a]	2000	500	ug/l	
142-28-9	1,3-Dichloropropane	ND [a]	5000	890	ug/l	
594-20-7	2,2-Dichloropropane	ND [a]	5000	700	ug/l	
563-58-6	1,1-Dichloropropene	ND [a]	5000	470	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND [a]	500	420	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND [a]	500	500	ug/l	
123-91-1	1,4-Dioxane	ND	13000	5400	ug/l	UJ
97-63-2	Ethyl methacrylate	ND [a]	5000	500	ug/l	
100-41-4	Ethylbenzene	ND [a]	1000	380	ug/l	
87-68-3	Hexachlorobutadiene	ND [a]	5000	1700	ug/l	
591-78-6	2-Hexanone	ND [a]	5000	1600	ug/l	
98-82-8	Isopropylbenzene	ND [a]	5000	350	ug/l	
99-87-6	p-Isopropyltoluene	ND [a]	5000	370	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND [a]	1000	510	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND [a]	5000	990	ug/l	
74-95-3	Methylene bromide	ND [a]	5000	520	ug/l	
75-09-2	Methylene chloride	ND [a]	2000	280	ug/l	
91-20-3	Naphthalene	ND [a]	5000	690	ug/l	
103-65-1	n-Propylbenzene	ND [a]	5000	490	ug/l	
100-42-5	Styrene	ND [a]	5000	850	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND [a]	1000	430	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND [a]	500	400	ug/l	
127-18-4	Tetrachloroethene	ND [a]	1000	590	ug/l	
108-88-3	Toluene	ND [a]	1000	330	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND [a]	5000	680	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND [a]	5000	500	ug/l	
71-55-6	1,1,1-Trichloroethane	ND [a]	1000	460	ug/l	
79-00-5	1,1,2-Trichloroethane	ND [a]	1000	450	ug/l	
79-01-6	Trichloroethene	ND [a]	1000	470	ug/l	
75-69-4	Trichlorofluoromethane	ND [a]	1000	550	ug/l	
96-18-4	1,2,3-Trichloropropane	ND [a]	5000	810	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND [a]	5000	320	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND [a]	5000	380	ug/l	
108-05-4	Vinyl Acetate	ND [a]	5000	710	ug/l	
75-01-4	Vinyl chloride	ND [a]	1000	580	ug/l	
	m,p-Xylene	ND [a]	1000	930	ug/l	
95-47-6	o-Xylene	ND [a]	1000	360	ug/l	
1330-20-7	Xylene (total)	ND [a]	1000	360	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-071814		
Lab Sample ID:	MC32243-1	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	120%	98%	70-130%
2037-26-5	Toluene-D8	104%	96%	70-130%
460-00-4	4-Bromofluorobenzene	106%	106%	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
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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:	P93A-ROX-071814		
Lab Sample ID:	MC32243-1	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X04080.D	1	07/31/14	WK	07/21/14	OP39045	MSX134
Run #2							

	Initial Volume	Final Volume
Run #1	880 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.7	0.35	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.94	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.45	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.64	ug/l	
51-28-5	2,4-Dinitrophenol	ND	23	2.8	ug/l	UJ
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.2	ug/l	
95-48-7	2-Methylphenol	ND	11	0.26	ug/l	
	3&4-Methylphenol	ND	11	0.53	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.3	ug/l	
100-02-7	4-Nitrophenol	ND	23	0.61	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	35.5	5.7	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.42	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.20	ug/l	
62-53-3	Aniline	ND	11	0.72	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.7	0.53	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.7	0.60	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.6	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.7	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.63	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.7	0.33	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.7	0.40	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.7	0.38	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.7	0.29	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.7	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.52	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.34	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.7	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.3	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	~~0.77~~ U	5.7	0.20	ug/l	JB U
117-84-0	Di-n-octyl phthalate	ND	5.7	0.32	ug/l	

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Report of Analysis

Client Sample ID:	P93A-ROX-071814		
Lab Sample ID:	MC32243-1	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	~~0.37~~ U	5.7	0.23	ug/l	JB U
131-11-3	Dimethyl phthalate	ND	5.7	0.39	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	4.1	2.3	0.38	ug/l	
118-74-1	Hexachlorobenzene	ND	5.7	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.5	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.7	0.34	ug/l	
78-59-1	Isophorone	ND	5.7	0.51	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.45	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.5	ug/l	
98-95-3	Nitrobenzene	5.9	5.7	0.44	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.7	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.7	0.46	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.7	0.22	ug/l	
110-86-1	Pyridine	ND	11	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	42%		15-110%
4165-62-2	Phenol-d5	32%		15-110%
118-79-6	2,4,6-Tribromophenol	81%		15-110%
4165-60-0	Nitrobenzene-d5	72%		30-130%
321-60-8	2-Fluorobiphenyl	68%		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:	P93A-ROX-071814		
Lab Sample ID:	MC32243-1	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90944.D	1	07/30/14	MR	07/21/14	OP39046	MSI3385
Run #2							

	Initial Volume	Final Volume
Run #1	880 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.17	0.11	0.078	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.056	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.057	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.033	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.057	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.031	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.044	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.036	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.046	ug/l	
86-73-7	Fluorene	0.24	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	8.4	0.23	0.057	ug/l	
91-57-6	2-Methylnaphthalene	5.3	0.23	0.084	ug/l	
85-01-8	Phenanthrene	0.17	0.057	0.014	ug/l	B
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	69%		30-130%
321-60-8	2-Fluorobiphenyl	60%		30-130%
1718-51-0	Terphenyl-d14	66%		30-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93A-ROX-071814		
Lab Sample ID:	MC32243-1	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39778.D	1	07/25/14	NK	07/22/14	OP39069	GBK1290
Run #2							

	Initial Volume	Final Volume
Run #1	35.7 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0060	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	87%		36-173%
460-00-4	Bromofluorobenzene (S)	97%		36-173%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93A-ROX-071814-DUP		
Lab Sample ID:	MC32243-2	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U21546.D	500	08/04/14	AMY	n/a	n/a	MSU957
Run #2	V33469.D	1000	08/01/14	AMY	n/a	n/a	MSV1226

	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 [a]	10000	2500	ug/l	
107-02-8	Acrolein	ND [a]	25000	6000	ug/l	
107-13-1	Acrylonitrile	ND [a]	5000	2100	ug/l	
71-43-2	Benzene	174000 [a]	500	320	ug/l	
108-86-1	Bromobenzene	ND [a]	5000	350	ug/l	
74-97-5	Bromochloromethane	ND [a]	5000	570	ug/l	
75-27-4	Bromodichloromethane	ND [a]	1000	340	ug/l	
75-25-2	Bromoform	ND [a]	1000	610	ug/l	
74-83-9	Bromomethane	ND [a]	2000	1800	ug/l	
78-93-3	2-Butanone (MEK)	ND [a]	5000	2500	ug/l	
104-51-8	n-Butylbenzene	ND [a]	5000	1100	ug/l	
135-98-8	sec-Butylbenzene	ND [a]	5000	420	ug/l	
98-06-6	tert-Butylbenzene	ND [a]	5000	390	ug/l	
75-15-0	Carbon disulfide	ND [a]	5000	460	ug/l	
56-23-5	Carbon tetrachloride	ND [a]	1000	530	ug/l	
108-90-7	Chlorobenzene	ND [a]	1000	430	ug/l	
75-00-3	Chloroethane	ND [a]	2000	530	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND [a]	5000	3300	ug/l	
67-66-3	Chloroform	ND [a]	1000	410	ug/l	
74-87-3	Chloromethane	ND [a]	2000	1100	ug/l	
95-49-8	o-Chlorotoluene	ND [a]	5000	380	ug/l	
106-43-4	p-Chlorotoluene	ND [a]	5000	450	ug/l	
124-48-1	Dibromochloromethane	ND [a]	1000	380	ug/l	
95-50-1	1,2-Dichlorobenzene	ND [a]	1000	320	ug/l	
541-73-1	1,3-Dichlorobenzene	ND [a]	1000	560	ug/l	
106-46-7	1,4-Dichlorobenzene	ND [a]	1000	360	ug/l	
75-71-8	Dichlorodifluoromethane	ND [a]	2000	710	ug/l	
75-34-3	1,1-Dichloroethane	ND [a]	1000	360	ug/l	
107-06-2	1,2-Dichloroethane	ND [a]	1000	500	ug/l	
75-35-4	1,1-Dichloroethene	ND [a]	1000	610	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND [a]	1000	840	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND [a]	1000	510	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-071814-DUP		
Lab Sample ID:	MC32243-2	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND [a]	2000	500	ug/l	
142-28-9	1,3-Dichloropropane	ND [a]	5000	890	ug/l	
594-20-7	2,2-Dichloropropane	ND [a]	5000	700	ug/l	
563-58-6	1,1-Dichloropropene	ND [a]	5000	470	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND [a]	500	420	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND [a]	500	500	ug/l	
123-91-1	1,4-Dioxane	ND	13000	5400	ug/l	UJ
97-63-2	Ethyl methacrylate	ND [a]	5000	500	ug/l	
100-41-4	Ethylbenzene	ND [a]	1000	380	ug/l	
87-68-3	Hexachlorobutadiene	ND [a]	5000	1700	ug/l	
591-78-6	2-Hexanone	ND [a]	5000	1600	ug/l	
98-82-8	Isopropylbenzene	ND [a]	5000	350	ug/l	
99-87-6	p-Isopropyltoluene	ND [a]	5000	370	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND [a]	1000	510	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND [a]	5000	990	ug/l	
74-95-3	Methylene bromide	ND [a]	5000	520	ug/l	
75-09-2	Methylene chloride	ND [a]	2000	280	ug/l	
91-20-3	Naphthalene	ND [a]	5000	690	ug/l	
103-65-1	n-Propylbenzene	ND [a]	5000	490	ug/l	
100-42-5	Styrene	ND [a]	5000	850	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND [a]	1000	430	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND [a]	500	400	ug/l	
127-18-4	Tetrachloroethene	ND [a]	1000	590	ug/l	
108-88-3	Toluene	ND [a]	1000	330	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND [a]	5000	680	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND [a]	5000	500	ug/l	
71-55-6	1,1,1-Trichloroethane	ND [a]	1000	460	ug/l	
79-00-5	1,1,2-Trichloroethane	ND [a]	1000	450	ug/l	
79-01-6	Trichloroethene	ND [a]	1000	470	ug/l	
75-69-4	Trichlorofluoromethane	ND [a]	1000	550	ug/l	
96-18-4	1,2,3-Trichloropropane	ND [a]	5000	810	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND [a]	5000	320	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND [a]	5000	380	ug/l	
108-05-4	Vinyl Acetate	ND [a]	5000	710	ug/l	
75-01-4	Vinyl chloride	ND [a]	1000	580	ug/l	
	m,p-Xylene	ND [a]	1000	930	ug/l	
95-47-6	o-Xylene	ND [a]	1000	360	ug/l	
1330-20-7	Xylene (total)	ND [a]	1000	360	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-071814-DUP		
Lab Sample ID:	MC32243-2	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%	100%	70-130%
2037-26-5	Toluene-D8	104%	98%	70-130%
460-00-4	4-Bromofluorobenzene	107%	108%	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

4.2

Client Sample ID:	P93A-ROX-071814-DUP		
Lab Sample ID:	MC32243-2	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X04081.D	1	07/31/14	WK	07/21/14	OP39045	MSX134
Run #2							

	Initial Volume	Final Volume
Run #1	870 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.9	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.7	0.36	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.95	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.46	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.64	ug/l	
51-28-5	2,4-Dinitrophenol	ND	23	2.9	ug/l	UJ
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.2	ug/l	
95-48-7	2-Methylphenol	ND	11	0.26	ug/l	
	3&4-Methylphenol	ND	11	0.54	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.3	ug/l	
100-02-7	4-Nitrophenol	ND	23	0.61	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	39.6	5.7	0.35	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.43	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.20	ug/l	
62-53-3	Aniline	ND	11	0.73	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.7	0.54	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.7	0.61	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.6	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.7	0.36	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.64	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.7	0.33	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.7	0.40	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.7	0.38	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.7	0.29	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.7	0.28	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.52	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.35	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.7	0.31	ug/l	
132-64-9	Dibenzofuran	ND	2.3	0.30	ug/l	
84-74-2	Di-n-butyl phthalate	~~0.41~~	5.7	0.20	ug/l	JB
117-84-0	Di-n-octyl phthalate	ND	5.7	0.32	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93A-ROX-071814-DUP		
Lab Sample ID:	MC32243-2	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.7	0.23	ug/l	
131-11-3	Dimethyl phthalate	ND	5.7	0.39	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.3	0.38	ug/l	
118-74-1	Hexachlorobenzene	ND	5.7	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.5	ug/l	U J
67-72-1	Hexachloroethane	ND	5.7	0.35	ug/l	
78-59-1	Isophorone	ND	5.7	0.52	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.46	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.5	ug/l	
98-95-3	Nitrobenzene	5.2	5.7	0.45	ug/l	J
62-75-9	n-Nitrosodimethylamine	ND	5.7	1.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.7	0.46	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.7	0.22	ug/l	
110-86-1	Pyridine	ND	11	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	46%		15-110%
4165-62-2	Phenol-d5	35%		15-110%
118-79-6	2,4,6-Tribromophenol	89%		15-110%
4165-60-0	Nitrobenzene-d5	81%		30-130%
321-60-8	2-Fluorobiphenyl	73%		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:	P93A-ROX-071814-DUP		
Lab Sample ID:	MC32243-2	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90945.D	1	07/30/14	MR	07/21/14	OP39046	MSI3385
Run #2							

