URS

January 9, 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 – 4th Quarter 2013**
Roxana, Illinois
119115002 – Madison County
Equilon Enterprises LLC d/b/a Shell Oil Products US
Log No. B-43-CA-21

Dear Mr. Nightingale:

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

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

Sincerely,

URS Corporation, on behalf of Shell Oil Products US

Wendy Pennington
Environmental Engineer

Robert B. Billman
Senior Project Manager

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

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

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RCRA FACILITY GROUNDWATER, LEACHATE AND GAS REPORTING FORM

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

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

Facility Name: Equilon Enterprises LLC dba Shell Oil Products US

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

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

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

☐ LPC-160 Forms

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

☑ Groundwater Data (without LPC-160 Forms)

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

☐ Well Construction Information

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

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

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

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

☐ Gas Monitoring Reports

☐ Other (identify)

_____

_____

REPORT

INTERIM GROUNDWATER MONITORING PROGRAM – 4TH QUARTER 2013

Roxana, Illinois

Prepared for:

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

January 2014

URS Corporation
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Project 21562850.03004

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URS Corporation (URS) is submitting this report on behalf of Shell Oil Products US (SOPUS) for the 4th Quarter 2013 (4Q13) 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

[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.

August 16, 2013, URS, on behalf of SOPUS, informed the IEPA of the determination that the 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 is currently being drafted for submittal.

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

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

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

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

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

Groundwater samples were collected and analyzed during 4Q13 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 4Q13 as part of the interim monitoring well network.

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

2.1 ADDITIONAL ACTIVITIES OR MODIFICATIONS

The following additional work activities or modifications were conducted in the 4Q13 sampling event:

- Groundwater monitoring well P-66 was resampled for volatile organic compounds (VOCs) on November 7, 2013 due to an anomalous result from the initial sample. Both sets of data are included in this report.

2.2 GROUNDWATER MONITORING WELL GAUGING AND SAMPLING

Groundwater Monitoring Well Gauging

The comprehensive groundwater monitoring well gauging event was conducted between October 1 and 4, 2013. The 4Q13 gauging activities were conducted in conjunction with the 4Q13 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 4Q13 can be found in **Table 1b**. The groundwater gauging data tables also include well-head PID results.

Low Flow Groundwater Purging and Sampling

Groundwater samples were collected from groundwater monitoring wells from October 3 through October 17, 2013. A groundwater monitoring well confirmation sample was collected from P-66 on November 7, 2013, and is discussed in **Section 3.3**.

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 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 VOC and semivolatile organic compound (SVOC) analysis.

Perched groundwater monitoring piezometers ROST-5-PZ, ROST-7-PZ, ROST-10-PZ, and ROST-21-PZ in the Village, and P-60-12S and P-60-13S in the WRR could not be sampled according to the Standard Operating Procedure (SOP), due to low volumes of water or lack of water. Groundwater monitoring well P-68, located inside the WRR, contained LNAPL and was 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 2013 (URS, 2013a), 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 4Q13 sampling event.

Decontamination

Field personnel and equipment underwent decontamination procedures to ensure the health and safety of those present, to maintain sample integrity, and to minimize cross contamination. Sampling equipment (e.g., groundwater pump) was decontaminated before and after each sample location by spraying and/or wiping down with isopropyl alcohol, then washing with LiquiNox® and water, and finishing with a distilled water rinse. Interface probes were decontaminated using isopropyl alcohol. Personnel and small equipment decontamination were performed at the sample locations.

Investigation Derived Waste

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

the Resource Conservation and Recovery Act (RCRA) and United States Department of Transportation (DOT) regulations. Expendable materials (e.g., disposable sampling equipment such as gloves and tubing) were 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^{o}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 8260B, 8260C and 8011, for SVOCs via USEPA Method 8270C, and for Polycyclic Aromatic Hydrocarbons (PAHs) via USEPA Method 8270C Low Level (LL). The 8011 method for VOCs was used in order to achieve lower reporting limits specified in the WRR RCRA Part B Permit (IEPA, 2013a) for 1,2-dibromoethane and 1,2-dibromo-3-chloropropane, and the 8270C 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 SW-846 published version for Method 8260.

The State of New York is no longer certifying for non-current versions of EPA methodology; therefore, Accutest has begun analyzing using 8260C while at the same time not eliminating use of 8260B. Quality control requirements for Method 8260C are more stringent than those for 8260B.

2.5 DATA QUALITY REVIEW AND DATA MANAGEMENT

Laboratory data were provided in electronic form and were independently reviewed and qualified by URS. One hundred percent of the data were subjected to a data quality review (Level III data review). Evaluation of the data followed procedures outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (USEPA, 2008). The laboratory assigned data qualifiers on the basis of their quality control or to indicate sample analysis information. Data qualifiers were also added by URS, as appropriate, and are included on the data table and the laboratory results in **Appendix B**. The results of the data review are discussed in **Section 3.2**.

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

The following documentation was completed and supplements the COC records:

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

This section presents the results of the 4Q13 groundwater sampling event.

3.1 GROUNDWATER MONITORING WELL GAUGING RESULTS

Comprehensive quarterly groundwater monitoring well gauging for the 4Q13 event was conducted between October 1 and 4, 2013. This groundwater monitoring well gauging was conducted in accordance with the Interim Groundwater Monitoring Program and the data can be found in **Table 1a**. Groundwater levels in most wells in the Village of Roxana have dropped approximately 1 foot or less since 3Q13. Groundwater levels in most wells in the WRR have dropped approximately 1 to 3 feet since 3Q13. Water levels, however, continue to be above the top of the screens in many of the wells gauged during the 4Q13 event. The potentiometric surface observed during the 4Q13 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 4Q13. During the 4Q13 comprehensive groundwater gauging, groundwater was encountered in ROST-7-PZ and ROST-21-PZ and was not encountered in ROST-5-PZ or ROST-10-PZ. The 4Q13 gauging results for perched groundwater monitoring wells and piezometers can be found in **Table 1a**.

During the 4Q13 groundwater monitoring well gauging event, LNAPL was detected in two groundwater monitoring wells (P-60 and P-68) that are located in the WRR and are part of the Roxana Interim Groundwater Monitoring Program **(Table 1a)**. LNAPL thicknesses in these two wells were 0.08 to 0.10 feet respectively. Of the two groundwater monitoring wells, LNAPL was observed above the top of the groundwater monitoring well screen in P-68. LNAPL was observed within the screened intervals of P-60. During the weekly and monthly gauging events throughout the 4Q13, LNAPL was detected in one groundwater monitoring well located in the WRR (P-60) and one groundwater monitoring well located in the Village of Roxana (ROST-4-PZ(D)). This routine gauging data can be found in **Table 1b**. LNAPL thickness in well P-60 was observed most weeks throughout the 4Q13 to be between 0.01 and 0.09 feet. LNAPL thickness in well ROST-4-PZ(D) was observed during two weeks of 4Q13 and was 0.01 feet.

LNAPL observed in groundwater monitoring wells located on the WRR property was removed for on-site reprocessing by P66. Removal of LNAPL, if observed, in the Village and WRR is conducted during quarterly, weekly, and monthly gauging events. **Figures 4a and 4b** illustrate the measured LNAPL thickness observed during the 4Q13 gauging event.

3.2 DATA QUALITY REVIEW RESULTS

A total of eleven sample delivery groups (SDGs) were prepared and sent to Accutest Laboratories in Marlborough, MA for the 4Q13 event. Forty-four different groundwater sample sets were prepared and analyzed for VOCs and SVOCs (including PAHs). This included 36 different investigative sample sets, 4 field duplicate sets, and 2 matrix spike/matrix spike duplicate (MS/MSD) sets. These SDGs are presented in **Appendix B**.

Trip blanks (TBs), equipment blanks (EBs), and laboratory method blanks were collectively analyzed to evaluate for the existence and magnitude of any contamination resulting from field and laboratory activities. Four EB sets were collected for this quarter. A TB set was included in every cooler which contained samples for VOC analysis. A total of eleven TB sets were analyzed for groundwater VOCs. Compounds qualified by URS are specified in the data reviews presented in **Appendix B**.

Based on laboratory control sample/laboratory control sample duplicate (LCS/LCSD), MS/MSD, surrogate, holding time, and field duplicate criteria, the groundwater results reported were accepted for their intended use. The initially reported sample results for P66-ROX-101013 (SDG MC25237) were outside of historical range and well P-66 was resampled on November 7, 2013. Subsequently, the laboratory found a mistake in the initial sample results reported. The laboratory corrected sample P66-ROX-101013 results and the resampling results (P66-ROX-110713) were both in line with the historic analytical data for well P-66. 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 4Q13 sampling event. Italic font denotes constituent detected for the first time.

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

SVOCs	
Acenaphthene	Fluorene
Acenaphthylene	1-Methylnaphthalene
Anthracene	2-Methylnaphthalene
Benzo(a)anthracene	2-Methylphenol (o-Cresol)
bis(2-Ethylhexyl)phthalate	3&4-Methylphenol (m&p-Cresol)
Dibenzofuran	Phenanthrene
2,4-Dimethylphenol	Phenol
2,6-Dinitrotoluene	Pyrene
Fluoranthene	

The VOC trans-1,3-dichloropropene, and the SVOC 2,6-dinitrotoluene, were detected in one sample each in this event but were not detected in past events. The analytical detections were compared to the concentration limits as provided in Section IV E of the Permit for the WRB Refining LP Wood River Refinery[5]. These concentration limits include the recently updated Groundwater Quality Standards for Class I: Potable Resource Groundwater (35 IAC 620, Subpart D), the IEPA Tiered Approach to Corrective Action Objectives (TACO) Tier 1 Groundwater Remediation Objectives for the Groundwater Component of the Groundwater

[4] Beginning in 4Q12, naphthalene was analyzed via 8260 VOC, and prior historic results were reported by PAH analysis.
[5] IEPA requested that the Interim Groundwater Program be consistent with the RCRA Part B Permit.

Ingestion Route (35 IAC 742 Appendix B, Table E), and the IEPA Toxicity Assessment Unit (Chemicals not in TACO, Tier 1 Tables). The results of this comparison are presented in **Table 3**. IEPA published screening values were not available for the following detected VOCs: sec-butylbenzene, tert-butylbenzene, chloroethane, chloromethane, cymene (p-isopropyltoluene), 4-methyl-2-pentanone (methyl isobutyl ketone), and 1,2,4-trimethylbenzene.

Laboratory analytical results for the following VOCs exceeded their respective groundwater screening criteria in one or more samples this event: benzene, ethylbenzene, MTBE, naphthalene, toluene, 1,3,5-trimethylbenzene, and xylenes (total). The laboratory analytical results for the following SVOCs exceeded their respective groundwater screening criteria in one or more samples this event: bis(2-ethylhexyl)phthalate, 2,6-dinitrotoluene, 2-methylnaphthalene, and phenol. The exceedance of the 2,6-dinitrotoluene screening criteria is anomalous with the historic data. The analytical results from these groundwater samples are on **Table 3**. **Figure 5** presents concentrations of analytes that exceeded the indicated screening criteria for 4Q13.

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 4Q13 Roxana Interim Groundwater Monitoring Program and the following conclusions are based on the data and information collected as part of this program.