	Initial Volume	Final Volume
Run #1	870 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.16	0.11	0.079	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.057	ug/l	
120-12-7	Anthracene	ND	0.11	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.057	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.033	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.057	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.031	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.044	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.037	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.047	ug/l	
86-73-7	Fluorene	0.25	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	9.5	0.23	0.057	ug/l	
91-57-6	2-Methylnaphthalene	6.2	0.23	0.085	ug/l	
85-01-8	Phenanthrene	0.17	0.057	0.014	ug/l	B
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	75%		30-130%
321-60-8	2-Fluorobiphenyl	65%		30-130%
1718-51-0	Terphenyl-d14	68%		30-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93A-ROX-071814-DUP		
Lab Sample ID:	MC32243-2	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39780.D	1	07/25/14	NK	07/22/14	OP39069	GBK1290
Run #2							

	Initial Volume	Final Volume
Run #1	36.3 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	78%		36-173%
460-00-4	Bromofluorobenzene (S)	87%		36-173%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P58-ROX-071814		
Lab Sample ID:	MC32243-3	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U21547.D	1000	08/04/14	AMY	n/a	n/a	MSU957
Run #2	V33470.D	2000	08/01/14	AMY	n/a	n/a	MSV1226

	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 [a]	20000	5000	ug/l	
107-02-8	Acrolein	ND [a]	50000	12000	ug/l	
107-13-1	Acrylonitrile	ND [a]	10000	4200	ug/l	
71-43-2	Benzene	406000 [a]	1000	630	ug/l	
108-86-1	Bromobenzene	ND [a]	10000	700	ug/l	
74-97-5	Bromochloromethane	ND [a]	10000	1100	ug/l	
75-27-4	Bromodichloromethane	ND [a]	2000	680	ug/l	
75-25-2	Bromoform	ND [a]	2000	1200	ug/l	
74-83-9	Bromomethane	ND [a]	4000	3500	ug/l	
78-93-3	2-Butanone (MEK)	ND [a]	10000	5000	ug/l	
104-51-8	n-Butylbenzene	ND [a]	10000	2200	ug/l	
135-98-8	sec-Butylbenzene	ND [a]	10000	840	ug/l	
98-06-6	tert-Butylbenzene	ND [a]	10000	780	ug/l	
75-15-0	Carbon disulfide	ND [a]	10000	920	ug/l	
56-23-5	Carbon tetrachloride	ND [a]	2000	1100	ug/l	
108-90-7	Chlorobenzene	ND [a]	2000	860	ug/l	
75-00-3	Chloroethane	ND [a]	4000	1100	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND [a]	10000	6600	ug/l	
67-66-3	Chloroform	ND [a]	2000	820	ug/l	
74-87-3	Chloromethane	ND [a]	4000	2100	ug/l	
95-49-8	o-Chlorotoluene	ND [a]	10000	760	ug/l	
106-43-4	p-Chlorotoluene	ND [a]	10000	900	ug/l	
124-48-1	Dibromochloromethane	ND [a]	2000	760	ug/l	
95-50-1	1,2-Dichlorobenzene	ND [a]	2000	630	ug/l	
541-73-1	1,3-Dichlorobenzene	ND [a]	2000	1100	ug/l	
106-46-7	1,4-Dichlorobenzene	ND [a]	2000	710	ug/l	
75-71-8	Dichlorodifluoromethane	ND [a]	4000	1400	ug/l	
75-34-3	1,1-Dichloroethane	ND [a]	2000	720	ug/l	
107-06-2	1,2-Dichloroethane	ND [a]	2000	1000	ug/l	
75-35-4	1,1-Dichloroethene	ND [a]	2000	1200	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND [a]	2000	1700	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND [a]	2000	1000	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:	P58-ROX-071814		
Lab Sample ID:	MC32243-3	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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 [a]	4000	1000	ug/l	
142-28-9	1,3-Dichloropropane	ND [a]	10000	1800	ug/l	
594-20-7	2,2-Dichloropropane	ND [a]	10000	1400	ug/l	
563-58-6	1,1-Dichloropropene	ND [a]	10000	950	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND [a]	1000	840	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND [a]	1000	1000	ug/l	
123-91-1	1,4-Dioxane	ND	25000	11000	ug/l	UJ
97-63-2	Ethyl methacrylate	ND [a]	10000	1000	ug/l	
100-41-4	Ethylbenzene	ND [a]	2000	760	ug/l	
87-68-3	Hexachlorobutadiene	ND [a]	10000	3300	ug/l	
591-78-6	2-Hexanone	ND [a]	10000	3200	ug/l	
98-82-8	Isopropylbenzene	ND [a]	10000	700	ug/l	
99-87-6	p-Isopropyltoluene	ND [a]	10000	750	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND [a]	2000	1000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND [a]	10000	2000	ug/l	
74-95-3	Methylene bromide	ND [a]	10000	1000	ug/l	
75-09-2	Methylene chloride	ND [a]	4000	560	ug/l	
91-20-3	Naphthalene	ND [a]	10000	1400	ug/l	
103-65-1	n-Propylbenzene	ND [a]	10000	980	ug/l	
100-42-5	Styrene	ND [a]	10000	1700	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND [a]	2000	870	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND [a]	1000	800	ug/l	
127-18-4	Tetrachloroethene	ND [a]	2000	1200	ug/l	
108-88-3	Toluene	ND [a]	2000	660	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND [a]	10000	1400	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND [a]	10000	1000	ug/l	
71-55-6	1,1,1-Trichloroethane	ND [a]	2000	930	ug/l	
79-00-5	1,1,2-Trichloroethane	ND [a]	2000	910	ug/l	
79-01-6	Trichloroethene	ND [a]	2000	940	ug/l	
75-69-4	Trichlorofluoromethane	ND [a]	2000	1100	ug/l	
96-18-4	1,2,3-Trichloropropane	ND [a]	10000	1600	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND [a]	10000	640	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND [a]	10000	770	ug/l	
108-05-4	Vinyl Acetate	ND [a]	10000	1400	ug/l	
75-01-4	Vinyl chloride	ND [a]	2000	1200	ug/l	
	m,p-Xylene	ND [a]	2000	1900	ug/l	
95-47-6	o-Xylene	ND [a]	2000	730	ug/l	
1330-20-7	Xylene (total)	ND [a]	2000	730	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P58-ROX-071814		
Lab Sample ID:	MC32243-3	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%	100%	70-130%
2037-26-5	Toluene-D8	113%	97%	70-130%
460-00-4	4-Bromofluorobenzene	113%	107%	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
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P58-ROX-071814		
Lab Sample ID:	MC32243-3	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X04082.D	1	07/31/14	WK	07/21/14	OP39045	MSX134
Run #2	F75074.D	5	08/01/14	WK	07/21/14	OP39045	MSF3305

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2	910 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.5	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	UJ
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	12.0	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	173 [a]	27	1.7	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.70	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.5	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.5	0.58	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.5	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.61	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.5	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.5	0.38	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.5	0.36	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.5	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.5	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.5	0.29	ug/l	
132-64-9	Dibenzofuran	1.8	2.2	0.28	ug/l	J
84-74-2	Di-n-butyl phthalate	~~0.32~~	5.5	0.19	ug/l	JB
117-84-0	Di-n-octyl phthalate	ND	5.5	0.31	ug/l	

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Report of Analysis

Client Sample ID:	P58-ROX-071814		
Lab Sample ID:	MC32243-3	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.5	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.5	0.37	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.5	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	u5
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	45%	43%	15-110%
4165-62-2	Phenol-d5	32%	32%	15-110%
118-79-6	2,4,6-Tribromophenol	96%	83%	15-110%
4165-60-0	Nitrobenzene-d5	82%	69%	30-130%
321-60-8	2-Fluorobiphenyl	74%	73%	30-130%
1718-51-0	Terphenyl-d14	85%	82%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

(a) Result is from Run# 2

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P58-ROX-071814		
Lab Sample ID:	MC32243-3	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90946.D	1	07/30/14	MR	07/21/14	OP39046	MSI3385
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.67	0.11	0.076	ug/l	
208-96-8	Acenaphthylene	0.21	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	0.083	0.055	0.021	ug/l	
50-32-8	Benzo(a)pyrene	0.086	0.11	0.032	ug/l	J
205-99-2	Benzo(b)fluoranthene	0.045	0.055	0.035	ug/l	J
191-24-2	Benzo(g,h,i)perylene	0.035	0.11	0.030	ug/l	J
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	0.15	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	0.062	0.11	0.045	ug/l	J
86-73-7	Fluorene	1.2	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.50	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	41.2	0.22	0.055	ug/l	
91-57-6	2-Methylnaphthalene	55.4	0.22	0.082	ug/l	
85-01-8	Phenanthrene	0.92	0.055	0.014	ug/l	
129-00-0	Pyrene	0.22	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	65%		30-130%
1718-51-0	Terphenyl-d14	68%		30-130%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P58-ROX-071814		
Lab Sample ID:	MC32243-3	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39781.D	1	07/25/14	NK	07/22/14	OP39069	GBK1290
Run #2							

	Initial Volume	Final Volume
Run #1	36.5 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	87%		36-173%
460-00-4	Bromofluorobenzene (S)	91%		36-173%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P114-ROX-071814		
Lab Sample ID:	MC32243-4	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33467.D	1	08/04/14	AMY	n/a	n/a	MSV1226
Run #2	U21548.D	1	08/04/14	AMY	n/a	n/a	MSU957

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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Report of Analysis

Client Sample ID:	P114-ROX-071814		
Lab Sample ID:	MC32243-4	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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 [a]	25	11	ug/l	UJ
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3.7	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	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-071814		
Lab Sample ID:	MC32243-4	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.4

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%	115%	70-130%
2037-26-5	Toluene-D8	99%	111%	70-130%
460-00-4	4-Bromofluorobenzene	108%	211% [b]	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) Result is from Run# 2
(b) Outside control limits. Associated target analytes are non-detect.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P114-ROX-071814		
Lab Sample ID:	MC32243-4	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X04083.D	1	07/31/14	WK	07/21/14	OP39045	MSX134
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.6	ug/l	u J
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	u J
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	~~0.28~~ 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

Report of Analysis

Client Sample ID:	P114-ROX-071814		
Lab Sample ID:	MC32243-4	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

4.4

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	UJ
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	43%		15-110%
4165-62-2	Phenol-d5	30%		15-110%
118-79-6	2,4,6-Tribromophenol	93%		15-110%
4165-60-0	Nitrobenzene-d5	78%		30-130%
321-60-8	2-Fluorobiphenyl	75%		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:	P114-ROX-071814		
Lab Sample ID:	MC32243-4	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I90947.D	1	07/30/14	MR	07/21/14	OP39046	MSI3385
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.082	0.10	0.070	ug/l	J
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	~~0.12~~ 4	~~0.051~~ 0.10	0.013	ug/l	B 4
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	75%		30-130%
321-60-8	2-Fluorobiphenyl	67%		30-130%
1718-51-0	Terphenyl-d14	69%		30-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P114-ROX-071814		
Lab Sample ID:	MC32243-4	Date Sampled:	07/18/14
Matrix:	AQ - Ground Water	Date Received:	07/19/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39782.D	1	07/25/14	NK	07/22/14	OP39069	GBK1290
Run #2							

	Initial Volume	Final Volume
Run #1	36.6 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoverics	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	87%		36-173%
460-00-4	Bromofluorobenzene (S)	89%		36-173%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-071814-HCL		
Lab Sample ID:	MC32243-5	Date Sampled:	07/18/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/19/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33461.D	1	08/01/14	AMY	n/a	n/a	MSV1226
Run #2	U21544.D	1	08/04/14	AMY	n/a	n/a	MSU957

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-071814-HCL		
Lab Sample ID:	MC32243-5	Date Sampled:	07/18/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/19/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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 [a]	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-071814-HCL		
Lab Sample ID:	MC32243-5	Date Sampled:	07/18/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/19/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	121%	70-130%
2037-26-5	Toluene-D8	100%	105%	70-130%
460-00-4	4-Bromofluorobenzene	106%	108%	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:	TB-ROX-071814-ST		
Lab Sample ID:	MC32243-6	Date Sampled:	07/18/14
Matrix:	AQ - Trip Blank Water	Date Received:	07/19/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK39783.D	1	07/25/14	NK	07/22/14	OP39069	GBK1290
Run #2							

	Initial Volume	Final Volume
Run #1	36.3 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	81%		36-173%
460-00-4	Bromofluorobenzene (S)	85%		36-173%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

New England ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

LAB (LOCATION)

☐ Valco (_____)
☐ Calscience
☐ Other (Accutest Labs: 495 Technology Dr W Marlborough, MA 01752 (508 481-6200))
☐ SPL ☐ Other # (_____)
Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:
☑ Civ. Services ☐ Motiva Retail ☐ Shell Retail
☐ Motiva Speech ☐ Consultant ☐ Other
☐ Shell Pipeline ☐ Other

Print Bill To Contact Name: Bob Ellerbusch
PO #
INCIDENT # (ENV SERVICES): 0 7 2 1 6 6 4 0
SAP #: 3 4 0 0 0 1
☐ Check if no incident # applies
DATE: 7-18-14
PAGE: 1 of 1

URS CORPORATION

1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300; ST. LOUIS, MO 63110

Elizabeth Kunkel, Wendy Pennington, Bob Ellerbusch, Lindsay Rathbone

314 429 0100 | 314-429-0462 | elizabeth.kunkel@urs.com, wendy.pennington@urs.com, bob.ellerbusch@urs.com, lindsay.rathbone@urs.com

Site Address: 600 South Conway Ave, ROXANA, IL
Email:
Consultant Project No.: Roxana Quarterly GW / 21502973.03003

Sampler(s): D. Haxel, C. Williams
Lab Use Only: MC32243

Turnaround Time (Calendar Days): ☑ Standard (10 Day) ☐ 5 Days ☐ 3 Days ☐ 2 Days ☐ 24 Hours ☐ Results Needed On (Rush – Surcharge Applies)

☐ EA - Region 9 Report Format ☐ UST Agency:

Deliverables: ☐ Level 1 ☑ Level 2 ☐ Level 3 ☑ Level 4 ☑ Other (Specify) EDD

Temperature on Receipt C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Report!
* Please provide sample receipt upon login.

☑ Shell Contract Rate Applies
☐ State Reimbursement Rate Applies
☐ EDD Not Needed
☑ Incident Verification Required
☐ Provide Level IV QA

Requested Analysis: D. Haxel, C. Williams

Lab Use Only	Field Sample Identification	Sampling Date	Sampling Time	Matrix	Preservation: HCL	H2SO4	HNO3	ICE	Other	No. of Cont.	VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL	PID (ppm)	Field Notes
-1	P93A-ROX-071814	7/18/14	0940	Water	2				1	5	X	X	X	X	0.0	Temperature on Receipt C°:
-2	P93A-ROX-071814-DUP		0940						↓	↓	X	X	X	X		
-3	P58-ROX-071814		1145						2	6	X	X	X	X		
-4	P114-ROX-071814		1555					↓	↓	↓	X	X	X	X		Container PID Readings or Laboratory Notes
-5	TB-ROX-071814-HCL		0000		↓					2	X					
-6	TB-ROX-071814-ST		0000	↓					2	2		X			↓	
																190,402
																1.1° 1.7°

Relinquished by (Signature): C. Williams — Date: 07-18-14 — Time: 1800
Received by (Signature): FED EX
Relinquished by (Signature): — Date: 7-19-14 — Time: 10:30
Received by (Signature): — Date: — Time:

5.1

MC32243: Chain of Custody
Page 1 of 3

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC32243 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 7/19/2014 **Delivery Method:**

Project: 900 SOUTH CENTRAL **No. Coolers:** **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☐		☑

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control, Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☑	☐	
2. Trip Blank listed on COC:	☑	☐	
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☑	☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☐		☑

Sample Integrity - Condition	Y	or	N
1. Sample rec'd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume rec'd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

-1 and -2 times do not match the coc. -1, -2 both have 9:40 for time on the coc, but 10:40 on all of the sample labels

ACCUTEST LABORATORIES

Sample Receipt Summary - Problem Resolution

Accutest Job Number: MC32243

CSR: mattm **Response Date:** 7/21/2014

Response: Client advised 10:40

5.1

Accutest Laboratories
V.508.481.6200

495 Technology Center West, Bldg One
F: 508 481.7753

Marlborough, MA
www.accutest.com

MC32243: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC32243

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Project No: 21562973.03003

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC32243-1 Collected: 18-JUL-14 10:40 By: DHCW Received: 19-JUL-14 By: P93A-ROX-071814						
MC32243-1	SW846 8011	25-JUL-14 01:17	NK	22-JUL-14	MEW	V8011SL
MC32243-1	SW846 8270D BY SIM	30-JUL-14 14:35	MR	21-JUL-14	FC	B8270SIMPAH
MC32243-1	SW846 8270D	31-JUL-14 13:27	WK	21-JUL-14	FC	AB8270SL+
MC32243-1	SW846 8260C	01-AUG-14 22:14	AMY			V8260SL+
MC32243-1	SW846 8260C	04-AUG-14 17:09	AMY			V8260SL+
MC32243-2 Collected: 18-JUL-14 10:40 By: DHCW Received: 19-JUL-14 By: P93A-ROX-071814-DUP						
MC32243-2	SW846 8011	25-JUL-14 01:55	NK	22-JUL-14	MEW	V8011SL
MC32243-2	SW846 8270D BY SIM	30-JUL-14 14:59	MR	21-JUL-14	FC	B8270SIMPAH
MC32243-2	SW846 8270D	31-JUL-14 13:47	WK	21-JUL-14	FC	AB8270SL+
MC32243-2	SW846 8260C	01-AUG-14 22:41	AMY			V8260SL+
MC32243-2	SW846 8260C	04-AUG-14 17:37	AMY			V8260SL+
MC32243-3 Collected: 18-JUL-14 11:45 By: DHCW Received: 19-JUL-14 By: P58-ROX-071814						
MC32243-3	SW846 8011	25-JUL-14 02:14	NK	22-JUL-14	MEW	V8011SL
MC32243-3	SW846 8270D BY SIM	30-JUL-14 15:21	MR	21-JUL-14	FC	B8270SIMPAH
MC32243-3	SW846 8270D	31-JUL-14 14:08	WK	21-JUL-14	FC	AB8270SL+
MC32243-3	SW846 8270D	01-AUG-14 09:52	WK	21-JUL-14	FC	AB8270SL+
MC32243-3	SW846 8260C	01-AUG-14 23:07	AMY			V8260SL+
MC32243-3	SW846 8260C	04-AUG-14 18:05	AMY			V8260SL+
MC32243-4 Collected: 18-JUL-14 15:55 By: DHCW Received: 19-JUL-14 By: P114-ROX-071814						
MC32243-4	SW846 8011	25-JUL-14 02:33	NK	22-JUL-14	MEW	V8011SL
MC32243-4	SW846 8270D BY SIM	30-JUL-14 15:44	MR	21-JUL-14	FC	B8270SIMPAH
MC32243-4	SW846 8270D	31-JUL-14 14:28	WK	21-JUL-14	FC	AB8270SL+
MC32243-4	SW846 8260C	01-AUG-14 21:48	AMY			V8260SL+
MC32243-4	SW846 8260C	04-AUG-14 18:32	AMY			V8260SL+
MC32243-5 Collected: 18-JUL-14 00:00 By: DHCW Received: 19-JUL-14 By: TB-ROX-071814-HCL						

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC32243

URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Project No: 21562973.03003

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC32243-5	SW846 8260C	01-AUG-14 19:11	AMY			V8260SL+
MC32243-5	SW846 8260C	04-AUG-14 16:42	AMY			V8260SL+
MC32243-6 Collected: 18-JUL-14 00:00 By: DHCW Received: 19-JUL-14 By: TB-ROX-071814-ST						
MC32243-6	SW846 8011	25-JUL-14 02:53	NK	22-JUL-14	MEW	V8011SL

Accutest Internal Chain of Custody

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Received: 07/19/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC32243-1.2	Walk In Ref #22	Thomas Abruzzise	07/21/14 14:13	Retrieve from Storage
MC32243-1.3	VOC Ref #4	Amy Min Yang	08/01/14 17:50	Retrieve from Storage
MC32243-1.3	Amy Min Yang	GCMSV	08/01/14 17:50	Load on Instrument
MC32243-1.3	GCMSV	Amy Min Yang	08/04/14 17:12	Unload from Instrument
MC32243-1.3	Amy Min Yang	VOC Ref #4	08/04/14 17:12	Return to Storage
MC32243-1.4	VOC Ref #4	Gary Krasinski	07/31/14 15:32	Retrieve from Storage
MC32243-1.4	Gary Krasinski	GCMSL	07/31/14 15:32	Load on Instrument
MC32243-1.4	GCMSL	Gary Krasinski	07/31/14 16:05	Unload from Instrument
MC32243-1.4	Gary Krasinski	VOC Ref #4	07/31/14 16:06	Return to Storage
MC32243-1.4	VOC Ref #4	Gary Krasinski	08/04/14 15:54	Retrieve from Storage
MC32243-1.4	Gary Krasinski	GCMSU	08/04/14 15:54	Load on Instrument
MC32243-1.4	GCMSU	Gary Krasinski	08/05/14 08:59	Unload from Instrument
MC32243-1.4	Gary Krasinski	VOC Ref #4	08/05/14 09:00	Return to Storage
MC32243-1.5	VOC Ref #4	Marc Tahtamoni	07/22/14 14:29	Retrieve from Storage
MC32243-2.2	Walk In Ref #22	Thomas Abruzzise	07/21/14 14:13	Retrieve from Storage
MC32243-2.3	VOC Ref #4	Amy Min Yang	08/01/14 17:50	Retrieve from Storage
MC32243-2.3	Amy Min Yang	GCMSV	08/01/14 17:50	Load on Instrument
MC32243-2.3	GCMSV	Amy Min Yang	08/04/14 17:12	Unload from Instrument
MC32243-2.3	Amy Min Yang	VOC Ref #4	08/04/14 17:12	Return to Storage
MC32243-2.4	VOC Ref #4	Gary Krasinski	07/31/14 15:32	Retrieve from Storage
MC32243-2.4	Gary Krasinski	GCMSL	07/31/14 15:32	Load on Instrument
MC32243-2.4	GCMSL	Gary Krasinski	07/31/14 16:05	Unload from Instrument
MC32243-2.4	Gary Krasinski	VOC Ref #4	07/31/14 16:06	Return to Storage
MC32243-2.4	VOC Ref #4	Gary Krasinski	08/04/14 15:54	Retrieve from Storage
MC32243-2.4	Gary Krasinski	GCMSU	08/04/14 15:54	Load on Instrument
MC32243-2.4	GCMSU	Gary Krasinski	08/05/14 08:59	Unload from Instrument
MC32243-2.4	Gary Krasinski	VOC Ref #4	08/05/14 09:00	Return to Storage
MC32243-2.5	VOC Ref #4	Marc Tahtamoni	07/22/14 14:29	Retrieve from Storage
MC32243-3.2	Walk In Ref #22	Thomas Abruzzise	07/21/14 14:13	Retrieve from Storage
MC32243-3.3	VOC Ref #4	Gary Krasinski	07/31/14 15:32	Retrieve from Storage
MC32243-3.3	Gary Krasinski	GCMSL	07/31/14 15:32	Load on Instrument
MC32243-3.3	GCMSL	Gary Krasinski	07/31/14 16:05	Unload from Instrument
MC32243-3.3	Gary Krasinski	VOC Ref #4	07/31/14 16:06	Return to Storage
MC32243-3.3	VOC Ref #4	Gary Krasinski	08/04/14 15:54	Retrieve from Storage
MC32243-3.3	Gary Krasinski	GCMSU	08/04/14 15:54	Load on Instrument

Accutest Internal Chain of Custody

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL
Received: 07/19/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC32243-3.3	GCMSU	Gary Krasinski	08/05/14 08:59	Unload from Instrument
MC32243-3.3	Gary Krasinski	VOC Ref #4	08/05/14 09:00	Return to Storage
MC32243-3.4	VOC Ref #4	Amy Min Yang	08/01/14 17:50	Retrieve from Storage
MC32243-3.4	Amy Min Yang	GCMSV	08/01/14 17:50	Load on Instrument
MC32243-3.4	GCMSV	Amy Min Yang	08/04/14 17:12	Unload from Instrument
MC32243-3.4	Amy Min Yang	VOC Ref #4	08/04/14 17:12	Return to Storage
MC32243-3.6	VOC Ref #4	Marc Tahtamoni	07/22/14 14:29	Retrieve from Storage
MC32243-4.1	Walk In Ref #22	Thomas Abruzzise	07/21/14 14:13	Retrieve from Storage
MC32243-4.3	VOC Ref #4	Amy Min Yang	08/01/14 17:50	Retrieve from Storage
MC32243-4.3	Amy Min Yang	GCMSV	08/01/14 17:50	Load on Instrument
MC32243-4.3	GCMSV	Amy Min Yang	08/04/14 17:12	Unload from Instrument
MC32243-4.3	Amy Min Yang	VOC Ref #4	08/04/14 17:12	Return to Storage
MC32243-4.4	VOC Ref #4	Gary Krasinski	07/31/14 15:32	Retrieve from Storage
MC32243-4.4	Gary Krasinski	GCMSL	07/31/14 15:32	Load on Instrument
MC32243-4.4	GCMSL	Gary Krasinski	07/31/14 16:05	Unload from Instrument
MC32243-4.4	Gary Krasinski	VOC Ref #4	07/31/14 16:06	Return to Storage
MC32243-4.4	VOC Ref #4	Amy Min Yang	08/01/14 17:50	Retrieve from Storage
MC32243-4.4	Amy Min Yang	GCMSV	08/01/14 17:50	Load on Instrument
MC32243-4.4	GCMSV	Amy Min Yang	08/04/14 17:12	Unload from Instrument
MC32243-4.4	Amy Min Yang	VOC Ref #4	08/04/14 17:12	Return to Storage
MC32243-4.5	VOC Ref #4	Gary Krasinski	08/04/14 15:54	Retrieve from Storage
MC32243-4.5	Gary Krasinski	GCMSU	08/04/14 15:54	Load on Instrument
MC32243-4.5	GCMSU	Gary Krasinski	08/05/14 08:59	Unload from Instrument
MC32243-4.5	Gary Krasinski	VOC Ref #4	08/05/14 09:00	Return to Storage
MC32243-4.6	VOC Ref #4	Marc Tahtamoni	07/22/14 14:29	Retrieve from Storage
MC32243-5.1	VOC Ref #4	Amy Min Yang	08/01/14 17:50	Retrieve from Storage
MC32243-5.1	Amy Min Yang	GCMSV	08/01/14 17:50	Load on Instrument
MC32243-5.1	GCMSV	Amy Min Yang	08/04/14 17:12	Unload from Instrument
MC32243-5.1	Amy Min Yang	VOC Ref #4	08/04/14 17:12	Return to Storage
MC32243-5.2	VOC Ref #4	Gary Krasinski	08/04/14 15:54	Retrieve from Storage
MC32243-5.2	Gary Krasinski	GCMSU	08/04/14 15:54	Load on Instrument
MC32243-5.2	GCMSU	Gary Krasinski	08/05/14 08:59	Unload from Instrument
MC32243-5.2	Gary Krasinski	VOC Ref #4	08/05/14 09:00	Return to Storage
MC32243-6.2	VOC Ref #4	Marc Tahtamoni	07/22/14 14:29	Retrieve from Storage