- During 4Q13, groundwater level data indicates groundwater flow from the Investigation Area is moving toward groundwater depression wells at the WRR. Groundwater levels observed in the Village of Roxana were approximately 1 foot lower than in the previous quarter. Groundwater levels observed in the WRR were approximately 1 to 3 feet lower than in the previous quarter.
- Perched groundwater was evaluated at groundwater monitoring wells P-60-12S, P-60-13S, ROST-5-PZ, ROST-7-PZ, ROST-10-PZ, and ROST-21-PZ. During the evaluation, groundwater sampling could not be performed because slow recharge or lack of water prevented sampling per the SOP, or the perched groundwater monitoring well was dry.
- The analytical results from 4Q13 are generally similar to the prior quarter.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
MW-01											
1Q11	442.86	1/13/2011	NE	37.58	NA	NA	NA	405.28	399.45 - 384.45 (43.41 - 58.41)	NA	*
2Q11		4/25/2011	NE	38.38	NA	NA	NA	404.48		NA	*
3Q11		7/5/2011	NE	35.77	NA	NA	NA	407.09		NA	*
4Q11		10/5/2011	NE	35.48	NA	NA	NA	407.38		NA	*
1Q12	442.65	1/3/2012	NE	37.65	NA	NA	NA	405.00	393.85 - 383.85 (48.80 - 58.80)	0.0	*1" Piezometer replaced with a 2" monitoring well
2Q12		4/2/2012	NE	38.85	NA	NA	NA	403.80		0.0	*
3Q12		7/2/2012	NE	39.12	NA	NA	NA	403.53		0.0	*
4Q12		10/1/2012	NE	40.92	NA	NA	NA	401.73		0.0	*
1Q13		1/3/2013	NE	41.95	NA	NA	NA	400.70		0.0	*
2Q13		4/1/2013	NE	42.63	NA	NA	NA	400.02		54.0	*
3Q13		7/1/2013	NE	39.80	NA	NA	NA	402.85		8.7	*
4Q13		10/1/2013	NE	40.23	NA	NA	NA	402.42		0.0	*
MW-02											
1Q11	443.93	1/13/2011	NE	38.67	NA	NA	NA	405.26	396.74 - 381.74 (47.19 - 62.19)	NA	*
2Q11		4/25/2011	NE	39.61	NA	NA	NA	404.32		NA	*
3Q11		7/5/2011	NE	37.04	NA	NA	NA	406.89		NA	*
4Q11		10/5/2011	NE	36.65	NA	NA	NA	407.28		NA	*
1Q12	443.77	1/3/2012	NE	38.88	NA	NA	NA	404.89	393.90 - 383.90 (49.87 - 59.87)	0.0	*1" Piezometer replaced with a 2" monitoring well
2Q12		4/2/2012	NE	40.04	NA	NA	NA	403.73		334.0	*
3Q12		7/2/2012	NE	40.32	NA	NA	NA	403.45		182.0	*
4Q12		10/1/2012	NE	42.10	NA	NA	NA	401.67		13.0	*
1Q13		1/3/2013	NE	43.10	NA	NA	NA	400.67		54.7	*
2Q13		4/1/2013	NE	43.81	NA	NA	NA	399.96		232.0	*
3Q13		7/1/2013	NE	41.15	NA	NA	NA	402.62		208.0	*
4Q13		10/1/2013	NE	41.56	NA	NA	NA	402.21		109.7	*
MW-03											
1Q11	430.36	1/13/2011	NE	24.92	NA	NA	NA	405.44	399.38 - 384.38 (30.98 - 45.98)	NA	*
2Q11		4/25/2011	NE	25.42	NA	NA	NA	404.94		NA	*
3Q11		7/5/2011	NE	22.72	NA	NA	NA	407.64		NA	*
4Q11		10/5/2011	NE	22.76	NA	NA	NA	407.60		NA	*
1Q12	430.08	1/3/2012	NE	24.84	NA	NA	NA	405.24	395.41 - 385.41 (34.67 - 44.67)	0.0	*1" Piezometer replaced with a 2" monitoring well
2Q12		4/2/2012	NE	26.04	NA	NA	NA	404.04		0.0	*
3Q12		7/2/2012	NE	26.30	NA	NA	NA	403.78		0.0	*
4Q12		10/1/2012	NE	28.13	NA	NA	NA	401.95		0.0	*
1Q13		1/3/2013	NE	29.22	NA	NA	NA	400.86		0.0	*
2Q13		4/1/2013	NE	29.88	NA	NA	NA	400.20		3.5	*
3Q13		7/1/2013	NE	26.65	NA	NA	NA	403.43		0.4	*
4Q13		10/2/2013	NE	27.21	NA	NA	NA	402.87		0.0	*
MW-04											
1Q11	441.58	1/13/2011	NE	36.04	NA	NA	NA	405.54	398.95 - 383.95 (42.63 - 57.63)	NA	*
2Q11		4/25/2011	NE	36.74	NA	NA	NA	404.84		NA	*
3Q11		7/5/2011	NE	34.15	NA	NA	NA	407.43		NA	*
4Q11		10/5/2011	NE	33.99	NA	NA	NA	407.59		NA	*
1Q12	441.14	1/3/2012	NE	35.97	NA	NA	NA	405.17	395.08 - 385.08 (46.06 - 56.06)	0.0	*1" Piezometer replaced with a 2" monitoring well
2Q12		4/2/2012	NE	37.11	NA	NA	NA	404.03		157.0	*
3Q12		7/2/2012	NE	37.43	NA	NA	NA	403.71		24.0	*
4Q12		10/1/2012	NE	39.27	NA	NA	NA	401.87		48.6	*
1Q13		1/3/2013	NE	40.27	NA	NA	NA	400.87		35.3	*
2Q13		4/1/2013	NE	41.00	NA	NA	NA	400.14		104.0	*
3Q13		7/1/2013	NE	38.07	NA	NA	NA	403.07		131.6	*
4Q13		10/2/2013	NE	38.49	NA	NA	NA	402.65		39.4	*
MW-05											
1Q11	429.73	1/13/2011	NE	24.15	NA	NA	NA	405.58	398.60 - 383.60 (31.13 - 46.13)	NA	*
2Q11		4/25/2011	NE	24.65	NA	NA	NA	405.08		NA	*
3Q11		7/5/2011	NE	22.00	NA	NA	NA	407.73		NA	*
4Q11		10/5/2011	NE	22.06	NA	NA	NA	407.67		NA	*
1Q12	429.80	1/3/2012	NE	24.45	NA	NA	NA	405.35	395.83 - 385.83 (33.97 - 43.97)	0.0	*1" Piezometer replaced with a 2" monitoring well
2Q12		4/2/2012	NE	25.65	NA	NA	NA	404.15		0.0	*
3Q12		7/2/2012	NE	25.91	NA	NA	NA	403.89		0.0	*
4Q12		10/1/2012	NE	27.80	NA	NA	NA	402.00		0.0	*
1Q13		1/3/2013	NE	28.86	NA	NA	NA	400.94		0.0	*
2Q13		4/1/2013	NE	29.53	NA	NA	NA	400.27		0.1	*
3Q13		7/1/2013	NE	26.37	NA	NA	NA	403.43		1.0	*
4Q13		10/2/2013	NE	26.85	NA	NA	NA	402.95		0.0	*
MW-06A											
1Q11	432.42	1/13/2011	NE	26.36	NA	NA	NA	406.06	400.44 - 385.44 (31.98 - 46.98)	NA	*
2Q11		4/25/2011	NE	26.78	NA	NA	NA	405.64		NA	*
3Q11		7/5/2011	NE	24.21	NA	NA	NA	408.21		NA	*
4Q11		10/5/2011	NE	24.44	NA	NA	NA	407.98		NA	*
1Q12	432.14	1/3/2012	NE	26.34	NA	NA	NA	405.80	397.31 - 387.31 (34.83 - 44.83)	0.0	*1" Piezometer replaced with a 2" monitoring well
2Q12		4/2/2012	NE	27.57	NA	NA	NA	404.57		0.0	*
3Q12		7/2/2012	NE	27.88	NA	NA	NA	404.26		0.0	*
4Q12		10/1/2012	NE	28.81	NA	NA	NA	403.33		0.0	*
1Q13		1/3/2013	NE	30.80	NA	NA	NA	401.34		0.0	*
2Q13		4/1/2013	NE	31.57	NA	NA	NA	400.57		0.1	*
3Q13		7/1/2013	NE	28.48	NA	NA	NA	403.66		0.6	*
4Q13		10/2/2013	NE	28.75	NA	NA	NA	403.39		0.0	*