New England ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1226-MB	V33459.D	1	08/01/14	AMY	n/a	n/a	MSV1226

The QC reported here applies to the following samples: Method: SW846 8260C

MC32243-1, MC32243-2, MC32243-3, MC32243-4, MC32243-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	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: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1226-MB	V33459.D	1	08/01/14	AMY	n/a	n/a	MSV1226

The QC reported here applies to the following samples: Method: SW846 8260C

MC32243-1, MC32243-2, MC32243-3, MC32243-4, MC32243-5

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	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

Method Blank Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1226-MB	V33459.D	1	08/01/14	AMY	n/a	n/a	MSV1226

The QC reported here applies to the following samples: Method: SW846 8260C

MC32243-1, MC32243-2, MC32243-3, MC32243-4, MC32243-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	70-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	106%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

6.1.1

Method Blank Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU957-MB	U21532.D	1	08/04/14	AMY	n/a	n/a	MSU957

The QC reported here applies to the following samples: Method: SW846 8260C

MC32243-1, MC32243-2, MC32243-3, MC32243-4, MC32243-5

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	25	11	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	116%	70-130%
2037-26-5	Toluene-D8	108%	70-130%
460-00-4	4-Bromofluorobenzene	109%	70-130%

6.1.2

Blank Spike Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1226-BS	V33457.D	1	08/01/14	AMY	n/a	n/a	MSV1226

The QC reported here applies to the following samples: Method: SW846 8260C

MC32243-1, MC32243-2, MC32243-3, MC32243-4, MC32243-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	41.2	82	70-130
107-02-8	Acrolein	250	188	75	70-130
107-13-1	Acrylonitrile	50	52.8	106	70-130
71-43-2	Benzene	50	51.6	103	70-130
108-86-1	Bromobenzene	50	52.1	104	70-130
74-97-5	Bromochloromethane	50	52.6	105	70-130
75-27-4	Bromodichloromethane	50	55.9	112	70-130
75-25-2	Bromoform	50	46.2	92	70-130
74-83-9	Bromomethane	50	42.4	85	70-130
78-93-3	2-Butanone (MEK)	50	44.8	90	70-130
104-51-8	n-Butylbenzene	50	55.0	110	70-130
135-98-8	sec-Butylbenzene	50	55.1	110	70-130
98-06-6	tert-Butylbenzene	50	54.1	108	70-130
75-15-0	Carbon disulfide	50	65.6	131* a	70-130
56-23-5	Carbon tetrachloride	50	48.1	96	70-130
108-90-7	Chlorobenzene	50	51.4	103	70-130
75-00-3	Chloroethane	50	50.7	101	70-130
110-75-8	2-Chloroethyl vinyl ether	50	49.6	99	70-130
67-66-3	Chloroform	50	48.9	98	70-130
74-87-3	Chloromethane	50	42.2	84	70-130
95-49-8	o-Chlorotoluene	50	51.6	103	70-130
106-43-4	p-Chlorotoluene	50	50.8	102	70-130
124-48-1	Dibromochloromethane	50	50.1	100	70-130
95-50-1	1,2-Dichlorobenzene	50	50.3	101	70-130
541-73-1	1,3-Dichlorobenzene	50	50.2	100	70-130
106-46-7	1,4-Dichlorobenzene	50	49.6	99	70-130
75-71-8	Dichlorodifluoromethane	50	39.8	80	70-130
75-34-3	1,1-Dichloroethane	50	52.3	105	70-130
107-06-2	1,2-Dichloroethane	50	48.3	97	70-130
75-35-4	1,1-Dichloroethene	50	57.9	116	70-130
156-59-2	cis-1,2-Dichloroethene	50	51.2	102	70-130
156-60-5	trans-1,2-Dichloroethene	50	53.8	108	70-130
78-87-5	1,2-Dichloropropane	50	51.7	103	70-130
142-28-9	1,3-Dichloropropane	50	49.7	99	70-130
594-20-7	2,2-Dichloropropane	50	53.6	107	70-130
563-58-6	1,1-Dichloropropene	50	52.4	105	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1226-BS	V33457.D	1	08/01/14	AMY	n/a	n/a	MSV1226

The QC reported here applies to the following samples: Method: SW846 8260C

MC32243-1, MC32243-2, MC32243-3, MC32243-4, MC32243-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	53.5	107	70-130
10061-02-6	trans-1,3-Dichloropropene	50	52.8	106	70-130
97-63-2	Ethyl methacrylate	50	48.8	98	77-137
100-41-4	Ethylbenzene	50	49.2	98	70-130
87-68-3	Hexachlorobutadiene	50	49.5	99	70-130
591-78-6	2-Hexanone	50	43.0	86	70-130
98-82-8	Isopropylbenzene	50	57.0	114	70-130
99-87-6	p-Isopropyltoluene	50	54.6	109	70-130
1634-04-4	Methyl Tert Butyl Ether	50	49.6	99	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	49.9	100	70-130
74-95-3	Methylene bromide	50	50.7	101	70-130
75-09-2	Methylene chloride	50	50.2	100	70-130
91-20-3	Naphthalene	50	52.1	104	70-130
103-65-1	n-Propylbenzene	50	55.1	110	70-130
100-42-5	Styrene	50	53.5	107	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	44.3	89	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	51.7	103	70-130
127-18-4	Tetrachloroethene	50	51.4	103	70-130
108-88-3	Toluene	50	51.0	102	70-130
87-61-6	1,2,3-Trichlorobenzene	50	50.0	100	70-130
120-82-1	1,2,4-Trichlorobenzene	50	51.2	102	70-130
71-55-6	1,1,1-Trichloroethane	50	53.2	106	70-130
79-00-5	1,1,2-Trichloroethane	50	50.3	101	70-130
79-01-6	Trichloroethene	50	48.8	98	70-130
75-69-4	Trichlorofluoromethane	50	38.5	77	70-130
96-18-4	1,2,3-Trichloropropane	50	54.2	108	70-130
95-63-6	1,2,4-Trimethylbenzene	50	53.8	108	70-130
108-67-8	1,3,5-Trimethylbenzene	50	51.8	104	70-130
108-05-4	Vinyl Acetate	50	46.4	93	70-130
75-01-4	Vinyl chloride	50	40.7	81	70-130
	m,p-Xylene	100	99.6	100	70-130
95-47-6	o-Xylene	50	50.7	101	70-130
1330-20-7	Xylene (total)	150	150	100	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1226-BS	V33457.D	1	08/01/14	AMY	n/a	n/a	MSV1226

The QC reported here applies to the following samples: Method: SW846 8260C

MC32243-1, MC32243-2, MC32243-3, MC32243-4, MC32243-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	101%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

6.2.1

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU957-BS	U21529.D	1	08/04/14	AMY	n/a	n/a	MSU957
MSU957-BSD	U21530.D	1	08/04/14	AMY	n/a	n/a	MSU957

6.3.1

The QC reported here applies to the following samples: Method: SW846 8260C

MC32243-1, MC32243-2, MC32243-3, MC32243-4, MC32243-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
123-91-1	1,4-Dioxane	125	215	172* [a]	169	135* [a]	24	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	111%	110%	70-130%
2037-26-5	Toluene-D8	116%	116%	70-130%
460-00-4	4-Bromofluorobenzene	113%	115%	70-130%

(a) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32242-2MS	V33472.D	5	08/01/14	AMY	n/a	n/a	MSV1226
MC32242-2MSD	V33473.D	5	08/02/14	AMY	n/a	n/a	MSV1226
MC32242-2	V33462.D	1	08/01/14	AMY	n/a	n/a	MSV1226

The QC reported here applies to the following samples: Method: SW846 8260C

MC32243-1, MC32243-2, MC32243-3, MC32243-4, MC32243-5

CAS No.	Compound	MC32242-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	108	43* [a]	250	113	45* [a]	5	70-130/30
107-02-8	Acrolein	ND		1250	912	73	1250	932	75	2	70-130/30
107-13-1	Acrylonitrile	ND		250	285	114	250	289	116	1	70-130/30
71-43-2	Benzene	ND		250	281	112	250	276	110	2	70-130/30
108-86-1	Bromobenzene	ND		250	220	88	250	223	89	1	70-130/30
74-97-5	Bromochloromethane	ND		250	273	109	250	271	108	1	70-130/30
75-27-4	Bromodichloromethane	ND		250	325	130	250	320	128	2	70-130/30
75-25-2	Bromoform	ND		250	267	107	250	271	108	1	70-130/30
74-83-9	Bromomethane	ND		250	224	90	250	229	92	2	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	169	68* [a]	250	180	72	6	70-130/30
104-51-8	n-Butylbenzene	ND		250	292	117	250	288	115	1	70-130/30
135-98-8	sec-Butylbenzene	ND		250	276	110	250	272	109	1	70-130/30
98-06-6	tert-Butylbenzene	ND		250	263	105	250	259	104	2	70-130/30
75-15-0	Carbon disulfide	ND		250	353	141* [b]	250	350	140* [b]	1	70-130/30
56-23-5	Carbon tetrachloride	ND		250	279	112	250	274	110	2	70-130/30
108-90-7	Chlorobenzene	ND		250	280	112	250	278	111	1	70-130/30
75-00-3	Chloroethane	ND		250	265	106	250	265	106	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	267	107	250	261	104	2	70-130/30
74-87-3	Chloromethane	ND		250	211	84	250	224	90	6	70-130/30
95-49-8	o-Chlorotoluene	ND		250	237	95	250	238	95	0	70-130/30
106-43-4	p-Chlorotoluene	ND		250	247	99	250	248	99	0	70-130/30
124-48-1	Dibromochloromethane	ND		250	263	105	250	269	108	2	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	269	108	250	271	108	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	252	101	250	251	100	0	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	268	107	250	270	108	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	202	81	250	213	85	5	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	280	112	250	277	111	1	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	278	111	250	273	109	2	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	300	120	250	295	118	2	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	270	108	250	266	106	1	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	280	112	250	276	110	1	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	293	117	250	292	117	0	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	266	106	250	265	106	0	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	232	93	250	233	93	0	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	292	117	250	285	114	2	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32242-2MS	V33472.D	5	08/01/14	AMY	n/a	n/a	MSV1226
MC32242-2MSD	V33473.D	5	08/02/14	AMY	n/a	n/a	MSV1226
MC32242-2	V33462.D	1	08/01/14	AMY	n/a	n/a	MSV1226

The QC reported here applies to the following samples: Method: SW846 8260C

MC32243-1, MC32243-2, MC32243-3, MC32243-4, MC32243-5

CAS No.	Compound	MC32242-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	280	112	250	276	110	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	277	111	250	280	112	1	70-130/30
97-63-2	Ethyl methacrylate	ND		250	250	100	250	258	103	3	72-139/30
100-41-4	Ethylbenzene	ND		250	284	114	250	280	112	1	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	231	92	250	230	92	0	70-130/30
591-78-6	2-Hexanone	ND		250	170	68* [a]	250	173	69* [a]	2	70-130/30
98-82-8	Isopropylbenzene	ND		250	242	97	250	242	97	0	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	286	114	250	282	113	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	243	97	250	251	100	3	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	276	110	250	279	112	1	70-130/30
74-95-3	Methylene bromide	ND		250	294	118	250	290	116	1	70-130/30
75-09-2	Methylene chloride	ND		250	258	103	250	255	102	1	70-130/30
91-20-3	Naphthalene	ND		250	240	96	250	272	109	13	70-130/30
103-65-1	n-Propylbenzene	ND		250	248	99	250	246	98	1	70-130/30
100-42-5	Styrene	ND		250	315	126	250	314	126	0	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	249	100	250	248	99	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	223	89	250	228	91	2	70-130/30
127-18-4	Tetrachloroethene	ND		250	273	109	250	267	107	2	70-130/30
108-88-3	Toluene	ND		250	293	117	250	286	114	2	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	227	91	250	251	100	10	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	231	92	250	243	97	5	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	297	119	250	293	117	1	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	294	118	250	293	117	0	70-130/30
79-01-6	Trichloroethene	ND		250	270	108	250	265	106	2	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	212	85	250	209	84	1	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	191	76	250	195	78	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	266	106	250	264	106	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	242	97	250	243	97	0	70-130/30
108-05-4	Vinyl Acetate	ND		250	249	100	250	251	100	1	70-130/30
75-01-4	Vinyl chloride	ND		250	214	86	250	214	86	0	70-130/30
	m,p-Xylene	ND		500	582	116	500	578	116	1	70-130/30
95-47-6	o-Xylene	ND		250	296	118	250	296	118	0	70-130/30
1330-20-7	Xylene (total)	ND		750	879	117	750	875	117	0	70-130/30

* = Outside of Control Limits.

6.4.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32242-2MS	V33472.D	5	08/01/14	AMY	n/a	n/a	MSV1226
MC32242-2MSD	V33473.D	5	08/02/14	AMY	n/a	n/a	MSV1226
MC32242-2	V33462.D	1	08/01/14	AMY	n/a	n/a	MSV1226

The QC reported here applies to the following samples: Method: SW846 8260C

MC32243-1, MC32243-2, MC32243-3, MC32243-4, MC32243-5

CAS No.	Surrogate Recoveries	MS	MSD	MC32242-2	Limits
1868-53-7	Dibromofluoromethane	100%	98%	101%	70-130%
2037-26-5	Toluene-D8	104%	104%	97%	70-130%
460-00-4	4-Bromofluorobenzene	82%	82%	108%	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.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC32460-4MS	U21552.D	1	08/04/14	AMY	n/a	n/a	MSU957
MC32460-4MSD	U21553.D	1	08/04/14	AMY	n/a	n/a	MSU957
MC32460-4	U21540.D	1	08/04/14	AMY	n/a	n/a	MSU957

The QC reported here applies to the following samples: Method: SW846 8260C

MC32243-1, MC32243-2, MC32243-3, MC32243-4, MC32243-5

CAS No.	Compound	MC32460-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
123-91-1	1,4-Dioxane	ND		125	99.9	80	125	175	140* [a]	55* [a]	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC32460-4	Limits
1868-53-7	Dibromofluoromethane	113%	116%	114%	70-130%
2037-26-5	Toluene-D8	111%	110%	114%	70-130%
460-00-4	4-Bromofluorobenzene	108%	108%	111%	70-130%

(a) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

6.4.2

Volatile Internal Standard Area Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSU957-CC957	Injection Date:	08/04/14
Lab File ID:	U21528.D	Injection Time:	09:24
Instrument ID:	GCMSU	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	798993	8.97	1268933	9.84	427955	13.10	694347	15.66	323825	6.60
Upper Limit [a]	1597986	9.47	2537866	10.34	855910	13.60	1388694	16.16	647650	7.10
Lower Limit [b]	399497	8.47	634467	9.34	213978	12.60	347174	15.16	161913	6.10

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSU957-BS	803924	8.97	1296013	9.84	470715	13.10	704870	15.66	342426	6.61
MSU957-BSD	811036	8.97	1284900	9.84	499007	13.10	724421	15.66	358703	6.60
MSU957-MB	757053	8.98	1111876	9.85	376944	13.11	667021	15.67	312945	6.62
ZZZZZZ	731241	8.98	1066598	9.85	372623	13.10	676811	15.67	308143	6.62
ZZZZZZ	743612	8.98	1141787	9.85	428817	13.10	670975	15.67	285071	6.61
ZZZZZZ	748899	8.98	1116132	9.85	383751	13.10	675378	15.67	297766	6.63
ZZZZZZ	742213	8.98	1118785	9.84	377019	13.10	656357	15.67	278343	6.62
ZZZZZZ	705784	8.98	1067000	9.85	388193	13.10	645927	15.67	252295	6.62
ZZZZZZ	730729	8.98	1096336	9.84	374528	13.10	655610	15.66	292998	6.61
MC32460-4	701288	8.98	1077896	9.84	394305	13.10	643092	15.67	260135	6.61
ZZZZZZ	697296	8.98	1060587	9.85	359364	13.10	639415	15.67	266296	6.62
ZZZZZZ	697472	8.98	1069287	9.85	378421	13.10	632241	15.67	277303	6.61
ZZZZZZ	707723	8.98	1106423	9.84	368755	13.10	635411	15.66	256514	6.62
MC32243-5	677045	8.98	1004169	9.85	352840	13.10	633274	15.67	249047	6.60
MC32243-1	696266	8.98	1055520	9.84	350263	13.10	640059	15.67	265751	6.60
MC32243-2	735314	8.98	1150509	9.84	380435	13.10	655553	15.67	229679	6.60
MC32243-3	715041	8.98	1106170	9.84	395437	13.10	644409	15.67	280477	6.61
MC32243-4	692189	8.98	1058282	9.85	371154	13.10	617659	15.67	282908	6.63
ZZZZZZ	671440	8.98	1031281	9.84	380334	13.10	596418	15.66	300804	6.61
ZZZZZZ	698398	8.98	1049802	9.84	354020	13.10	623582	15.66	274003	6.62
ZZZZZZ	736425	8.97	1153604	9.84	426587	13.10	639632	15.66	293614	6.62
MC32460-4MS	781369	8.97	1238002	9.84	445066	13.10	673586	15.66	274804	6.62
MC32460-4MSD	771775	8.97	1230493	9.84	443866	13.10	659398	15.66	304374	6.61

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.

6.5.1

Volatile Internal Standard Area Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSV1226-CC1226	Injection Date:	08/01/14
Lab File ID:	V33457.D	Injection Time:	17:26
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	125638	6.54	159975	7.73	61543	11.07	66247	13.28	22547	3.50
Upper Limit [a]	251276	7.04	319950	8.23	123086	11.57	132494	13.78	45094	4.00
Lower Limit [b]	62819	6.04	79988	7.23	30772	10.57	33124	12.78	11274	3.00
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1226-BS	125638	6.54	159975	7.73	61543	11.07	66247	13.28	22547	3.50
MSV1226-MB	173855	6.54	215399	7.72	84398	11.07	84360	13.28	33727	3.49
ZZZZZZ	171964	6.54	209280	7.73	81326	11.07	83359	13.28	31603	3.50
MC32243-5	176674	6.54	218066	7.73	84923	11.07	85742	13.28	32753	3.50
MC32242-2	192555	6.54	235448	7.73	87578	11.07	86480	13.28	37207	3.50
ZZZZZZ	174596	6.54	212519	7.72	81840	11.07	80502	13.28	32903	3.49
ZZZZZZ	179077	6.54	221551	7.72	86098	11.07	86251	13.28	34274	3.49
ZZZZZZ	216279	6.54	256857	7.73	96513	11.07	94851	13.28	42296	3.50
ZZZZZZ	204062	6.54	244663	7.73	91555	11.07	89810	13.28	40910	3.50
MC32243-4	209309	6.54	254588	7.73	99111	11.07	102040	13.28	40499	3.50
MC32243-1	207425	6.54	287162	7.73	105975	11.07	105580	13.28	31836	3.50
MC32243-2	186357	6.54	257275	7.73	97449	11.07	95852	13.28	30692	3.50
MC32243-3	175808	6.54	246527	7.72	94436	11.07	92318	13.28	28984	3.49
MC32242-2MS	256920[c]	6.54	332755[c]	7.72	138814[c]	11.07	215649[c]	13.28	38129	3.49
MC32242-2MSD	259534[c]	6.54	333453[c]	7.72	137671[c]	11.07	211135[c]	13.28	42755	3.49

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Outside control limits due to possible matrix interference.

6.5.2

Volatile Surrogate Recovery Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC32243-1	U21545.D	120	104	106
MC32243-1	V33468.D	98	96	106
MC32243-2	U21546.D	114	104	107
MC32243-2	V33469.D	100	98	108
MC32243-3	U21547.D	115	113	113
MC32243-3	V33470.D	100	97	107
MC32243-4	U21548.D	115	111	211* [a]
MC32243-4	V33467.D	96	99	108
MC32243-5	U21544.D	121	105	108
MC32243-5	V33461.D	101	100	106
MC32242-2MS	V33472.D	100	104	82
MC32242-2MSD	V33473.D	98	104	82
MC32460-4MS	U21552.D	113	111	108
MC32460-4MSD	U21553.D	116	110	108
MSU957-BS	U21529.D	111	116	113
MSU957-BSD	U21530.D	110	116	115
MSU957-MB	U21532.D	116	108	109
MSV1226-BS	V33457.D	99	101	101
MSV1226-MB	V33459.D	99	99	106

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

(a) Outside control limits. Associated target analytes are non-detect.

6.6.1

New England ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39045-MB	X04075.D	1	07/31/14	WK	07/21/14	OP39045	MSX134

The QC reported here applies to the following samples: Method: SW846 8270D

MC32243-1, MC32243-2, MC32243-3, MC32243-4

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	0.27	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	0.25	5.0	0.20	ug/l	J
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

Method Blank Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39045-MB	X04075.D	1	07/31/14	WK	07/21/14	OP39045	MSX134

The QC reported here applies to the following samples: Method: SW846 8270D

MC32243-1, MC32243-2, MC32243-3, MC32243-4

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	44%	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	79%	30-130%
321-60-8	2-Fluorobiphenyl	75%	30-130%
1718-51-0	Terphenyl-d14	93%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

Method Blank Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39046-MB	I90939.D	1	07/30/14	MR	07/21/14	OP39046	MSI3385

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC32243-1, MC32243-2, MC32243-3, MC32243-4

7.1.2

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	0.029	0.050	0.013	ug/l	J
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	77%	30-130%
321-60-8	2-Fluorobiphenyl	65%	30-130%
1718-51-0	Terphenyl-d14	70%	30-130%

Blank Spike Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39045-BS	X04076.D	1	07/31/14	WK	07/21/14	OP39045	MSX134

The QC reported here applies to the following samples: Method: SW846 8270D

MC32243-1, MC32243-2, MC32243-3, MC32243-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	12.3	25* a	30-130
95-57-8	2-Chlorophenol	50	35.4	71	30-130
59-50-7	4-Chloro-3-methyl phenol	50	39.5	79	30-130
120-83-2	2,4-Dichlorophenol	50	39.1	78	30-130
105-67-9	2,4-Dimethylphenol	50	37.3	75	30-130
51-28-5	2,4-Dinitrophenol	50	14.0	28* a	30-130
534-52-1	4,6-Dinitro-o-cresol	50	21.6	43	30-130
95-48-7	2-Methylphenol	50	33.5	67	30-130
	3&4-Methylphenol	100	58.5	59	30-130
88-75-5	2-Nitrophenol	50	36.5	73	30-130
100-02-7	4-Nitrophenol	50	16.5	33	30-130
87-86-5	Pentachlorophenol	50	25.3	51	30-130
108-95-2	Phenol	50	17.3	35	30-130
95-95-4	2,4,5-Trichlorophenol	50	43.4	87	30-130
88-06-2	2,4,6-Trichlorophenol	50	35.7	71	30-130
62-53-3	Aniline	50	29.6	59	40-140
101-55-3	4-Bromophenyl phenyl ether	50	45.8	92	40-140
85-68-7	Butyl benzyl phthalate	50	44.6	89	40-140
100-51-6	Benzyl Alcohol	50	44.1	88	40-140
91-58-7	2-Chloronaphthalene	50	35.8	72	40-140
106-47-8	4-Chloroaniline	50	40.0	80	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	39.2	78	40-140
111-44-4	bis(2-Chloroethyl)ether	50	38.0	76	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	36.3	73	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	42.4	85	40-140
122-66-7	1,2-Diphenylhydrazine	50	43.1	86	40-140
121-14-2	2,4-Dinitrotoluene	50	43.4	87	40-140
606-20-2	2,6-Dinitrotoluene	50	44.2	88	40-140
91-94-1	3,3'-Dichlorobenzidine	50	51.7	103	40-140
132-64-9	Dibenzofuran	50	35.7	71	40-140
84-74-2	Di-n-butyl phthalate	50	40.1	80	40-140
117-84-0	Di-n-octyl phthalate	50	47.8	96	40-140
84-66-2	Diethyl phthalate	50	42.6	85	40-140
131-11-3	Dimethyl phthalate	50	43.4	87	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	47.9	96	40-140
118-74-1	Hexachlorobenzene	50	46.8	94	40-140

* = Outside of Control Limits.