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TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
MW-06B											
1Q11	432.29	1/13/2011	NE	26.21	NA	NA	NA	406.08	368.24 - 363.24 (64.05 - 69.05)	NA	*
2Q11		4/25/2011	NE	26.65	NA	NA	NA	405.64		NA	*
3Q11		7/5/2011	NE	24.08	NA	NA	NA	408.21		NA	*
4Q11		10/5/2011	NE	24.28	NA	NA	NA	408.01		NA	*
1Q12		1/3/2012	NE	26.40	NA	NA	NA	405.89		0.0	*
2Q12		4/2/2012	NE	27.61	NA	NA	NA	404.68		0.0	*
3Q12		7/2/2012	NE	27.92	NA	NA	NA	404.37		0.0	*
4Q12		10/1/2012	NE	29.86	NA	NA	NA	402.43		0.0	*
1Q13		1/3/2013	NE	30.87	NA	NA	NA	401.42		0.0	*
2Q13		4/1/2013	NE	31.63	NA	NA	NA	400.66		2.7	*
3Q13		7/1/2013	NE	28.53	NA	NA	NA	403.76		0.0	*
4Q13		10/2/2013	NE	28.80	NA	NA	NA	403.49		0.5	*
MW-06C											
1Q11	432.11	1/13/2011	NE	25.97	NA	NA	NA	406.14	347.16 - 342.16 (84.95 - 89.95)	NA	*
2Q11		4/25/2011	NE	26.73	NA	NA	NA	405.38		NA	*
3Q11		7/5/2011	NE	23.80	NA	NA	NA	408.31		NA	*
4Q11		10/5/2011	NE	24.03	NA	NA	NA	408.08		NA	*
1Q12		1/3/2012	NE	26.17	NA	NA	NA	405.94		0.0	*
2Q12		4/2/2012	NE	27.40	NA	NA	NA	404.71		0.0	*
3Q12		7/2/2012	NE	27.71	NA	NA	NA	404.40		0.0	*
4Q12		10/1/2012	NE	29.70	NA	NA	NA	402.41		0.0	*
1Q13		1/3/2013	NE	30.65	NA	NA	NA	401.46		0.0	*
2Q13		4/1/2013	NE	31.40	NA	NA	NA	400.71		1.1	*
3Q13		7/1/2013	NE	28.32	NA	NA	NA	403.79		0.2	*
4Q13		10/2/2013	NE	28.58	NA	NA	NA	403.53		0.0	*
MW-06D											
1Q11	431.99	1/13/2011	NE	25.87	NA	NA	NA	406.12	327.27 - 322.27 (104.72 - 109.72)	NA	*
2Q11		4/25/2011	NE	26.30	NA	NA	NA	405.69		NA	*
3Q11		7/5/2011	NE	23.67	NA	NA	NA	408.32		NA	*
4Q11		10/5/2011	NE	23.95	NA	NA	NA	408.04		NA	*
1Q12		1/3/2012	NE	26.05	NA	NA	NA	405.94		0.0	*
2Q12		4/2/2012	NE	27.46	NA	NA	NA	404.53		0.0	*
3Q12		7/2/2012	NE	27.58	NA	NA	NA	404.41		0.0	*
4Q12		10/1/2012	NE	29.51	NA	NA	NA	402.48		0.0	*
1Q13		1/3/2013	NE	30.51	NA	NA	NA	401.48		0.0	*
2Q13		4/1/2013	NE	31.26	NA	NA	NA	400.73		4.2	*
3Q13		7/1/2013	NE	28.17	NA	NA	NA	403.82		0.7	*
4Q13		10/2/2013	NE	28.45	NA	NA	NA	403.54		0.0	*
MW-07											
1Q11	443.10	1/13/2011	NE	37.52	NA	NA	NA	405.58	400.18 - 390.18 (42.92 - 52.92)	NA	*
2Q11		4/25/2011	NE	38.18	NA	NA	NA	404.92		NA	*
3Q11		7/5/2011	NE	35.65	NA	NA	NA	407.45		NA	*
4Q11		10/5/2011	NE	25.52	NA	NA	NA	417.58		NA	*
1Q12		1/3/2012	NE	37.79	NA	NA	NA	405.31		20.0	*
2Q12		4/2/2012	NE	38.91	NA	NA	NA	404.19		0.0	*
3Q12		7/2/2012	NE	39.23	NA	NA	NA	403.87		5.6	*
4Q12		10/1/2012	NE	41.10	NA	NA	NA	402.00		0.0	*
1Q13		1/3/2013	NE	42.10	NA	NA	NA	401.00		0.0	*
2Q13		4/1/2013	NE	42.90	NA	NA	NA	400.20		0.0	*
3Q13		7/1/2013	NE	40.08	NA	NA	NA	403.02		357.0	*
4Q13		10/2/2013	NE	40.33	NA	NA	NA	402.77		OVR	*
MW-08											
1Q11	434.11	1/13/2011	NE	28.59	NA	NA	NA	405.52	400.51 - 390.51 (33.60 - 43.60)	NA	*
2Q11		4/25/2011	NE	29.15	NA	NA	NA	404.96		NA	*
3Q11		7/5/2011	NE	26.55	NA	NA	NA	407.56		NA	*
4Q11		10/5/2011	NE	26.57	NA	NA	NA	407.54		NA	*
1Q12		1/3/2012	NE	28.84	NA	NA	NA	405.27		35.0	*
2Q12		4/2/2012	NE	30.01	NA	NA	NA	404.10		34.0	*
3Q12		7/2/2012	NE	30.29	NA	NA	NA	403.82		9.2	*
4Q12		10/1/2012	NE	32.17	NA	NA	NA	401.94		0.0	*
1Q13		1/3/2013	NE	33.21	NA	NA	NA	400.90		11.2	*
2Q13		4/1/2013	NE	33.94	NA	NA	NA	400.17		0.2	
3Q13		7/1/2013	NE	30.90	NA	NA	NA	403.21		883.0	*
4Q13		10/2/2013	NE	31.26	NA	NA	NA	402.85		684.6	*
MW-09											
1Q11	445.20	1/13/2011	NE	39.62	NA	NA	NA	405.58	398.75 - 388.75 (46.45 - 56.45)	NA	*
2Q11		4/25/2011	NM	NM	NA	NA	NA	NA		NM	
3Q11		7/5/2011	NE	38.06	NA	NA	NA	407.14		NA	*
4Q11		10/5/2011	NE	37.56	NA	NA	NA	407.64		NA	*
1Q12		1/3/2012	NE	39.50	NA	NA	NA	405.70		0.0	*
2Q12		4/2/2012	NE	40.77	NA	NA	NA	404.43		0.0	*
3Q12		7/2/2012	NE	40.07	NA	NA	NA	405.13		0.0	*
4Q12		10/1/2012	NE	42.75	NA	NA	NA	402.45		0.0	*
1Q13		1/2/2013	NE	43.92	NA	NA	NA	401.28		0.0	*
2Q13		4/1/2013	NE	44.76	NA	NA	NA	400.44		0.8	*
3Q13		7/1/2013	NE	42.35	NA	NA	NA	402.85		0.8	*
4Q13		10/1/2013	NE	42.29	NA	NA	NA	402.91		0.0	*

TABLE 1a
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WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
MW-10											
1Q11	445.03	1/13/2011	NE	39.40	NA	NA	NA	405.63	400.60 - 390.60 (44.43 - 54.43)	NA	*
2Q11		4/25/2011	NE	40.26	NA	NA	NA	404.77		NA	*
3Q11		7/5/2011	NE	38.01	NA	NA	NA	407.02		NA	*
4Q11		10/5/2011	NE	37.47	NA	NA	NA	407.56		NA	*
1Q12		1/3/2012	NE	39.39	NA	NA	NA	405.64		0.0	*
2Q12		4/2/2012	NE	40.58	NA	NA	NA	404.45		16.0	*
3Q12		7/2/2012	NE	40.92	NA	NA	NA	404.11		0.0	*
4Q12		10/1/2012	NE	42.69	NA	NA	NA	402.34		0.0	*
1Q13		1/2/2013	NE	43.81	NA	NA	NA	401.22		0.0	*
2Q13		4/1/2013	NE	44.72	NA	NA	NA	400.31		0.0	
3Q13		7/1/2013	NE	42.55	NA	NA	NA	402.48		13.4	*
4Q13		10/1/2013	NE	42.45	NA	NA	NA	402.58		0.0	*
MW-11											
1Q11	442.33	1/13/2011	NE	37.15	NA	NA	NA	405.18	400.67 - 390.67 (41.66 - 51.66)	NA	*
2Q11		4/25/2011	NE	38.00	NA	NA	NA	404.33		NA	*
3Q11		7/5/2011	NE	35.46	NA	NA	NA	406.87		NA	*
4Q11		10/5/2011	NE	34.07	NA	NA	NA	408.26		NA	*
1Q12		1/3/2012	NE	37.21	NA	NA	NA	405.12		0.0	*
2Q12		4/2/2012	NE	38.44	NA	NA	NA	403.89		0.0	*
3Q12		7/2/2012	NE	38.68	NA	NA	NA	403.65		0.0	*
4Q12		10/1/2012	NE	40.42	NA	NA	NA	401.91		0.0	*
1Q13		1/2/2013	NE	41.49	NA	NA	NA	400.84		0.0	*
2Q13		4/1/2013	NE	42.18	NA	NA	NA	400.15		2.3	
3Q13		7/1/2013	NE	39.49	NA	NA	NA	402.84		0.3	*
4Q13		10/1/2013	NE	39.84	NA	NA	NA	402.49		0.0	*
MW-12											
1Q11	442.60	1/13/2011	NE	37.42	NA	NA	NA	405.18	400.68 - 390.68 (41.92 - 51.92)	NA	*
2Q11		4/25/2011	NE	38.20	NA	NA	NA	404.40		NA	*
3Q11		7/5/2011	NE	35.55	NA	NA	NA	407.05		NA	*
4Q11		10/5/2011	NE	35.20	NA	NA	NA	407.40		NA	*
1Q12		1/3/2012	NE	37.57	NA	NA	NA	405.03		0.0	*
2Q12		4/2/2012	NE	38.75	NA	NA	NA	403.85		0.0	*
3Q12		7/2/2012	NE	39.01	NA	NA	NA	403.59		0.0	*
4Q12		10/1/2012	NE	40.78	NA	NA	NA	401.82		0.0	*
1Q13		1/3/2013	NE	41.86	NA	NA	NA	400.74		0.0	*
2Q13		4/1/2013	NE	42.46	NA	NA	NA	400.14		0.0	
3Q13		7/1/2013	NE	39.57	NA	NA	NA	403.03		1.2	*
4Q13		10/1/2013	NE	40.05	NA	NA	NA	402.55		0.0	*
MW-13											
1Q11	430.27	1/13/2011	NE	24.28	NA	NA	NA	405.99	404.70 - 394.70 (25.57 - 35.57)	NA	*
2Q11		4/25/2011	NE	24.47	NA	NA	NA	405.80		NA	*
3Q11		7/5/2011	NE	21.67	NA	NA	NA	408.60		NA	*
4Q11		10/6/2011	NE	21.20	NA	NA	NA	409.07		NA	*
1Q12		1/3/2012	NE	24.35	NA	NA	NA	405.92		0.0	*
2Q12		4/2/2012	NE	25.48	NA	NA	NA	404.79		0.0	*
3Q12		7/3/2012	NE	25.95	NA	NA	NA	404.32		0.0	
4Q12		10/2/2012	NE	27.99	NA	NA	NA	402.28		0.0	
1Q13		1/7/2013	NE	29.07	NA	NA	NA	401.20		24.0	
2Q13		4/2/2013	NE	29.62	NA	NA	NA	400.65		0.0	
3Q13		7/2/2013	NE	25.97	NA	NA	NA	404.30		2.9	
4Q13		10/2/2013	NE	26.69	NA	NA	NA	403.58		54.8	
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	*
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	
MW-17											
1Q13	441.57	2/11/2013	NE	41.75	NA	NA	NA	399.82	407.28 - 392.28 (34.29 - 49.29)	0.2	Installed during 4Q12
2Q13		4/1/2013	NE	41.85	NA	NA	NA	399.72		0.5	
3Q13		7/1/2013	NE	39.42	NA	NA	NA	402.15		0.0	
4Q13		10/1/2013	NE	40.18	NA	NA	NA	401.39		0.0	
MW-18											
1Q13	442.04	2/11/2013	NE	42.25	NA	NA	NA	399.79	407.12 - 392.12 (34.92 - 49.92)	0.0	Installed during 4Q12
2Q13		4/1/2013	NE	42.38	NA	NA	NA	399.66		0.0	
3Q13		7/1/2013	NE	39.89	NA	NA	NA	402.15		0.0	
4Q13		10/1/2013	NE	40.85	NA	NA	NA	401.19		0.0	
MW-19											
1Q13	442.77	2/11/2013	NE	42.88	NA	NA	NA	399.89	406.43 - 391.43 (36.34 - 51.34)	0.9	Installed during 4Q12
2Q13		4/1/2013	NE	43.04	NA	NA	NA	399.73		10.3	
3Q13		7/1/2013	NE	40.50	NA	NA	NA	402.27		0.0	
4Q13		10/2/2013	NE	41.24	NA	NA	NA	401.53		0.0	
MW-20											
1Q13	443.67	2/11/2013	NE	43.66	NA	NA	NA	400.01	407.79 - 392.79 (35.88 - 50.88)	0.0	Installed during 4Q12
2Q13		4/1/2013	NE	43.89	NA	NA	NA	399.78		0.1	
3Q13		7/1/2013	NE	41.23	NA	NA	NA	402.44		0.0	
4Q13		10/1/2013	NE	41.77	NA	NA	NA	401.90		0.0	

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TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
MW-21											
1Q13	443.81	2/11/2013	NE	43.53	NA	NA	NA	400.28	408.80 - 393.80 (35.01 - 50.01)	0.1	Installed during 4Q12
2Q13		4/1/2013	NE	43.79	NA	NA	NA	400.02		0.3	
3Q13		7/1/2013	NE	41.05	NA	NA	NA	402.76		0.0	
4Q13		10/2/2013	NE	41.40	NA	NA	NA	402.41		0.0	
MW-22											
1Q13	442.16	1/23/2013	NE	41.80	NA	NA	NA	400.36	404.28 - 394.28 (37.88 - 47.88)	2.0	Installed during 4Q12
2Q13		4/1/2013	NE	42.31	NA	NA	NA	399.85		2.8	
3Q13		7/5/2013	NE	39.60	NA	NA	NA	402.56		0.6	
4Q13		10/1/2013	NE	40.23	NA	NA	NA	401.93		0.0	
MW-24											
2Q13	443.42	4/1/2013	NE	43.44	NA	NA	NA	399.98	404.53 - 394.53 (38.89 - 48.89)	0.5	Installed during 1Q13
3Q13		7/3/2013	NE	40.59	NA	NA	NA	402.83		0.0	
4Q13		10/1/2013	NE	41.08	NA	NA	NA	402.34		134.4	
P-01											
1Q11	442.56	1/1/2011	NE	28.52	NA	NA	NA	414.04	380.61 - 375.61 (61.95 - 66.95)	NA	*
2Q11		4/1/2011	NE	27.30	NA	NA	NA	415.26		NA	*
3Q11		7/5/2011	NE	25.51	NA	NA	NA	417.05		NA	*
4Q11		10/6/2011	NE	28.15	NA	NA	NA	414.41		NA	*
1Q12		1/3/2012	NE	28.93	NA	NA	NA	413.63		NA	*
2Q12		4/2/2012	NE	29.38	NA	NA	NA	413.18		0.0	*
3Q12		7/2/2012	NE	30.60	NA	NA	NA	411.96		0.0	*
4Q12		10/1/2012	NE	32.35	NA	NA	NA	410.21		0.0	*
1Q13		1/3/2013	NE	33.96	NA	NA	NA	408.60		0.0	*
2Q13		4/1/2013	NE	33.68	NA	NA	NA	408.88		0.4	*
3Q13		7/3/2013	NE	30.60	NA	NA	NA	411.96		0.0	*
4Q13		10/1/2013	NE	33.13	NA	NA	NA	409.43		0.6	*
P-4U											
1Q11	442.50	1/1/2011	NE	29.81	NA	NA	NA	412.69	361.35 - 359.35 (81.15 - 83.15)	NA	*
2Q11		4/1/2011	NE	29.10	NA	NA	NA	413.40		NA	*
3Q11		7/5/2011	NE	27.02	NA	NA	NA	415.48		NA	*
4Q11		10/6/2011	NE	29.17	NA	NA	NA	413.33		NA	*
1Q12		1/3/2012	NE	40.32	NA	NA	NA	402.18		NA	*
2Q12		4/2/2012	NE	30.80	NA	NA	NA	411.70		0.0	*
3Q12		7/2/2012	NE	31.70	NA	NA	NA	410.80		0.0	*
4Q12		10/1/2012	NE	33.65	NA	NA	NA	408.85		0.5	*
1Q13		1/3/2013	NE	35.10	NA	NA	NA	407.40		0.0	*
2Q13		4/1/2013	NE	35.95	NA	NA	NA	406.55		0.5	*
3Q13		7/3/2013	NE	32.80	NA	NA	NA	409.70		0.0	*
4Q13		10/1/2013	NE	34.72	NA	NA	NA	407.78		0.2	*
P-5L											
1Q11	443.79	1/1/2011	NE	29.55	NA	NA	NA	414.24	303.39 - 301.39 (140.40 - 142.40)	NA	*
2Q11		4/1/2011	NE	28.10	NA	NA	NA	415.69		NA	*
3Q11		7/5/2011	NE	25.87	NA	NA	NA	417.92		NA	*
4Q11		10/6/2011	NE	29.16	NA	NA	NA	414.63		NA	*
1Q12		1/3/2012	NE	30.42	NA	NA	NA	413.37		NA	*
2Q12		4/2/2012	NE	30.56	NA	NA	NA	413.23		0.9	*
3Q12		7/2/2012	NE	31.60	NA	NA	NA	412.19		0.0	*
4Q12		10/1/2012	NE	33.60	NA	NA	NA	410.19		0.0	*
1Q13		1/3/2013	NE	35.17	NA	NA	NA	408.62		0.0	*
2Q13		4/1/2013	NE	35.84	NA	NA	NA	407.95		0.0	*
3Q13		7/3/2013	NE	31.51	NA	NA	NA	412.28		0.0	*
4Q13		10/1/2013	NE	34.35	NA	NA	NA	409.44		0.4	*
P-5U											
1Q11	444.15	1/1/2011	NE	30.96	NA	NA	NA	413.19	313.52 - 311.52 (130.63 - 132.63)	NA	*
2Q11		4/1/2011	NE	29.91	NA	NA	NA	414.24		NA	*
3Q11		7/5/2011	NE	27.80	NA	NA	NA	416.35		NA	*
4Q11		10/6/2011	NE	30.41	NA	NA	NA	413.74		NA	*
1Q12		1/3/2012	NE	30.42	NA	NA	NA	413.73		NA	*
2Q12		4/2/2012	NE	31.96	NA	NA	NA	412.19		0.9	*
3Q12		7/2/2012	NE	32.80	NA	NA	NA	411.35		0.8	*
4Q12		10/1/2012	NE	35.00	NA	NA	NA	409.15		0.8	*
1Q13		1/3/2013	NE	36.41	NA	NA	NA	407.74		0.0	*
2Q13		4/1/2013	NE	37.24	NA	NA	NA	406.91		0.0	*
3Q13		7/3/2013	NE	33.53	NA	NA	NA	410.62		0.0	*
4Q13		10/1/2013	NE	35.88	NA	NA	NA	408.27		0.0	*
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	*

TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-6U											
1Q11	443.35	1/1/2011	NE	30.53	NA	NA	NA	412.82	362.85 - 360.85 (80.50 - 82.50)	NA	*
2Q11		4/1/2011	NE	29.57	NA	NA	NA	413.78		NA	*
3Q11		7/5/2011	NE	27.35	NA	NA	NA	416.00		NA	*
4Q11		10/6/2011	NE	29.78	NA	NA	NA	413.57		NA	*
1Q12		1/3/2012	NE	30.97	NA	NA	NA	412.38		NA	*
2Q12		4/2/2012	NE	31.42	NA	NA	NA	411.93		0.0	*
3Q12		7/2/2012	NE	32.25	NA	NA	NA	411.10		0.0	*
4Q12		10/1/2012	NE	30.40	NA	NA	NA	412.95		0.2	*
1Q13		1/3/2013	NE	35.86	NA	NA	NA	407.49		0.0	*
2Q13		4/1/2013	NE	36.88	NA	NA	NA	406.47		0.0	*
3Q13		7/3/2013	NE	33.17	NA	NA	NA	410.18		0.0	*
4Q13		10/1/2013	NE	35.31	NA	NA	NA	408.04		0.1	*
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	*
P-7U											
1Q11	443.80	1/1/2011	NE	30.70	NA	NA	NA	413.10	382.72 - 380.72 (61.08 - 63.08)	NA	*
2Q11		4/1/2011	NE	29.66	NA	NA	NA	414.14		NA	*
3Q11		7/5/2011	NE	27.30	NA	NA	NA	416.50		NA	*
4Q11		10/6/2011	NE	30.02	NA	NA	NA	413.78		NA	*
1Q12		1/3/2012	NE	31.23	NA	NA	NA	412.57		NA	*
2Q12		4/2/2012	NE	31.63	NA	NA	NA	412.17		0.0	*
3Q12		7/2/2012	NE	31.86	NA	NA	NA	411.94		0.0	*
4Q12		10/1/2012	NE	34.55	NA	NA	NA	409.25		0.0	*
1Q13		1/3/2013	NE	36.12	NA	NA	NA	407.68		0.0	*
2Q13		4/1/2013	NE	37.12	NA	NA	NA	406.68		0.0	*
3Q13		7/3/2013	NE	33.11	NA	NA	NA	410.69		0.0	*
4Q13		10/1/2013	NE	35.54	NA	NA	NA	408.26		0.1	*
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	*
P-8U											
1Q11	441.87	1/1/2011	NE	30.79	NA	NA	NA	411.08	382.35 - 380.35 (59.52 - 61.52)	NA	*
2Q11		4/1/2011	NE	30.50	NA	NA	NA	411.37		NA	*
3Q11		7/5/2011	NE	28.20	NA	NA	NA	413.67		NA	*
4Q11		10/6/2011	NE	29.86	NA	NA	NA	412.01		NA	*
1Q12		1/3/2012	NE	30.99	NA	NA	NA	410.88		NA	*
2Q12		4/2/2012	NE	31.73	NA	NA	NA	410.14		0.0	*
3Q12		7/1/2012	NE	32.51	NA	NA	NA	409.36		0.0	*
4Q12		10/1/2012	NE	34.77	NA	NA	NA	407.10		0.2	*
1Q13		1/3/2013	NE	35.97	NA	NA	NA	405.90		0.0	*
2Q13		4/1/2013	NE	37.30	NA	NA	NA	404.57		0.0	*
3Q13		7/3/2013	NE	34.48	NA	NA	NA	407.39		0.0	*
4Q13		10/1/2013	NE	35.70	NA	NA	NA	406.17		0.0	*
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	*
P-9U											
1Q11	444.91	1/13/2011	NE	36.87	NA	NA	NA	408.04	344.32 - 342.32 (100.59 - 102.59)	NA	*
2Q11		4/1/2011	NE	35.71	NA	NA	NA	409.20		NA	*
3Q11		7/5/2011	NE	34.92	NA	NA	NA	409.99		NA	*
4Q11		10/6/2011	NE	34.56	NA	NA	NA	410.35		NA	*
1Q12		1/3/2012	NE	34.52	NA	NA	NA	410.39		NA	*
2Q12		4/2/2012	NE	36.34	NA	NA	NA	408.57		0.0	*
3Q12		7/2/2012	NE	36.81	NA	NA	NA	408.10		0.0	*
4Q12		10/1/2012	NE	38.59	NA	NA	NA	406.32		0.0	*
1Q13		1/3/2013	NE	40.11	NA	NA	NA	404.80		0.0	*
2Q13		4/1/2013	NE	41.20	NA	NA	NA	403.71		0.0	*
3Q13		7/3/2013	NE	39.74	NA	NA	NA	405.17		0.5	*
4Q13		10/1/2013	NE	39.93	NA	NA	NA	404.98		0.0	*