7.2.1

Blank Spike Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39045-BS	X04076.D	1	07/31/14	WK	07/21/14	OP39045	MSX134

The QC reported here applies to the following samples: Method: SW846 8270D

MC32243-1, MC32243-2, MC32243-3, MC32243-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	15.6	31* a	40-140
67-72-1	Hexachloroethane	50	22.1	44	40-140
78-59-1	Isophorone	50	37.9	76	40-140
88-74-4	2-Nitroaniline	50	42.3	85	40-140
99-09-2	3-Nitroaniline	50	40.2	80	40-140
100-01-6	4-Nitroaniline	50	37.3	75	40-140
98-95-3	Nitrobenzene	50	39.8	80	40-140
62-75-9	n-Nitrosodimethylamine	50	22.6	45	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	41.5	83	40-140
86-30-6	N-Nitrosodiphenylamine	50	38.9	78	40-140
110-86-1	Pyridine	50	20.2	40	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	43%	15-110%
4165-62-2	Phenol-d5	31%	15-110%
118-79-6	2,4,6-Tribromophenol	82%	15-110%
4165-60-0	Nitrobenzene-d5	79%	30-130%
321-60-8	2-Fluorobiphenyl	69%	30-130%
1718-51-0	Terphenyl-d14	88%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39046-BS	I90940.D	1	07/30/14	MR	07/21/14	OP39046	MSI3385

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC32243-1, MC32243-2, MC32243-3, MC32243-4

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	28.3	57	40-140
120-12-7	Anthracene	50	34.1	68	40-140
56-55-3	Benzo(a)anthracene	50	34.8	70	40-140
50-32-8	Benzo(a)pyrene	50	33.6	67	40-140
205-99-2	Benzo(b)fluoranthene	50	34.0	68	40-140
191-24-2	Benzo(g,h,i)perylene	50	37.0	74	40-140
207-08-9	Benzo(k)fluoranthene	50	34.2	68	40-140
218-01-9	Chrysene	50	32.4	65	40-140
53-70-3	Dibenzo(a,h)anthracene	50	36.1	72	40-140
206-44-0	Fluoranthene	50	31.3	63	40-140
86-73-7	Fluorene	50	33.8	68	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	36.3	73	40-140
90-12-0	1-Methylnaphthalene	50	28.7	57	40-140
91-57-6	2-Methylnaphthalene	50	28.8	58	40-140
85-01-8	Phenanthrene	50	34.8	70	40-140
129-00-0	Pyrene	50	30.2	60	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	72%	30-130%
321-60-8	2-Fluorobiphenyl	61%	30-130%
1718-51-0	Terphenyl-d14	68%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39045-MS	X04077.D	1	07/31/14	WK	07/21/14	OP39045	MSX134
OP39045-MSD	X04078.D	1	07/31/14	WK	07/21/14	OP39045	MSX134
MC32236-7	X04079.D	1	07/31/14	WK	07/21/14	OP39045	MSX134

The QC reported here applies to the following samples: Method: SW846 8270D

MC32243-1, MC32243-2, MC32243-3, MC32243-4

CAS No.	Compound	MC32236-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	13.9	28* [a]	50	12.6	25* [a]	10	30-130/20
95-57-8	2-Chlorophenol	ND		50	33.1	66	50	35.4	71	7	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	37.8	76	50	39.9	80	5	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	37.3	75	50	39.7	79	6	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	32.7	65	50	37.9	76	15	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	18.5	37	50	14.5	29* [a]	24* [a]	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	25.2	50	50	22.0	44	14	30-130/20
95-48-7	2-Methylphenol	ND		50	29.6	59	50	33.3	67	12	30-130/20
	3&4-Methylphenol	ND		100	56.7	57	100	61.5	62	8	30-130/20
88-75-5	2-Nitrophenol	ND		50	35.5	71	50	37.7	75	6	30-130/20
100-02-7	4-Nitrophenol	ND		50	18.0	36	50	17.1	34	5	30-130/20
87-86-5	Pentachlorophenol	ND		50	25.8	52	50	25.4	51	2	30-130/20
108-95-2	Phenol	ND		50	16.2	32	50	17.9	36	10	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	41.5	83	50	40.7	81	2	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	35.6	71	50	37.5	75	5	30-130/20
62-53-3	Aniline	ND		50	26.1	52	50	29.6	59	13	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	45.2	90	50	47.4	95	5	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	43.2	86	50	44.0	88	2	40-140/20
100-51-6	Benzyl Alcohol	ND		50	ND	0* [b]	50	ND	0* [b]	nc	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	35.6	71	50	38.7	77	8	40-140/20
106-47-8	4-Chloroaniline	ND		50	36.6	73	50	40.2	80	9	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	36.7	73	50	40.0	80	9	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	35.2	70	50	38.0	76	8	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	34.0	68	50	36.6	73	7	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	42.0	84	50	43.6	87	4	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	42.5	85	50	44.9	90	5	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	44.3	89	50	43.5	87	2	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	45.1	90	50	45.4	91	1	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	45.7	91	50	52.5	105	14	40-140/20
132-64-9	Dibenzofuran	ND		50	35.7	71	50	37.3	75	4	40-140/20
84-74-2	Di-n-butyl phthalate	0.39	J	50	40.4	80	50	41.7	83	3	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	47.8	96	50	48.1	96	1	40-140/20
84-66-2	Diethyl phthalate	0.32	J	50	43.2	86	50	43.8	87	1	40-140/20
131-11-3	Dimethyl phthalate	ND		50	44.0	88	50	44.3	89	1	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	0.78	J	50	47.7	94	50	48.3	95	1	40-140/20
118-74-1	Hexachlorobenzene	ND		50	46.1	92	50	49.2	98	7	40-140/20

* = Outside of Control Limits.

7.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39045-MS	X04077.D	1	07/31/14	WK	07/21/14	OP39045	MSX134
OP39045-MSD	X04078.D	1	07/31/14	WK	07/21/14	OP39045	MSX134
MC32236-7	X04079.D	1	07/31/14	WK	07/21/14	OP39045	MSX134

The QC reported here applies to the following samples: Method: SW846 8270D

MC32243-1, MC32243-2, MC32243-3, MC32243-4

7.3.1

7

CAS No.	Compound	MC32236-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	15.8	32* [a]	50	17.8	36* [a]	12	40-140/20
67-72-1	Hexachloroethane	ND		50	22.9	46	50	23.8	48	4	40-140/20
78-59-1	Isophorone	ND		50	35.9	72	50	38.3	77	6	40-140/20
88-74-4	2-Nitroaniline	ND		50	44.1	88	50	44.4	89	1	40-140/20
99-09-2	3-Nitroaniline	ND		50	40.0	80	50	41.2	82	3	40-140/20
100-01-6	4-Nitroaniline	ND		50	37.3	75	50	37.6	75	1	40-140/20
98-95-3	Nitrobenzene	ND		50	36.5	73	50	40.1	80	9	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	20.9	42	50	22.5	45	7	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	38.5	77	50	41.3	83	7	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	38.1	76	50	39.7	79	4	40-140/20
110-86-1	Pyridine	ND		50	18.2	36* [b]	50	19.9	40	9	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC32236-7	Limits
367-12-4	2-Fluorophenol	38%	42%	39%	15-110%
4165-62-2	Phenol-d5	29%	31%	29%	15-110%
118-79-6	2,4,6-Tribromophenol	83%	86%	81%	15-110%
4165-60-0	Nitrobenzene-d5	74%	80%	76%	30-130%
321-60-8	2-Fluorobiphenyl	68%	72%	70%	30-130%
1718-51-0	Terphenyl-d14	84%	85%	93%	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: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39046-MS	I90941.D	1	07/30/14	MR	07/21/14	OP39046	MSI3385
OP39046-MSD	I90942.D	1	07/30/14	MR	07/21/14	OP39046	MSI3385
MC32236-8	I90943.D	1	07/30/14	MR	07/21/14	OP39046	MSI3385

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC32243-1, MC32243-2, MC32243-3, MC32243-4

7.3.2

CAS No.	Compound	MC32236-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	31.8	64	50	34.0	68	7	40-140/20
208-96-8	Acenaphthylene	ND		50	27.6	55	50	29.2	58	6	40-140/20
120-12-7	Anthracene	ND		50	33.8	68	50	34.5	69	2	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	34.5	69	50	35.6	71	3	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	33.4	67	50	34.1	68	2	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	36.8	74	50	37.7	75	2	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	37.0	74	50	37.4	75	1	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	31.2	62	50	31.6	63	1	40-140/20
218-01-9	Chrysene	ND		50	32.3	65	50	32.8	66	2	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	35.9	72	50	36.4	73	1	40-140/20
206-44-0	Fluoranthene	ND		50	30.7	61	50	31.5	63	3	40-140/20
86-73-7	Fluorene	ND		50	33.4	67	50	34.3	69	3	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	36.2	72	50	36.7	73	1	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	28.1	56	50	30.2	60	7	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	28.3	57	50	30.7	61	8	40-140/20
85-01-8	Phenanthrene	0.036	J	50	34.3	69	50	35.3	71	3	40-140/20
129-00-0	Pyrene	ND		50	30.0	60	50	30.8	62	3	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC32236-8	Limits
4165-60-0	Nitrobenzene-d5	68%	73%	71%	30-130%
321-60-8	2-Fluorobiphenyl	60%	62%	62%	30-130%
1718-51-0	Terphenyl-d14	67%	68%	70%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSF3305-CC3270	Injection Date:	08/01/14
Lab File ID:	F75073.D	Injection Time:	09:29
Instrument ID:	GCMSF	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	138903	3.05	490892	4.08	323697	5.57	605542	6.81	730612	9.10	697175	10.52
Upper Limit [a]	277806	3.55	981784	4.58	647394	6.07	1211084	7.31	1461224	9.60	1394350	11.02
Lower Limit [b]	69452	2.55	245446	3.58	161849	5.07	302771	6.31	365306	8.60	348588	10.02
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
MC32243-3	135217	3.06	483247	4.08	316184	5.57	599985	6.81	715473	9.09	699364	10.51
OP39138-MB	145069	3.06	526677	4.08	350063	5.57	642984	6.81	784908	9.09	749664	10.51
OP39138-BS	151995	3.06	545977	4.08	355390	5.57	673837	6.81	824012	9.10	782168	10.52
OP39138-MS	159054	3.06	574284	4.08	371744	5.57	695508	6.81	843473	9.10	803854	10.52
OP39138-MSD	163050	3.06	574154	4.08	368503	5.57	687048	6.81	824694	9.10	789134	10.52
MC32300-3	151972	3.05	541710	4.08	357827	5.57	654925	6.81	775137	9.09	750806	10.51
ZZZZZZ	147873	3.05	532495	4.08	348328	5.56	638539	6.81	757567	9.09	750390	10.51
ZZZZZZ	148328	3.05	536014	4.08	359292	5.56	661960	6.81	786614	9.09	762449	10.51
ZZZZZZ	144530	3.05	530865	4.08	350109	5.57	650221	6.81	749728	9.09	747311	10.51
ZZZZZZ	148608	3.05	526795	4.08	344370	5.57	637760	6.80	739948	9.09	727027	10.51
OP39132-MB	158297	3.06	556262	4.08	355286	5.57	649317	6.81	729755	9.09	695997	10.51
OP39132-BS	154848	3.06	545336	4.08	346430	5.57	624085	6.81	719446	9.09	679102	10.51
OP39132-MS	149211	3.06	525095	4.08	342546	5.57	621932	6.81	751738	9.10	807826	10.52
OP39132-MSD	163685	3.06	567691	4.08	369841	5.57	654471	6.81	783543	9.10	855245	10.52
MC32398-1	142617	3.06	490511	4.08	321891	5.57	573240	6.81	682729	9.10	773153	10.52
ZZZZZZ	155688	3.06	522458	4.08	326385	5.57	588956	6.81	677787	9.09	716104	10.51
ZZZZZZ	148485	3.06	515531	4.08	321283	5.57	565317	6.81	645726	9.09	698867	10.51
ZZZZZZ	143566	3.06	475126	4.08	301771	5.56	544274	6.81	662012	9.10	745545	10.52
ZZZZZZ	141909	3.06	480835	4.08	301130	5.56	572529	6.81	681730	9.09	760323	10.52
ZZZZZZ	134754	3.06	462744	4.08	309783	5.57	555672	6.81	660205	9.09	772895	10.51
ZZZZZZ	145945	3.06	495619	4.08	323008	5.57	566768	6.81	687984	9.09	745538	10.51
ZZZZZZ	139124	3.06	482933	4.08	309106	5.56	586481	6.81	716492	9.09	778564	10.51
OP39162-MS	142809	3.06	506616	4.08	326243	5.57	596120	6.81	717828	9.10	764612	10.52
OP39162-MSD	151138	3.06	543657	4.08	348036	5.57	643038	6.81	744941	9.10	808716	10.52
MC32446-4	140574	3.06	497241	4.08	324356	5.57	591481	6.81	731635	9.09	792229	10.51
ZZZZZZ	138372	3.05	491720	4.08	308580	5.57	513255	6.81	636273	9.09	687720	10.51
ZZZZZZ	143303	3.05	472515	4.08	332426	5.57	629938	6.81	748510	9.09	750246	10.51
ZZZZZZ	131147	3.06	466398	4.08	311635	5.56	549024	6.81	727028	9.09	780818	10.51
MSF3305-ECC3270	139421	3.05	491427	4.08	322955	5.57	589914	6.81	687726	9.10	682378	10.52

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12

7.4.1

Semivolatile Internal Standard Area Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSF3305-CC3270	Injection Date:	08/01/14
Lab File ID:	F75073.D	Injection Time:	09:29
Instrument ID:	GCMSF	Method:	SW846 8270D

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT	IS 3 AREA	IS 3 RT	IS 4 AREA	IS 4 RT	IS 5 AREA	IS 5 RT	IS 6 AREA	IS 6 RT

IS 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: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSI3385-CC3320	Injection Date:	07/30/14
Lab File ID:	I90927.D	Injection Time:	08:04
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	366197	4.31	766702	5.37	390836	6.91	659326	8.32	417805	11.09	1127728	12.59
Upper Limit [a]	732394	4.81	1533404	5.87	781672	7.41	1318652	8.82	835610	11.59	2255456	13.09
Lower Limit [b]	183099	3.81	383351	4.87	195418	6.41	329663	7.82	208903	10.59	563864	12.09
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP39142-MB	423753	4.31	888448	5.37	454690	6.91	768166	8.31	501548	11.09	1342668	12.60
OP39142-BS	415417	4.31	881136	5.37	445287	6.91	752951	8.32	483146	11.09	1291076	12.60
ZZZZZZ	418921	4.31	868869	5.37	439428	6.91	743663	8.32	481851	11.09	1311800	12.60
OP39038-MB	377379	4.31	792985	5.37	404800	6.91	682320	8.31	438726	11.09	1177052	12.59
OP39038-BS	419689	4.31	891340	5.37	453450	6.91	761734	8.32	489521	11.09	1300982	12.60
OP39038-MS	402617	4.31	854860	5.37	435153	6.91	731876	8.32	473011	11.09	1262035	12.60
OP39038-MSD	351938	4.31	749128	5.37	380858	6.91	638001	8.32	409032	11.09	1093892	12.60
MC32236-6	393546	4.31	833720	5.37	424407	6.91	716647	8.31	458109	11.09	1242417	12.59
ZZZZZZ	358303	4.31	755114	5.37	386750	6.91	651254	8.31	415934	11.09	1146008	12.59
ZZZZZZ	363592	4.31	768352	5.37	385928	6.91	648040	8.31	414998	11.09	1142713	12.59
ZZZZZZ	359463	4.31	747823	5.37	381772	6.91	639895	8.31	409097	11.09	1125122	12.60
OP39046-MB	367173	4.31	773778	5.37	394602	6.91	663643	8.31	426128	11.09	1157078	12.59
OP39046-BS	382647	4.31	810720	5.37	411715	6.91	690238	8.32	441297	11.09	1180085	12.60
OP39046-MS	411985	4.31	873253	5.37	442159	6.91	740460	8.32	481710	11.09	1282445	12.60
OP39046-MSD	406040	4.31	868448	5.37	437430	6.91	726394	8.32	466188	11.09	1240919	12.60
MC32236-8	329797	4.31	694934	5.37	355420	6.91	595720	8.31	379190	11.09	1026449	12.59
MC32243-1	385453	4.31	804421	5.37	410983	6.91	671119	8.32	425623	11.09	1155046	12.60
MC32243-2	398957	4.31	828157	5.37	421345	6.91	687529	8.32	430054	11.09	1161884	12.60
MC32243-3	372691	4.31	791493	5.37	394572	6.91	649723	8.32	402431	11.09	1092472	12.60
MC32243-4	398386	4.31	833173	5.37	412672	6.91	665692	8.32	413842	11.09	1114420	12.60

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.4.2

Semivolatile Internal Standard Area Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	MSX134-CC106	Injection Date:	07/31/14
Lab File ID:	X04063.D	Injection Time:	07:41
Instrument ID:	GCMSX	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	297500	3.44	1129924	4.48	617272	5.99	965664	7.26	782832	9.67	645707	11.23
Upper Limit [a]	595000	3.94	2259848	4.98	1234544	6.49	1931328	7.76	1565664	10.17	1291414	11.73
Lower Limit [b]	148750	2.94	564962	3.98	308636	5.49	482832	6.76	391416	9.17	322854	10.73
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP39135-MB	340695	3.43	1237141	4.47	668781	5.99	985518	7.26	698295	9.66	498309	11.22
OP39135-BS	363359	3.44	1350714	4.48	713834	5.99	1086844	7.26	773234	9.67	632821	11.23
ZZZZZZ	388991	3.43	1434199	4.47	760174	5.98	1092757	7.26	759358	9.66	617580	11.23
ZZZZZZ	354851	3.43	1291546	4.47	656675	5.98	899223	7.26	609074	9.68	514985	11.26
ZZZZZZ	378560	3.43	1391884	4.47	742970	5.98	1103632	7.26	731214	9.66	545527	11.22
ZZZZZZ	397997	3.43	1479209	4.47	787450	5.98	1126958	7.26	728473	9.66	571577	11.23
ZZZZZZ	336163	3.43	1205073	4.47	591730	5.99	830536	7.26	581628	9.72	415161	11.30
OP39045-MB	313246	3.43	1150121	4.47	627051	5.98	937706	7.26	706030	9.66	562565	11.23
OP39045-BS	329074	3.43	1206896	4.47	660939	5.99	1021235	7.26	803256	9.66	689017	11.22
OP39045-MS	371269	3.43	1370534	4.47	730055	5.99	1157507	7.26	923558	9.67	777221	11.23
OP39045-MSD	389631	3.43	1420161	4.48	759373	5.99	1156817	7.26	905412	9.67	771337	11.23
MC32236-7	294641	3.43	1097400	4.47	593458	5.98	907107	7.25	679940	9.66	534054	11.22
MC32243-1	337599	3.43	1269258	4.47	694803	5.98	1051377	7.26	806063	9.66	646315	11.22
MC32243-2	330213	3.43	1219062	4.47	687560	5.98	1043468	7.26	835104	9.66	675493	11.23
MC32243-3	341846	3.44	1268145	4.47	692834	5.99	1023963	7.26	778068	9.66	649942	11.23
MC32243-4	363495	3.43	1330522	4.47	712066	5.98	1040420	7.26	801830	9.66	663355	11.23
OP39154-MB	373199	3.43	1374417	4.47	728247	5.98	1058122	7.26	702876	9.66	530485	11.22
OP39154-BS	375836	3.43	1397074	4.47	735880	5.99	1109973	7.26	775045	9.66	642249	11.23
ZZZZZZ	338175	3.43	1210510	4.47	604921	5.98	840625	7.26	612539	9.69	483970	11.26
ZZZZZZ	300254	3.43	1072704	4.47	549236	5.98	733342	7.26	529640	9.71	411230	11.28
ZZZZZZ	343276	3.43	1252135	4.47	657573	5.98	955878	7.26	664251	9.66	584713	11.23
ZZZZZZ	346335	3.43	1275304	4.47	680671	5.98	988066	7.26	655354	9.66	529756	11.22
ZZZZZZ	374069	3.43	1366420	4.47	727327	5.98	1048372	7.26	715109	9.66	614990	11.23
ZZZZZZ	361566	3.43	1342643	4.47	707223	5.98	1022813	7.26	670046	9.66	527490	11.22

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Surrogate Recovery Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC32243-1	X04080.D	42	32	81	72	68	85
MC32243-2	X04081.D	46	35	89	81	73	85
MC32243-3	F75074.D	43	32	83	69	73	82
MC32243-3	X04082.D	45	32	96	82	74	85
MC32243-4	X04083.D	43	30	93	78	75	87
OP39045-BS	X04076.D	43	31	82	79	69	88
OP39045-MB	X04075.D	44	32	84	79	75	93
OP39045-MS	X04077.D	38	29	83	74	68	84
OP39045-MSD	X04078.D	42	31	86	80	72	85

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: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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
MC32243-1	I90944.D	69	60	66
MC32243-2	I90945.D	75	65	68
MC32243-3	I90946.D	69	65	68
MC32243-4	I90947.D	75	67	69
OP39046-BS	I90940.D	72	61	68
OP39046-MB	I90939.D	77	65	70
OP39046-MS	I90941.D	68	60	67
OP39046-MSD	I90942.D	73	62	68

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

7.5.2

New England ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

8

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39069-MB	BK39758.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290

The QC reported here applies to the following samples: Method: SW846 8011

MC32243-1, MC32243-2, MC32243-3, MC32243-4, MC32243-6

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	111%	36-173%
460-00-4	Bromofluorobenzene (S)	109%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39069-BS	BK39759.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290

The QC reported here applies to the following samples: Method: SW846 8011

MC32243-1, MC32243-2, MC32243-3, MC32243-4, MC32243-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.142	0.11	78	60-140
106-93-4	1,2-Dibromoethane	0.142	0.11	78	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	127%	36-173%
460-00-4	Bromofluorobenzene (S)	118%	36-173%

8.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP39069-MS	BK39760.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290
OP39069-MSD	BK39761.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290
MC32236-13	BK39762.D	1	07/24/14	NK	07/22/14	OP39069	GBK1290

The QC reported here applies to the following samples: Method: SW846 8011

MC32243-1, MC32243-2, MC32243-3, MC32243-4, MC32243-6

CAS No.	Compound	MC32236-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.142	0.10	71	0.142	0.10	71	0	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.142	0.11	78	0.142	0.11	78	0	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC32236-13 Limits	
460-00-4	Bromofluorobenzene (S)	130%	117%	121%	36-173%
460-00-4	Bromofluorobenzene (S)	120%	111%	116%	36-173%

8.3.1

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 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]
MC32243-1	BK39778.D	87	97
MC32243-2	BK39780.D	78	87
MC32243-3	BK39781.D	87	91
MC32243-4	BK39782.D	87	89
MC32243-6	BK39783.D	81	85
OP39069-BS	BK39759.D	127	118
OP39069-MB	BK39758.D	111	109
OP39069-MS	BK39760.D	130	120
OP39069-MSD	BK39761.D	117	111

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	GBK1290-ICC1290	Injection Date:	07/24/14
Lab File ID:	BK39754.D	Injection Time:	17:33
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.39	4.41

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP39069-MB	BK39758.D	07/24/14	18:50	4.39	4.41
OP39069-BS	BK39759.D	07/24/14	19:10	4.39	4.41
OP39069-MS	BK39760.D	07/24/14	19:29	4.39	4.41
OP39069-MSD	BK39761.D	07/24/14	19:48	4.39	4.41
MC32236-13	BK39762.D	07/24/14	20:07	4.39	4.41
ZZZZZZ	BK39763.D	07/24/14	20:26	4.39	4.41
ZZZZZZ	BK39764.D	07/24/14	20:46	4.39	4.41
ZZZZZZ	BK39765.D	07/24/14	21:05	4.39	4.41
ZZZZZZ	BK39766.D	07/24/14	21:25	4.39	4.41
ZZZZZZ	BK39767.D	07/24/14	21:44	4.39	4.41

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: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	GBK1290-CC1290	Injection Date:	07/24/14
Lab File ID:	BK39768.D	Injection Time:	22:03
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.39	4.41

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BK39769.D	07/24/14	22:23	4.39	4.41
ZZZZZZ	BK39770.D	07/24/14	22:42	4.39	4.41
ZZZZZZ	BK39771.D	07/24/14	23:01	4.39	4.41
ZZZZZZ	BK39772.D	07/24/14	23:21	4.39	4.41
ZZZZZZ	BK39773.D	07/24/14	23:40	4.39	4.41
ZZZZZZ	BK39774.D	07/24/14	23:59	4.39	4.41
ZZZZZZ	BK39775.D	07/25/14	00:19	4.39	4.41
ZZZZZZ	BK39776.D	07/25/14	00:38	4.39	4.41
ZZZZZZ	BK39777.D	07/25/14	00:57	4.39	4.41
MC32243-1	BK39778.D	07/25/14	01:17	4.39	4.41

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.2

GC Surrogate Retention Time Summary

Job Number: MC32243
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 3Q14 GW/ 21562973.03003 900 South Central Avenue, Roxana, IL

Check Std:	GBK1290-CC1290	Injection Date:	07/25/14
Lab File ID:	BK39779.D	Injection Time:	01:36
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.39	4.41

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC32243-2	BK39780.D	07/25/14	01:55	4.39	4.41
MC32243-3	BK39781.D	07/25/14	02:14	4.39	4.41
MC32243-4	BK39782.D	07/25/14	02:33	4.39	4.41
MC32243-6	BK39783.D	07/25/14	02:53	4.39	4.41
ZZZZZZ	BK39784.D	07/25/14	03:12	0.00	0.00
ZZZZZZ	BK39785.D	07/25/14	03:32	0.00	0.00
GBK1290-ECC129	BK39786.D	07/25/14	03:51	4.39	4.41

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.3

TestAmerica Savannah
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☐ NPDES ☒ RCRA ☐ Other:

Client Contact	Project Manager: Jennifer Schwent	Office Contact: Elizabeth Kunkel	Date: 8/5/14	COC No:
URS Corporation	Email: jennifer.schwent@urs.com	Site Contact: Melissa Mansker		Job No. 21563550.00012
1001 Highlands Plaza Drive West - Suite 300	Tel/Fax: (314) 743-4227 / (314) 429-0462	Lab Contact: Kathy Smith	Carrier: FedEx	1 of 2 COCs
Saint Louis, MO 63110	Analysis Turnaround Time			Samplers:
(314) 429-0100 Phone	☐ CALENDAR DAYS ☒ WORKING DAYS			For Lab Use Only:
(314) 429-0462 FAX	TAT if different from Below _____	Preservation Codes		Walk-in Client:
Project	☑ 2 weeks	MeOH - Methanol; HCl - Hydrochloric acid		Lab Sampling:
Project Name: INEOS Phase II RFI	☐ 1 week	DI H2O - DI Water; H2SO4 - Sulfuric acid		
Site: 356 Three Rivers Parkway, Addyston, OH 45001	☐ 2 days	HNO3 - Nitric Acid		SDG No.:
Project # 68012613	☐ 1 day			

Sample Identification	SAMPLING Date	SAMPLING Time	Sample Type (C=Comp, G=Grab)	Matrix	PRESERVATIVE NONE	MeOH	DI H2O	HNO3	HCl	H2SO4	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	LL_SVOCs by 8270D	Metals by 6020A/Mercury by 7471D	Total Phosphorus by 365.4	Arsenic by 6020A (SWMU-5 ONLY)	Cation Exchange Capacity	Sample Specific Notes:
SB-002-14-8	8-5-14	0915	G	SL	3						3		N	1	1	1			
SB-002-14-8-MS		0915	G	SL	3						3		Y	1	1	1			
SB-002-14-8-MSD		0915	G	SL	3						3		Y	1	1	1			
SB-002-14-49		1000	G	SL	3						3		N	1	1	1			
~~SB-004-18-8~~ SB-004-18-8		1130	G	SL	2						2		N	1	1				
SB-004-18-12		1140	G	SL	2						2		N	1	1				
SB-004-18-22		1200	G	SL	2						2		N	1	1				
SB-004-13-8		1420	G	SL	2						2		N	1	1				
SB-004-13-25		1435	G	SL	2						2		N	1	1				
SB-004-13-29		1455	G	SL	2						2		N	1	1				
SB-003-06-10		1545	G	SL	2						2		N	1	1				
SB-003-06-30		1615	G	SL	2						2		N	1	1				

680-103958 Chain of Custody

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:
*Level 4 Data Package
*Please include "J" values on Reports
*Please provide sample receipt upon login

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

Relinquished by:	Company: URS Corporation	Date/Time: 8/5/14 1830	Received by:	Company: FedEx	Date/Time:
Relinquished by:	Company	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company	Date/Time:	Received in Laboratory by: [signature]	Company: TASAV	Date/Time: 8-6-14 9:26 5.4/3.2

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

Airbill # 8060 6215 1550

TestAmerica Savannah
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☑ RCRA ☐ Other:

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Jennifer Schwent	Office Contact: Elizabeth Kunkel	Date: 8/5/14	COC No:
URS Corporation	Email: jennifer.schwent@urs.com	Site Contact: Melissa Mansker		Job No. 21562650.00012
1001 Highlands Plaza Drive West - Suite 300	Tel/Fax: (314) 743-4227 / (314) 429-0462	Lab Contact: Kathy Smith	Carrier: FedEx	2 of 2 COCs
Saint Louis, MO 63110	Analysis Turnaround Time			Samplers:
(314) 429-0100 Phone	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
(314) 429-0462 FAX	TAT if different from Below _____	Preservation Codes		Walk-in Client:
Project	☑ 2 weeks	MeOH - Methanol HCl - Hydrochloric acid		Lab Sampling:
Project Name: INEOS Phase II RFI	☐ 1 week	DI H2O - DI Water H2SO4 - Sulfuric acid		
Site: 356 Three Rivers Parkway, Addyston, OH 45001	☐ 2 days	HNO3 - Nitric Acid		SDG No.
Project #: 60012513	☐ 1 day			

Sample Identification	SAMPLING Date	SAMPLING Time	Sample Type (C=Comp, G=Grab)	Matrix	PRESERVATIVE NONE	MeOH	DI H2O	HNO3	HCl	H2SO4	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Lit_5VOCs by 8270D	Metals by 6020A/Mercury by 7471B	Total Phosphorus by 365.4	Arsenic by 6020A (SWMU-8 ONLY)	Cation Exchange Capacity	Sample Specific Notes.
SB-003-06-10-0	8/5/14	1615	G	Soil	2						2	N	N	—	—				

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

*Level 4 Data Package
*Please include "J" values on Reports
*Please provide sample receipt upon login

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temp. (°C): Obs'd: _____ Corr'd: _____	Therm ID No.: _____

Relinquished by:	Company: URS Corporation	Date/Time: 8/5/14 1830	Received by	Company: FedEx	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TASAV	Date/Time: 8-6-14 9:26

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

5.4/3.2

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Regulatory Program: ☐ DW ☐ NPDES ☒ RCRA ☐ Other:

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Jennifer Schwent	Office Contact: Elizabeth Kunkel	Date: 8/5/14	COC No:
URS Corporation	Email: jennifer.schwent@urs.com	Site Contact: Melissa Mansker		Job No. 21563656.00012
1001 Highlands Plaza Drive West - Suite 300	Tel/Fax: (314) 743-4227 / (314) 429-0462	Lab Contact: Kathy Smith	Carrier: FedEx	1 of 3 COCs
Saint Louis, MO 63110	Analysis Turnaround Time			Samplers:
(314) 429-0100 Phone	☐ CALENDAR DAYS ☒ WORKING DAYS			For Lab Use Only:
(314) 429-0462 FAX	TAT if different from Below _____	Preservation Codes		Walk-in Client:
Project	☒ 2 weeks	MeOH - Methanol HCl - Hydrochloric acid		Lab Sampling:
Project Name: INEOS Phase II RFI	☐ 1 week	DI H2O - DI Water H2SO4 -Sulfuric acid		
Site: 356 Three Rivers Parkway, Addyston, OH 45001	☐ 2 days	HNO3 - Nitric Acid		SDG No.:
Project #: 66012613	☐ 1 day			

Sample Identification	SAMPLING Date	SAMPLING Time	Sample Type (C=Comp, G=Grab)	Matrix	PRESERVATIVE NONE	MeOH	DI H2O	HNO3	HCl	H2SO4	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	VOCs by 8260B	TOC by Lloyd Kahn	Sample Specific Notes:
SB-002-14-8	8-5-14	0915	G	SL	1	1	2				4			X		
SB-002-14-8-MS		0915	G	SL	1	1	2				4			X		
SB-002-14-8-MSD		0915	G	SL	1	1	2				4			X		
SB-002-14-49		1000	G	SL	2	1	2				5			X	X	
SB-004-18-8		1130	G	SL	1	1	2				4			X		
SB-004-18-12		1140	G	SL	1	1	2				4			X		
SB-004-18-22		1200	G	SL	2	1	2				5			X		
SB-004-13-8		1420	G	SL	1	1	2				4			X		
SB-004-13-25		1435	G	SL	1	1	2				4			X		
SB-004-13-29		1455	G	SL	2	1	2				5			X	X	
SB-003-06-10		1545	G	SL	1	1	2				4			X		
SB-003-06-10-D	↓	1615	G	SL	1	1	2				4			X		

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:
*Level 4 Data Package
*Please include "J" values on Reports
*Please provide sample receipt upon login

680 - 103958

8.6/3.5 oc
0.8/3.7 oc
0.3/2.2°
Fed Ex #5

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: #5

Relinquished by:	Company: URS Corporation	Date/Time: 8/5/14 1830	Received by: Fed Ex	Company: FedEx	Date/Time:
Relinquished by: Fed Ex	Company: Fed Ex	Date/Time: 8/6/14 900	Received by:	Company: TA EDI	Date/Time: 8/6/14 900
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

Airbill # 8063 1851 4397

TestAmerica Savannah
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☐ NPDES ☑ RCRA ☐ Other

Client Contact	Project Manager: Jennifer Schwent	Office Contact: Elizabeth Kunkel	Date: 8/5/14	COC No:
URS Corporation	Email: jennifer.schwent@urs.com	Site Contact: Melissa Manske		Job No. 21563650.00012
1001 Highlands Plaza Drive West - Suite 300	Tel/Fax: (314) 743-4227 / (314) 429-0462	Lab Contact: Kathy Smith	Carrier: FedEx	2 of 3 COCs
Saint Louis, MO 63110	Analysis Turnaround Time			Samplers:
(314) 429-0100 Phone	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
(314) 429-0462 FAX	TAT if different from Below:			Walk-in Client:
Project	☑ 2 weeks	Preservation Codes		Lab Sampling:
Project Name: INEOS Phase II RFI	☐ 1 week	MeOH - Methanol HCl - Hydrochloric acid		
Site: 358 Three Rivers Parkway, Addyston, OH 45001	☐ 2 days	DI H2O - DI Water H2SO4 -Sulfuric acid		SDG No.:
Project #: 60012613	☐ 1 day	HNO3 - Nitric Acid		

Sample Identification	SAMPLING Date	SAMPLING Time	Sample Type (C=Comp, G=Grab)	Matrix	PRESERVATIVE NONE	MeOH	DI H2O	HNO3	HCl	H2SO4	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	VOCs by 8260B	TOC by Lloyd Kahn	Sample Specific Notes:
SB-Rock-27-10	8/5/14	0822	G	Soil	1	1	2				4	N		4		
SB-Rock-27-10-D	8/5/14	0822	G	Soil	1	1	2				4	N		4		
SB-Rock-27-14	8/5/14	0829	G	Soil	1	1	2				4	N		4		
SB-Rock-27-18	8/5/14	0837	G	Soil	2	1	2				5	N		4	1	
SB-Rock-24-10-EB	8/5/14	1105	G	Aq	3				3		6	N		6		
SB-Rock-24-10	8/5/14	1105	G	Soil	1	1	2				4	N		4		
SB-Rock-24-22	8/5/14	1113	G	Soil	2	1	2				5	N		4	1	
SB-Rock-26-10	8/5/14	1319	G	Soil	1	1	2				4	N		4		
SB-Rock-26-18	8/5/14	1355	G	Soil	1	1	2				4	N		4		
SB-Rock-26-18-D	8/5/14	1355	G	Soil	1	1	2				4	N		4		
SB-Rock-26-22	8/5/14	1358	G	Soil	2	1	2				5	N		4	1	
SB-Rock-29-10	8/5/14	1548	G	Soil	1	1 [2nd]	2				4	N		4		

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

*Level 4 Data Package
*Please include "J" values on Reports
*Please provide sample receipt upon login

680-103458

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

Relinquished by:	Company: URS Corporation	Date/Time: 8/5/14 1830	Received by: FedEx	Company: FedEx	Date/Time:
Relinquished by: FedEx	Company: FedEx	Date/Time: 8/6/14 900	Received by:	Company: TAEDL	Date/Time: 8/6/14 900
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Savannah
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Regulatory Program: ☐ DW ☐ NPDES ☑ RCRA ☐ Other

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Jennifer Schwent	Office Contact: Elizabeth Kunkel	Date: 8/5/14	COC No:
URS Corporation	Email: jennifer.schwent@urs.com	Site Contact: Melissa Mansker		Job No. 21563650.00912
1001 Highlands Plaza Drive West - Suite 300	Tel/Fax: (314) 743-4227 / (314) 429-0462	Lab Contact: Kathy Smith	Carrier: FedEx	2 of 3 COCs
Saint Louis, MO 63110	Analysis Turnaround Time			Samplers:
(314) 429-0100 Phone	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
(314) 429-0462 FAX	TAT if different from Below _____	Preservation Codes		Walk-in Client:
Project	☑ 2 weeks	MeOH - Methanol HCl - Hydrochloric acid		Lab Sampling:
Project Name: INEOS Phase II RFI	☐ 1 week	DI H2O - DI Water H2SO4 - Sulfuric acid		
Site: 356 Three Rivers Parkway, Addyston, OH 45001	☐ 2 days	HNO3 - Nitric Acid		SDG No.:
Project #: 60612613	☐ 1 day			

Sample Identification	SAMPLING Date	SAMPLING Time	Sample Type (C=Comp, G=Grab)	Matrix	PRESERVATIVE NONE	MeOH	DI H2O	HNO3	HCl	H2SO4	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y / N)	VOCs by 8260B	TOC by Lloyd Kahn	Sample Specific Notes:
SB-AOCK-29-18	8/5/14	1554	G	Soil	1	1	2				4	N		4		
SB-AOCK-29-22	8/5/14	1558	G	Soil	2	1	2				5	N		4	1	
SB-003-06-30	8/5/14	1615	G	Soil	2	1	2				5	N		4	1	
TB-080514	8/5/14	0000	—	Aq	2						2	N		2		

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

*Level 4 Data Package
*Please include "J" values on Reports
*Please provide sample receipt upon login

6 80 - 103958

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

Relinquished by:	Company: URS Corporation	Date/Time: 8/5/14 1830	Received by: FedEx	Company: FedEx	Date/Time:
Relinquished by: FedEx	Company: FedEx	Date/Time: 8/6/14 900	Received by:	Company: TAFedEx	Date/Time: 8/6/14 900
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☐ NPDES ☒ RCRA ☐ Other:

Client Contact	Project Manager: Jennifer Schwent	Office Contact: Elizabeth Kunkel	Date: 8/5/14	COC No:
URS Corporation	Email: jennifer.schwent@urs.com	Site Contact: Melissa Mansker		Job No. 21563660.00012
1001 Highlands Plaza Drive West - Suite 300	Tel/Fax: (314) 743-4227 / (314) 429-0462	Lab Contact: Kathy Smith	Carrier: FedEx	1 of 1 COCs
Saint Louis, MO 63110	Analysis Turnaround Time			Samplers:
(314) 429-0100 Phone	☐ CALENDAR DAYS ☒ WORKING DAYS			For Lab Use Only:
(314) 429-0462 FAX	TAT if different from Below _____	Preservation Codes		Walk-in Client:
Project	☒ 2 weeks	MeOH - Methanol HCl - Hydrochloric acid		Lab Sampling:
Project Name: INEOS Phase II RFI	☐ 1 week	DI H2O - DI Water H2SO4 - Sulfuric acid		SDG No.:
Site: 356 Three Rivers Parkway, Addyston, OH 45001	☐ 2 days	HNO3 - Nitric Acid		
Project #: 60012813	☐ 1 day			

Sample Identification	SAMPLING Date	SAMPLING Time	Sample Type (C=Comp, G=Grab)	Matrix	PRESERVATIVE NONE	MeOH	DI H2O	HNO3	HCl	H2SO4	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Formaldehyde by 8315A	Sample Specific Notes:
SB-004-18-8	8-5-14	1130	G	SL	1						1	N		1	
SB-004-18-12		1140	G	SL	1						1	N		1	
SB-004-18-22		1200	G	SL	1						1	N		1	
SB-004-13-8		1420	G	SL	1						1	N		1	
SB-004-13-25		1435	G	SL	1						1	N		1	
SB-004-13-29		1445	G	SL	1						1	N		1	
SB-003-06-10		1545	G	SL	1						1	N		1	
SB-003-06-10-D		1545	G	SL	1						1	N		1	
SB-003-06-30	↓	1615	G	SL	1						1	N		1	

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:
*Level 4 Data Package
*Please include "J" values on Reports
*Please provide sample receipt upon login

680 - 103958

3.7C

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

Relinquished by:	Company: URS Corporation	Date/Time: 8/5/14 1830	Received by:	Company: FedEx	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TA	Date/Time: 8/6/14 0915

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

Airbill # 8062 8325 4258