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TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-11L											
1Q11	442.80	1/1/2011	NE	31.62	NA	NA	NA	411.18	332.59 - 330.59 (110.21 - 112.21)	NA	*
2Q11		4/1/2011	NE	31.28	NA	NA	NA	411.52		NA	*
3Q11		7/5/2011	NE	29.34	NA	NA	NA	413.46		NA	*
4Q11		10/6/2011	NE	30.67	NA	NA	NA	412.13		NA	*
1Q12		1/3/2012	NE	31.77	NA	NA	NA	411.03		NA	*
2Q12		4/2/2012	NE	32.68	NA	NA	NA	410.12		0.0	*
3Q12		7/2/2012	NE	33.52	NA	NA	NA	409.28		0.0	*
4Q12		10/1/2012	NE	35.56	NA	NA	NA	407.24		0.0	*
1Q13		1/3/2013	NE	37.20	NA	NA	NA	405.60		0.0	*
2Q13		4/1/2013	NE	37.97	NA	NA	NA	404.83		0.0	*
3Q13		7/3/2013	NE	37.85	NA	NA	NA	404.95		0.0	*
4Q13		10/1/2013	NE	36.60	NA	NA	NA	406.20		1.0	*
P-11U											
1Q11	443.09	1/1/2011	NE	32.21	NA	NA	NA	410.88	343.17 - 341.17 (99.92 - 101.92)	NA	*
2Q11		4/1/2011	NE	31.92	NA	NA	NA	411.17		NA	*
3Q11		7/5/2011	NE	29.95	NA	NA	NA	413.14		NA	*
4Q11		10/6/2011	NE	31.12	NA	NA	NA	411.97		NA	*
1Q12		1/3/2012	NE	32.35	NA	NA	NA	410.74		NA	*
2Q12		4/2/2012	NE	33.34	NA	NA	NA	409.75		0.0	*
3Q12		7/2/2012	NE	34.15	NA	NA	NA	408.94		0.0	*
4Q12		10/1/2012	NE	36.19	NA	NA	NA	406.90		0.0	*
1Q13		1/3/2013	NE	37.80	NA	NA	NA	405.29		0.0	*
2Q13		4/1/2013	NE	38.62	NA	NA	NA	404.47		0.0	*
3Q13		7/3/2013	NE	36.40	NA	NA	NA	406.69		0.0	*
4Q13		10/1/2013	NE	37.20	NA	NA	NA	405.89		0.0	*
P-14											
1Q11	442.65	1/1/2011	NE	28.57	NA	NA	NA	414.08	395.32 - 385.32 (47.33 - 57.33)	NA	*
2Q11		4/1/2011	NE	27.38	NA	NA	NA	415.27		NA	*
3Q11		7/5/2011	NE	25.57	NA	NA	NA	417.08		NA	*
4Q11		10/6/2011	NE	28.20	NA	NA	NA	414.45		NA	*
1Q12		1/3/2012	NE	28.98	NA	NA	NA	413.67		NA	*
2Q12		4/2/2012	NE	29.42	NA	NA	NA	413.23		0.0	*
3Q12		7/2/2012	NE	30.55	NA	NA	NA	412.10		0.0	*
4Q12		10/1/2012	NE	32.39	NA	NA	NA	410.26		0.0	*
1Q13		1/3/2013	NE	34.01	NA	NA	NA	408.64		0.0	*
2Q13		4/1/2013	NE	33.74	NA	NA	NA	408.91		0.0	*
3Q13		7/3/2013	NE	30.67	NA	NA	NA	411.98		0.0	*
4Q13		10/1/2013	NE	33.18	NA	NA	NA	409.47		4.6	*
P-15											
1Q11	443.35	1/1/2011	NE	30.55	NA	NA	NA	412.80	397.90 - 387.90 (45.45 - 55.45)	NA	*
2Q11		4/1/2011	NE	29.80	NA	NA	NA	413.55		NA	*
3Q11		7/5/2011	NE	27.75	NA	NA	NA	415.60		NA	*
4Q11		10/6/2011	NE	29.93	NA	NA	NA	413.42		NA	*
1Q12		1/3/2012	31.05	31.06	412.29	412.30	0.01	412.30		NA	*
2Q12		4/2/2012	NE	31.55	NA	NA	NA	411.80		0.0	*
3Q12		7/2/2012	NE	32.40	NA	NA	NA	410.95		0.0	*
4Q12		10/1/2012	NE	34.35	NA	NA	NA	409.00		0.6	*
1Q13		1/3/2013	NE	35.81	NA	NA	NA	407.54		0.0	*
2Q13		4/1/2013	NE	36.46	NA	NA	NA	406.89		0.0	*
3Q13		7/3/2013	NE	33.48	NA	NA	NA	409.87		0.0	*
4Q13		10/1/2013	NE	35.03	NA	NA	NA	408.32		0.2	*
P-16											
1Q11	442.31	1/1/2011	NE	29.40	NA	NA	NA	412.91	396.57 - 386.57 (45.74 - 55.74)	NA	*
2Q11		4/1/2011	NE	28.54	NA	NA	NA	413.77		NA	*
3Q11		7/5/2011	NE	26.34	NA	NA	NA	415.97		NA	*
4Q11		10/6/2011	NE	28.77	NA	NA	NA	413.54		NA	*
1Q12		1/3/2012	NE	30.00	NA	NA	NA	412.31		NA	*
2Q12		4/1/2012	NM	NM	NA	NA	NA	NA		NM	
3Q12		7/6/2012	NE	31.16	NA	NA	NA	411.15		0.0	*
4Q12		10/4/2012	NE	33.35	NA	NA	NA	408.96		0.0	*
1Q13		1/3/2013	NE	34.80	NA	NA	NA	407.51		0.0	*
2Q13		4/1/2013	NE	35.55	NA	NA	NA	406.76		0.0	*
3Q13		7/3/2013	NE	32.10	NA	NA	NA	410.21		0.0	*
4Q13		10/1/2013	NE	33.96	NA	NA	NA	408.35		0.3	*
P-43											
1Q11	444.07	1/1/2011	NE	33.09	NA	NA	NA	410.98	380.51 - 370.51 (63.56 - 73.56)	NA	*
2Q11		4/1/2011	NE	32.75	NA	NA	NA	411.32		NA	*
3Q11		7/5/2011	NE	30.78	NA	NA	NA	413.29		NA	*
4Q11		10/6/2011	NE	32.18	NA	NA	NA	411.89		NA	*
1Q12		1/3/2012	NE	33.24	NA	NA	NA	410.83		NA	*
2Q12		4/2/2012	NE	34.17	NA	NA	NA	409.90		0.0	*
3Q12		7/2/2012	NE	34.95	NA	NA	NA	409.12		0.0	*
4Q12		10/1/2012	NE	36.80	NA	NA	NA	407.27		0.0	*
1Q13		1/3/2013	NE	38.21	NA	NA	NA	405.86		0.0	*
2Q13		4/1/2013	NE	39.10	NA	NA	NA	404.97		0.0	*
3Q13		7/3/2013	NE	37.04	NA	NA	NA	407.03		0.0	*
4Q13		10/1/2013	NE	37.73	NA	NA	NA	406.34		0.1	*

TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-53											
1Q11	446.23	1/13/2011	NE	39.46	NA	NA	NA	406.77	407.73 - 382.73 (38.50 - 63.50)	NA	
2Q11		4/1/2011	NE	39.99	NA	NA	NA	406.24		NA	
3Q11		7/5/2011	NE	38.28	NA	NA	NA	407.95		NA	*
4Q11		10/5/2011	NE	37.58	NA	NA	NA	408.65		NA	*
1Q12		1/3/2012	NE	38.73	NA	NA	NA	407.50		0.0	
2Q12		4/2/2012	NM	NM	NA	NA	NA	NA		NM	
3Q12		7/2/2012	NE	40.46	NA	NA	NA	405.77		0.0	
4Q12		10/1/2012	NE	41.88	NA	NA	NA	404.35		0.0	
1Q13		1/2/2013	NE	43.06	NA	NA	NA	403.17		0.0	
2Q13		4/1/2013	NE	44.29	NA	NA	NA	401.94		0.1	
3Q13		7/2/2013	NE	42.84	NA	NA	NA	403.39		0.4	
4Q13		10/2/2013	NE	42.20	NA	NA	NA	404.03		0.0	
P-54											
1Q11	442.18	1/13/2011	NE	37.24	NA	NA	NA	404.94	404.18 - 379.18 (38.00 - 63.00)	NA	*
2Q11		4/25/2011	NE	38.00	NA	NA	NA	404.18		NA	
3Q11		7/5/2011	NE	35.38	NA	NA	NA	406.80		NA	*
4Q11		10/5/2011	NE	35.01	NA	NA	NA	407.17		NA	*
1Q12		1/3/2012	NE	37.17	NA	NA	NA	405.01		0.0	*
2Q12		4/2/2012	NE	38.48	NA	NA	NA	403.70		0.0	
3Q12		7/2/2012	NE	38.73	NA	NA	NA	403.45		0.0	
4Q12		10/1/2012	NE	40.44	NA	NA	NA	401.74		0.0	
1Q13		1/3/2013	NE	41.62	NA	NA	NA	400.56		0.0	
2Q13		4/1/2013	NE	42.26	NA	NA	NA	399.92		0.0	
3Q13		7/1/2013	NE	39.40	NA	NA	NA	402.78		0.8	
4Q13		10/1/2013	NE	39.74	NA	NA	NA	402.44		0.0	
P-55											
1Q11	445.95	1/13/2011	NE	40.56	NA	NA	NA	405.39	406.13 - 381.13 (39.82 - 64.82)	NA	
2Q11		4/25/2011	41.52	41.54	404.41	404.43	0.02	404.43		NA	
3Q11		7/5/2011	39.41	39.42	406.53	406.54	0.01	406.54		NA	*
4Q11		10/6/2011	NE	38.61	NA	NA	NA	407.34		NA	*
1Q12		1/4/2012	NE	40.71	NA	NA	NA	405.24		0.0	
2Q12		4/2/2012	NE	42.04	NA	NA	NA	403.91		0.0	
3Q12		7/2/2012	NE	42.33	NA	NA	NA	403.62		0.0	
4Q12		10/1/2012	NE	44.17	NA	NA	NA	401.78		3.0	
1Q13		1/8/2013	NE	45.24	NA	NA	NA	400.71		0.0	
2Q13	443.78	4/2/2013	NE	43.87	NA	NA	NA	399.91	403.35 - 393.35 (40.43 - 50.43)	202.0	Replaced during 4Q12
3Q13		7/5/2013	NE	41.43	NA	NA	NA	402.35		136.4	
4Q13		10/2/2013	NE	41.58	NA	NA	NA	402.20		52.4	
P-56											
1Q11	446.02	1/13/2011	NE	41.03	NA	NA	NA	404.99	405.20 - 380.20 (40.82 - 65.82)	NA	
2Q11		4/25/2011	NE	42.16	NA	NA	NA	403.86		NA	
3Q11		7/5/2011	NE	39.63	NA	NA	NA	406.39		NA	*
4Q11		10/6/2011	NE	39.10	NA	NA	NA	406.92		NA	*
1Q12		1/4/2012	NE	41.51	NA	NA	NA	404.51		1.1	
2Q12		4/3/2012	NE	42.88	NA	NA	NA	403.14		0.0	
3Q12		7/5/2012	NE	43.01	NA	NA	NA	403.01		0.0	
4Q12		10/2/2012	NE	44.76	NA	NA	NA	401.26		0.0	
1Q13		1/4/2013	NE	45.65	NA	NA	NA	400.37		0.6	
2Q13		4/2/2013	NE	46.40	NA	NA	NA	399.62		0.0	
3Q13		7/5/2013	NE	43.60	NA	NA	NA	402.42		0.0	
4Q13		10/2/2013	NE	44.29	NA	NA	NA	401.73		0.1	
P-57											
1Q11	446.53	1/13/2011	NE	41.04	NA	NA	NA	405.49	406.07 - 381.07 (40.46 - 65.46)	NA	
2Q11		4/25/2011	NE	41.88	NA	NA	NA	404.65		NA	
3Q11		7/5/2011	NE	39.48	NA	NA	NA	407.05		NA	*
4Q11		10/6/2011	NE	39.20	NA	NA	NA	407.33		NA	*
1Q12		2/13/2012	NE	42.13	NA	NA	NA	404.40		NA	
2Q12		4/4/2012	NE	42.61	NA	NA	NA	403.92		0.0	
3Q12		7/5/2012	NE	43.00	NA	NA	NA	403.53		0.0	
4Q12		10/1/2012	NE	44.78	NA	NA	NA	401.75		0.0	
1Q13		1/4/2013	NE	45.82	NA	NA	NA	400.71		0.0	
2Q13		4/2/2013	NE	46.63	NA	NA	NA	399.90		0.0	
3Q13		7/5/2013	NE	43.70	NA	NA	NA	402.83		0.0	
4Q13		10/2/2013	NE	44.12	NA	NA	NA	402.41		1.8	
P-58											
1Q11	444.92	1/13/2011	NE	39.10	NA	NA	NA	405.82	404.70 - 379.70 (40.21 - 65.21)	NA	*
2Q11		4/25/2011	NE	39.78	NA	NA	NA	405.14		NA	*
3Q11		7/5/2011	NE	37.42	NA	NA	NA	407.50		NA	*
4Q11		10/6/2011	NE	37.31	NA	NA	NA	407.61		NA	*
1Q12		1/4/2012	NE	39.41	NA	NA	NA	405.51		13.5	*
2Q12		4/3/2012	NE	40.81	NA	NA	NA	404.11		0.5	
3Q12		7/5/2012	NE	41.04	NA	NA	NA	403.88		0.0	
4Q12		10/2/2012	NE	42.90	NA	NA	NA	402.02		0.2	
1Q13		1/4/2013	NE	43.80	NA	NA	NA	401.12		0.0	
2Q13		4/2/2013	NE	44.75	NA	NA	NA	400.17		0.0	
3Q13		7/5/2013	NE	41.85	NA	NA	NA	403.07		0.0	
4Q13		10/2/2013	NE	41.97	NA	NA	NA	402.95		4.9	

TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-59											
1Q11	446.78	1/13/2011	NE	42.16	NA	NA	NA	404.62	398.87 - 373.87 (47.91 - 72.91)	NA	*
2Q11		4/25/2011	43.25	43.26	403.52	403.53	0.01	403.53		NA	*
3Q11		7/5/2011	NE	41.44	NA	NA	NA	405.34		NA	*
4Q11		10/6/2011	NE	40.77	NA	NA	NA	406.01		NA	*
1Q12		1/4/2012	NE	42.61	NA	NA	NA	404.17		250.0	*
2Q12		4/4/2012	NE	43.82	NA	NA	NA	402.96		0.0	*
3Q12		7/5/2012	NE	44.00	NA	NA	NA	402.78		0.0	*
4Q12		10/2/2012	NE	45.83	NA	NA	NA	400.95		389.0	*
1Q13		1/4/2013	NE	46.54	NA	NA	NA	400.24		417.0	*
2Q13		4/2/2013	NE	47.20	NA	NA	NA	399.58		116.0	*
3Q13		7/5/2013	NE	44.47	NA	NA	NA	402.31		186.4	*
4Q13		10/2/2013	NE	45.37	NA	NA	NA	401.41		131.4	*
P-60											
1Q11	446.57	1/14/2011	41.68	41.72	404.85	404.89	0.04	404.88	403.12 - 383.12 (43.45 - 63.45)	NA	*
2Q11		4/25/2011	42.72	43.18	403.39	403.85	0.46	403.76		NA	*
3Q11		7/5/2011	40.41	40.77	405.80	406.16	0.36	406.09		NA	*
4Q11		10/6/2011	39.72	40.06	406.51	406.85	0.34	406.79		NA	*
1Q12		1/4/2012	NE	41.98	NA	NA	NA	404.59		5.5	*
2Q12		4/3/2012	43.46	43.48	403.09	403.11	0.02	403.11		10.0	
3Q12		7/5/2012	43.51	43.55	403.02	403.06	0.04	403.05		19.8	
4Q12		10/2/2012	45.33	45.44	401.13	401.24	0.11	401.22		44.0	
1Q13		1/4/2013	NE	46.19	NA	NA	NA	400.38		9.9	
2Q13		4/2/2013	46.96	47.04	399.53	399.61	0.08	399.60		8.8	
3Q13		7/5/2013	44.41	44.46	402.11	402.16	0.05	402.15		42.7	
4Q13		10/2/2013	44.91	44.99	401.58	401.66	0.08	401.65		28.3	
P-60-11											
1Q11	446.18	1/14/2011	NE	41.14	NA	NA	NA	405.04	413.03 - 383.03 (33.15 - 63.15)	NA	
2Q11		4/25/2011	NE	42.22	NA	NA	NA	403.96		NA	
3Q11		7/5/2011	NE	39.97	NA	NA	NA	406.21		NA	
4Q11		10/6/2011	NE	39.25	NA	NA	NA	406.93		NA	
1Q12		1/4/2012	NE	41.22	NA	NA	NA	404.96		0.3	
2Q12		4/3/2012	NE	42.65	NA	NA	NA	403.53		0.0	
3Q12		7/5/2012	NE	42.64	NA	NA	NA	403.54		0.0	
4Q12		10/2/2012	44.32	44.41	401.77	401.86	0.09	401.84		0.1	
1Q13		1/4/2013	NE	45.06	NA	NA	NA	401.12		2.0	
2Q13		4/2/2013	NE	45.72	NA	NA	NA	400.46		0.0	
3Q13		7/5/2013	NE	43.81	NA	NA	NA	402.37		0.0	
4Q13		10/2/2013	NE	43.43	NA	NA	NA	402.75		0.0	
P-60-12											
1Q11	443.31	1/14/2011	NE	38.51	NA	NA	NA	404.80	383.31 - 373.31 (60.00 - 70.00)	NA	*
2Q11		4/25/2011	NE	39.63	NA	NA	NA	403.68		NA	*
3Q11		7/5/2011	NE	37.27	NA	NA	NA	406.04		NA	*
4Q11		10/6/2011	NE	36.53	NA	NA	NA	406.78		NA	*
1Q12		1/4/2012	NE	38.76	NA	NA	NA	404.55		1.5	*
2Q12		4/3/2012	NE	40.25	NA	NA	NA	403.06		0.0	*
3Q12		7/5/2012	NE	40.23	NA	NA	NA	403.08		0.0	*
4Q12		10/2/2012	NE	44.15	NA	NA	NA	399.16		0.0	*
1Q13		1/4/2013	NE	42.97	NA	NA	NA	400.34		2.4	*
2Q13		4/2/2013	NE	43.77	NA	NA	NA	399.54		0.0	*
3Q13		7/5/2013	NE	41.20	NA	NA	NA	402.11		0.0	*
4Q13		10/2/2013	NE	41.72	NA	NA	NA	401.59		1.1	*
P-60-12S											
1Q11	443.33	1/14/2011	NM	NM	NA	NA	NA	NA	429.49 - 419.49 (13.84 - 23.84)	NM	
2Q11		4/25/2011	NE	21.84	NA	NA	NA	421.49		NA	
3Q11		7/5/2011	21.10	21.11	422.22	422.23	0.01	422.23		NA	
4Q11		10/6/2011	NE	23.36	NA	NA	NA	419.97		NA	
1Q12		1/4/2012	NE	22.81	NA	NA	NA	420.52		1.0	
2Q12		4/3/2012	NE	20.21	NA	NA	NA	423.12		0.0	
3Q12		7/5/2012	NE	19.48	NA	NA	NA	423.85		0.0	
4Q12		10/2/2012	NE	19.04	NA	NA	NA	424.29		0.0	
1Q13		1/4/2013	NE	19.35	NA	NA	NA	423.98		3.5	
2Q13		4/2/2013	NM	NM	NA	NA	NA	NA		NM	
3Q13		7/5/2013	NE	17.73	NA	NA	NA	425.60		0.0	
4Q13		10/2/2013	NE	19.03	NA	NA	NA	424.30		0.3	
P-60-13											
1Q11	442.43	1/14/2011	37.73	37.74	404.69	404.70	0.01	404.70	402.43 - 382.43 (40.00 - 60.00)	NA	*
2Q11		4/25/2011	38.80	39.10	403.33	403.63	0.30	403.57		NA	*
3Q11		7/5/2011	36.85	36.99	405.44	405.58	0.14	405.55		NA	*
4Q11		10/6/2011	NE	35.86	NA	NA	NA	406.57		NA	*
1Q12		1/4/2012	NE	37.82	NA	NA	NA	404.61		4.3	*
2Q12		4/3/2012	NE	39.21	NA	NA	NA	403.22		0.0	*
3Q12		7/5/2012	NE	39.37	NA	NA	NA	403.06		0.0	*
4Q12		10/2/2012	NE	40.61	NA	NA	NA	401.82		0.0	
1Q13		1/4/2013	NE	41.55	NA	NA	NA	400.88		0.7	
2Q13		4/2/2013	NM	NM	NA	NA	NA	NA		NM	
3Q13		7/5/2013	NE	40.53	NA	NA	NA	401.90		0.0	
4Q13		10/2/2013	NE	39.98	NA	NA	NA	402.45		0.6	*

TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-60-13S											
1Q11	442.39	1/14/2011	NM	NM	NA	NA	NA	NA	432.39 - 422.39 (10.00 - 20.00)	NM	
2Q11		4/25/2011	NE	17.45	NA	NA	NA	424.94		NA	
3Q11		7/5/2011	NE	17.08	NA	NA	NA	425.31		NA	
4Q11		10/6/2011	NE	18.44	NA	NA	NA	423.95		NA	
1Q12		1/4/2012	NE	17.66	NA	NA	NA	424.73		1.5	
2Q12		4/3/2012	NE	17.58	NA	NA	NA	424.81		0.0	
3Q12		7/5/2012	NE	17.87	NA	NA	NA	424.52		0.0	
4Q12		10/2/2012	NE	17.97	NA	NA	NA	424.42		0.7	
1Q13		1/4/2013	NM	NM	NA	NA	NA	NA		NM	
2Q13		4/2/2013	NM	NM	NA	NA	NA	NA		NM	
3Q13		7/5/2013	NE	15.66	NA	NA	NA	426.73		8.2	
4Q13		10/2/2013	NE	17.60	NA	NA	NA	424.79		2.8	
P-60-S											
3Q11	446.98	7/5/2011	NE	40.81	NA	NA	NA	406.17	410.50 - 395.50 (36.48 - 51.48)	NA	
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA		NM	
1Q12		1/4/2012	41.39	41.90	405.08	405.59	0.51	405.49		1.8	
2Q12		4/3/2012	42.85	43.28	403.70	404.13	0.43	404.04		1.2	
3Q12		7/5/2012	43.12	43.26	403.72	403.86	0.14	403.83		0.7	
4Q12		10/4/2012	43.94	45.84	401.14	403.04	1.90	402.66		0.3	
1Q13		1/4/2013	45.34	45.95	401.03	401.64	0.61	401.52		0.0	
2Q13		4/2/2013	46.33	46.39	400.59	400.65	0.06	400.64		0.1	
3Q13		7/5/2013	NE	44.45	NA	NA	NA	402.53		0.0	
4Q13		10/2/2013	43.56	44.49	402.49	403.42	0.93	403.23		0.2	
P-61											
1Q11	444.27	1/13/2011	38.81	38.94	405.33	405.46	0.13	405.43	398.59 - 373.59 (45.68 - 70.68)	NA	*
2Q11		4/25/2011	NE	40.93	NA	NA	NA	403.34		NA	*
3Q11		7/5/2011	37.58	37.59	406.68	406.69	0.01	406.69		NA	*
4Q11		10/6/2011	NE	37.63	NA	NA	NA	406.64		NA	*
1Q12		1/3/2012	NE	40.34	NA	NA	NA	403.93		NA	*
2Q12		4/3/2012	NE	41.50	NA	NA	NA	402.77		0.0	*
3Q12		7/3/2012	NE	41.53	NA	NA	NA	402.74		0.0	*
4Q12		10/2/2012	NE	43.36	NA	NA	NA	400.91		24.3	*
1Q13		1/4/2013	43.82	45.95	398.32	400.45	2.13	400.02		38.8	*
2Q13		4/2/2013	44.78	46.64	397.63	399.49	1.86	399.12		23.1	*
3Q13		7/5/2013	42.52	42.56	401.71	401.75	0.04	401.74		186.4	*
4Q13		10/2/2013	43.08	43.14	401.13	401.19	0.06	401.18		10.9	*
P-62											
1Q11	442.32	1/13/2011	36.39	37.81	404.51	405.93	1.42	405.65	400.85 - 375.85 (41.47 - 66.47)	NA	*
2Q11		4/25/2011	NE	38.18	NA	NA	NA	404.14		NA	*
3Q11		7/5/2011	35.62	35.63	406.69	406.70	0.01	406.70		NA	*
4Q11		10/6/2011	NE	35.64	NA	NA	NA	406.68		NA	*
1Q12		1/3/2012	37.68	37.71	404.61	404.64	0.03	404.64		NA	*
2Q12		4/3/2012	NE	30.94	NA	NA	NA	411.38		0.0	*
3Q12		7/3/2012	39.13	39.15	403.17	403.19	0.02	403.19		0.0	*
4Q12		10/1/2012	40.61	42.35	399.97	401.71	1.74	401.37		3.2	*
1Q13		1/8/2013	NE	30.39	NA	NA	NA	411.93		0.0	*
2Q13		4/2/2013	42.81	44.32	398.00	399.51	1.51	399.21		0.0	
3Q13		7/1/2013	40.77	41.88	400.44	401.55	1.11	401.33		32.6	*
4Q13		10/2/2013	40.61	42.26	400.06	401.71	1.65	401.38		62.6	*
P-63											
1Q11	445.75	1/13/2011	39.48	39.68	406.07	406.27	0.20	406.23	398.46 - 373.46 (47.29 - 72.29)	NA	*
2Q11		4/1/2011	NE	41.11	NA	NA	NA	404.64		NA	*
3Q11		7/5/2011	NE	38.56	NA	NA	NA	407.19		NA	*
4Q11		10/6/2011	NE	39.20	NA	NA	NA	406.55		NA	*
1Q12		1/3/2012	NE	40.65	NA	NA	NA	405.10		NA	*
2Q12		4/3/2012	NE	42.09	NA	NA	NA	403.66		0.0	*
3Q12		7/3/2012	NE	42.94	NA	NA	NA	402.81		0.0	*
4Q12		10/1/2012	NE	44.55	NA	NA	NA	401.20		104.0	*
1Q13		1/4/2013	NE	46.03	NA	NA	NA	399.72		0.0	*
2Q13		4/1/2013	NE	46.98	NA	NA	NA	398.77		0.0	*
3Q13		7/5/2013	NE	45.41	NA	NA	NA	400.34		142.0	*
4Q13		10/2/2013	44.98	45.01	400.74	400.77	0.03	400.76		33.4	*
P-64											
1Q11	446.52	1/13/2011	40.14	40.46	406.06	406.38	0.32	406.32	399.29 - 374.29 (47.23 - 72.23)	NA	*
2Q11		4/1/2011	41.77	41.86	404.66	404.75	0.09	404.73		NA	*
3Q11		7/5/2011	39.25	39.42	407.10	407.27	0.17	407.24		NA	*
4Q11		10/6/2011	40.35	40.53	405.99	406.17	0.18	406.13		NA	*
1Q12		1/3/2012	41.68	41.75	404.77	404.84	0.07	404.83		NA	*
2Q12		4/3/2012	43.18	43.19	403.33	403.34	0.01	403.34		0.0	*
3Q12		7/3/2012	44.40	44.41	402.11	402.12	0.01	402.12		0.0	*
4Q12		10/1/2012	45.62	45.68	400.84	400.90	0.06	400.89		34.5	*
1Q13		1/4/2013	NE	47.84	NA	NA	NA	398.68		103.0	
2Q13		4/1/2013	NE	48.23	NA	NA	NA	398.29		0.0	
3Q13		7/5/2013	46.95	46.97	399.55	399.57	0.02	399.57		96.5	*
4Q13		10/2/2013	46.25	46.31	400.21	400.27	0.06	400.26		41.4	*

TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-65											
1Q11	444.53	1/13/2011	37.73	37.74	406.79	406.80	0.01	406.80	396.91 - 371.91 (47.62 - 72.62)	NA	*
2Q11		4/1/2011	NE	39.20	NA	NA	NA	405.33		NA	*
3Q11		7/5/2011	NE	36.87	NA	NA	NA	407.66		NA	*
4Q11		10/6/2011	NE	37.67	NA	NA	NA	406.86		NA	*
1Q12		1/3/2012	NE	39.15	NA	NA	NA	405.38		NA	*
2Q12		4/3/2012	NE	40.76	NA	NA	NA	403.77		0.0	*
3Q12		7/3/2012	NE	41.76	NA	NA	NA	402.77		0.0	*
4Q12		10/1/2012	NE	43.00	NA	NA	NA	401.53		0.5	*
1Q13		1/4/2013	NE	44.61	NA	NA	NA	399.92		0.0	*
2Q13		4/1/2013	NM	NM	NA	NA	NA	NA		NM	Well damaged
3Q13		7/3/2013	NM	NM	NA	NA	NA	NA		NM	Well damaged
4Q13	Unknown	10/2/2013	NE	43.11	NA	NA	NA	401.42	Unknown	21.2	Well repaired during 3Q13 Resurvey needed
P-66											
1Q11	436.70	1/13/2011	NE	30.70	NA	NA	NA	406.00	401.98 - 376.98 (34.72 - 59.72)	NA	*
2Q11		4/25/2011	NE	31.26	NA	NA	NA	405.44		NA	*
3Q11		7/5/2011	NE	28.87	NA	NA	NA	407.83		NA	*
4Q11		10/5/2011	NE	28.92	NA	NA	NA	407.78		NA	*
1Q12		1/1/2012	NM	NM	NA	NA	NA	NA		NM	
2Q12		4/1/2012	NM	NM	NA	NA	NA	NA		NM	
3Q12		7/5/2012	32.60	32.61	404.09	404.10	0.01	404.10		3.3	*
4Q12		10/2/2012	NE	34.55	NA	NA	NA	402.15		5.0	*
1Q13		1/2/2013	NE	35.40	NA	NA	NA	401.30		66.2	
2Q13		4/2/2013	NE	36.41	NA	NA	NA	400.29		0.6	
3Q13		7/2/2013	NE	33.55	NA	NA	NA	403.15		3.5	*
4Q13		10/2/2013	NE	33.44	NA	NA	NA	403.26		54.0	*
P-67											
1Q11	444.13	1/13/2011	36.75	36.78	407.35	407.38	0.03	407.37	402.16 - 377.16 (41.98 - 66.98)	NA	*
2Q11		4/1/2011	NE	37.24	NA	NA	NA	406.89		NA	*
3Q11		7/5/2011	NE	35.17	NA	NA	NA	408.96		NA	*
4Q11		10/5/2011	NE	35.38	NA	NA	NA	408.75		NA	*
1Q12		1/4/2012	NE	37.08	NA	NA	NA	407.05		0.0	*
2Q12		4/3/2012	NE	38.50	NA	NA	NA	405.63		0.0	*
3Q12		7/2/2012	NE	38.90	NA	NA	NA	405.23		0.0	*
4Q12		10/2/2012	NE	40.81	NA	NA	NA	403.32		0.0	*
1Q13		1/2/2013	NE	41.69	NA	NA	NA	402.44		11.1	*
2Q13		4/2/2013	42.79	42.80	401.33	401.34	0.01	401.34		46.5	
3Q13		7/2/2013	NE	40.29	NA	NA	NA	403.84		0.0	*
4Q13		10/2/2013	39.78	39.80	404.33	404.35	0.02	404.35		17.3	*
P-68											
1Q11	445.07	1/13/2011	39.15	43.18	401.89	405.92	4.03	405.12	399.81 - 374.81 (45.26 - 70.26)	NA	*
2Q11		4/25/2011	41.42	41.51	403.56	403.65	0.09	403.63		NA	*
3Q11		7/5/2011	39.06	39.13	405.94	406.01	0.07	406.00		NA	*
4Q11		10/6/2011	38.53	38.58	406.49	406.54	0.05	406.53		NA	*
1Q12		1/4/2012	40.53	40.61	404.46	404.54	0.08	404.52		225.0	*
2Q12		4/3/2012	NE	42.08	NA	NA	NA	402.99		0.0	*
3Q12		7/5/2012	42.08	42.12	402.95	402.99	0.04	402.98		288.0	*
4Q12		10/2/2012	43.85	44.04	401.03	401.22	0.19	401.18		349.0	*
1Q13		1/4/2013	NM	NM	NA	NA	NA	NA		NM	
2Q13		4/2/2013	45.40	45.54	399.53	399.67	0.14	399.64		74.3	
3Q13		7/5/2013	43.05	43.12	401.95	402.02	0.07	402.01		197.0	*
4Q13		10/2/2013	43.42	43.52	401.55	401.65	0.10	401.63		101.6	*
P-69											
1Q11	443.18	1/13/2011	38.62	38.63	404.55	404.56	0.01	404.56	402.36 - 377.36 (40.82 - 65.82)	NA	*
2Q11		4/25/2011	NE	39.98	NA	NA	NA	403.20		NA	*
3Q11		7/5/2011	NE	37.41	NA	NA	NA	405.77		NA	*
4Q11		10/6/2011	NE	36.77	NA	NA	NA	406.41		NA	*
1Q12		1/4/2012	NE	39.18	NA	NA	NA	404.00		18.0	*
2Q12		4/3/2012	NE	40.59	NA	NA	NA	402.59		0.0	*
3Q12		7/5/2012	NE	40.61	NA	NA	NA	402.57		0.0	*
4Q12		10/2/2012	NE	42.46	NA	NA	NA	400.72		0.8	
1Q13		1/4/2013	NE	43.85	NA	NA	NA	399.33		0.0	
2Q13		4/2/2013	NE	43.94	NA	NA	NA	399.24		0.0	
3Q13		7/5/2013	NE	41.36	NA	NA	NA	401.82		0.0	
4Q13		10/2/2013	NE	42.17	NA	NA	NA	401.01		0.5	
P-70											
1Q11	442.83	1/13/2011	37.48	37.90	404.93	405.35	0.42	405.27	398.16 - 373.16 (44.67 - 69.67)	NA	*
2Q11		4/25/2011	39.20	39.22	403.61	403.63	0.02	403.62		NA	*
3Q11		7/5/2011	36.42	36.43	406.40	406.41	0.01	406.41		NA	*
4Q11		10/6/2011	NE	36.25	NA	NA	NA	406.58		NA	*
1Q12		1/3/2012	NE	38.62	NA	NA	NA	404.21		NA	*
2Q12		4/3/2012	NE	39.80	NA	NA	NA	403.03		0.0	*
3Q12		7/3/2012	NE	39.83	NA	NA	NA	403.00		0.0	*
4Q12		10/1/2012	NE	41.67	NA	NA	NA	401.16		0.0	*
1Q13		1/4/2013	NE	42.72	NA	NA	NA	400.11		1.7	*
2Q13		4/2/2013	NE	43.59	NA	NA	NA	399.24		211.0	*
3Q13		7/5/2013	NE	41.06	NA	NA	NA	401.77		134.2	*
4Q13		10/2/2013	NE	41.52	NA	NA	NA	401.31		99.1	*

TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-71											
1Q11	444.83	1/13/2011	NE	38.32	NA	NA	NA	406.51	402.22 - 377.22 (42.61 - 67.61)	NA	*
2Q11		4/25/2011	NE	39.52	NA	NA	NA	405.31		NA	*
3Q11		7/5/2011	NE	37.91	NA	NA	NA	406.92		NA	*
4Q11		10/6/2011	NE	47.31	NA	NA	NA	397.52		NA	
1Q12		1/3/2012	NE	38.91	NA	NA	NA	405.92		NA	*
2Q12		4/3/2012	NE	40.34	NA	NA	NA	404.49		0.0	*
3Q12		7/3/2012	NE	40.90	NA	NA	NA	403.93		0.0	*
4Q12		10/2/2012	42.69	42.75	402.08	402.14	0.06	402.13		23.0	
1Q13		1/4/2013	NE	43.83	NA	NA	NA	401.00		1.1	
2Q13		4/2/2013	NE	44.54	NA	NA	NA	400.29		1.2	
3Q13		7/5/2013	NE	42.65	NA	NA	NA	402.18		82.5	
4Q13		10/2/2013	NE	42.53	NA	NA	NA	402.30		53.0	*
P-72											
1Q11	444.43	1/13/2011	37.65	37.66	406.77	406.78	0.01	406.78	398.66 - 373.66 (45.77 - 70.77)	NA	*
2Q11		4/25/2011	38.78	38.80	405.63	405.65	0.02	405.65		NA	*
3Q11		7/5/2011	37.02	37.03	407.40	407.41	0.01	407.41		NA	*
4Q11		10/6/2011	NE	36.82	NA	NA	NA	407.61		NA	*
1Q12		1/3/2012	NE	38.43	NA	NA	NA	406.00		NA	*
2Q12		4/3/2012	NE	39.58	NA	NA	NA	404.85		0.0	*
3Q12		7/3/2012	NE	40.30	NA	NA	NA	404.13		0.0	*
4Q12		10/1/2012	NE	41.88	NA	NA	NA	402.55		5.1	*
1Q13		1/4/2013	NE	43.27	NA	NA	NA	401.16		2.2	*
2Q13		4/1/2013	NE	44.23	NA	NA	NA	400.20		0.3	*
3Q13		7/5/2013	NE	42.36	NA	NA	NA	402.07		2.0	*
4Q13		10/2/2013	NE	41.88	NA	NA	NA	402.55		2.7	*
P-73											
1Q11	443.76	1/13/2011	NE	38.10	NA	NA	NA	405.66	402.17 - 377.17 (41.60 - 66.60)	NA	*
2Q11		4/25/2011	NE	39.13	NA	NA	NA	404.63		NA	*
3Q11		7/5/2011	NE	36.88	NA	NA	NA	406.88		NA	*
4Q11		10/6/2011	NE	36.68	NA	NA	NA	407.08		NA	*
1Q12		1/4/2012	NE	38.68	NA	NA	NA	405.08		3.3	*
2Q12		4/3/2012	NE	40.03	NA	NA	NA	403.73		0.4	*
3Q12		7/5/2012	NE	40.28	NA	NA	NA	403.48		0.3	*
4Q12		10/2/2012	NE	42.02	NA	NA	NA	401.74		7.5	
1Q13		1/4/2013	NE	43.04	NA	NA	NA	400.72		0.0	
2Q13		4/1/2013	NE	43.93	NA	NA	NA	399.83		0.0	
3Q13		7/5/2013	NE	41.48	NA	NA	NA	402.28		18.3	*
4Q13		10/2/2013	NE	41.68	NA	NA	NA	402.08		50.3	
P-74											
1Q11	442.63	1/13/2011	NE	37.94	NA	NA	NA	404.69	398.20 - 373.20 (44.43 - 69.43)	NA	*
2Q11		4/25/2011	NE	39.18	NA	NA	NA	403.45		NA	*
3Q11		7/5/2011	NE	36.51	NA	NA	NA	406.12		NA	*
4Q11		10/6/2011	NE	36.26	NA	NA	NA	406.37		NA	*
1Q12		1/4/2012	NE	38.56	NA	NA	NA	404.07		0.0	*
2Q12		4/3/2012	NE	39.94	NA	NA	NA	402.69		0.0	*
3Q12		7/5/2012	NE	42.14	NA	NA	NA	400.49		0.0	*
4Q12		10/2/2012	NE	41.78	NA	NA	NA	400.85		0.0	*
1Q13		1/4/2013	NE	42.55	NA	NA	NA	400.08		0.2	*
2Q13		4/2/2013	NE	43.23	NA	NA	NA	399.40		0.0	*
3Q13		7/5/2013	NE	40.55	NA	NA	NA	402.08		0.0	*
4Q13		10/2/2013	NE	41.49	NA	NA	NA	401.14		0.5	*
P-75											
1Q11	446.32	1/13/2011	40.04	40.43	405.89	406.28	0.39	406.21	403.19 - 378.19 (43.13 - 68.13)	NA	*
2Q11		4/25/2011	40.81	40.83	405.49	405.51	0.02	405.51		NA	*
3Q11		7/5/2011	38.57	38.59	407.73	407.75	0.02	407.75		NA	*
4Q11		10/5/2011	38.52	38.53	407.79	407.80	0.01	407.80		NA	*
1Q12		1/4/2012	NE	40.48	NA	NA	NA	405.84		0.0	*
2Q12		4/4/2012	NE	41.62	NA	NA	NA	404.70		0.0	*
3Q12		7/2/2012	42.14	42.14	404.18	404.18	0.00	404.18		0.0	*
4Q12		10/2/2012	44.10	44.20	402.12	402.22	0.10	402.20		1.9	
1Q13		1/2/2013	NE	44.87	NA	NA	NA	401.45		3.1	
2Q13		4/2/2013	NE	46.03	NA	NA	NA	400.29		0.7	
3Q13		7/2/2013	NE	43.43	NA	NA	NA	402.89		0.0	
4Q13		10/2/2013	NE	42.92	NA	NA	NA	403.40		3.7	*
P-82A											
1Q11	434.69	1/13/2011	NE	25.29	NA	NA	NA	409.40	401.48 - 386.48 (33.21 - 48.21)	NA	*
2Q11		4/1/2011	NE	25.12	NA	NA	NA	409.57		NA	*
3Q11		7/5/2011	NE	23.01	NA	NA	NA	411.68		NA	*
4Q11		10/5/2011	NE	24.00	NA	NA	NA	410.69		NA	*
1Q12		1/3/2012	NE	25.50	NA	NA	NA	409.19		0.0	*
2Q12		4/2/2012	NE	26.82	NA	NA	NA	407.87		0.0	*
3Q12		7/2/2012	NE	27.34	NA	NA	NA	407.35		0.0	*
4Q12		10/2/2012	NE	29.07	NA	NA	NA	405.62		0.0	*
1Q13		1/3/2013	NE	30.09	NA	NA	NA	404.60		0.0	*
2Q13		4/2/2013	NE	30.77	NA	NA	NA	403.92		0.2	*
3Q13		7/2/2013	NE	27.75	NA	NA	NA	406.94		0.0	*
4Q13		10/2/2013	NE	28.20	NA	NA	NA	406.49		0.0	*

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TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-82B											
1Q11	434.44	1/13/2011	NE	25.01	NA	NA	NA	409.43	370.84 - 368.84 (63.60 - 65.60)	NA	*
2Q11		4/1/2011	NE	24.85	NA	NA	NA	409.59		NA	*
3Q11		7/5/2011	NE	22.71	NA	NA	NA	411.73		NA	*
4Q11		10/5/2011	NE	23.73	NA	NA	NA	410.71		NA	*
1Q12		1/3/2012	NE	25.21	NA	NA	NA	409.23		0.0	*
2Q12		4/2/2012	NE	26.55	NA	NA	NA	407.89		0.0	*
3Q12		7/2/2012	NE	27.07	NA	NA	NA	407.37		0.0	*
4Q12		10/2/2012	NE	28.81	NA	NA	NA	405.63		0.0	*
1Q13		1/3/2013	NE	29.82	NA	NA	NA	404.62		0.0	*
2Q13		4/2/2013	NE	30.50	NA	NA	NA	403.94		0.4	*
3Q13		7/2/2013	NE	27.49	NA	NA	NA	406.95		0.0	*
4Q13		10/2/2013	NE	27.94	NA	NA	NA	406.50		0.0	*
P-82C											
1Q11	434.16	1/13/2011	NE	24.73	NA	NA	NA	409.43	351.39 - 349.39 (82.77 - 84.77)	NA	*
2Q11		4/1/2011	NE	24.87	NA	NA	NA	409.29		NA	*
3Q11		7/5/2011	NE	22.75	NA	NA	NA	411.41		NA	*
4Q11		10/5/2011	NE	23.81	NA	NA	NA	410.35		NA	*
1Q12		1/3/2012	NE	25.26	NA	NA	NA	408.90		0.0	*
2Q12		4/2/2012	NE	26.61	NA	NA	NA	407.55		0.0	*
3Q12		7/2/2012	NE	27.11	NA	NA	NA	407.05		0.0	*
4Q12		10/2/2012	NE	28.85	NA	NA	NA	405.31		0.0	*
1Q13		1/3/2013	NE	29.86	NA	NA	NA	404.30		0.0	*
2Q13		4/2/2013	NE	30.54	NA	NA	NA	403.62		0.8	*
3Q13		7/2/2013	NE	27.51	NA	NA	NA	406.65		0.0	*
4Q13		10/2/2013	NE	27.95	NA	NA	NA	406.21		0.0	*
P-82D											
1Q11	434.85	1/13/2011	NE	25.48	NA	NA	NA	409.37	323.43 - 321.43 (111.42 - 113.42)	NA	*
2Q11		4/1/2011	NE	25.63	NA	NA	NA	409.22		NA	*
3Q11		7/5/2011	NE	23.54	NA	NA	NA	411.31		NA	*
4Q11		10/5/2011	NE	24.56	NA	NA	NA	410.29		NA	*
1Q12		1/3/2012	NE	26.06	NA	NA	NA	408.79		0.0	*
2Q12		4/2/2012	NE	27.37	NA	NA	NA	407.48		0.0	*
3Q12		7/2/2012	NE	27.91	NA	NA	NA	406.94		0.0	*
4Q12		10/2/2012	NE	29.62	NA	NA	NA	405.23		0.0	*
1Q13		1/3/2013	NE	30.65	NA	NA	NA	404.20		0.0	*
2Q13		4/2/2013	NE	31.31	NA	NA	NA	403.54		0.2	*
3Q13		7/2/2013	NE	28.24	NA	NA	NA	406.61		0.0	*
4Q13		10/2/2013	NE	28.74	NA	NA	NA	406.11		0.0	*
P-83A											
1Q11	445.23	1/13/2011	NE	37.93	NA	NA	NA	407.30	398.58 - 383.58 (46.65 - 61.65)	NA	*
2Q11		4/1/2011	NE	38.42	NA	NA	NA	406.81		NA	*
3Q11		7/5/2011	NE	36.25	NA	NA	NA	408.98		NA	*
4Q11		10/6/2011	NE	37.41	NA	NA	NA	407.82		NA	*
1Q12		1/3/2012	NE	38.31	NA	NA	NA	406.92		NA	*
2Q12		4/2/2012	NE	39.85	NA	NA	NA	405.38		0.0	*
3Q12		7/2/2012	NE	40.50	NA	NA	NA	404.73		0.0	*
4Q12		10/1/2012	NE	42.29	NA	NA	NA	402.94		0.0	*
1Q13		1/3/2013	NE	43.85	NA	NA	NA	401.38		0.0	*
2Q13		4/2/2013	NE	44.75	NA	NA	NA	400.48		0.0	*
3Q13		7/3/2013	NE	43.44	NA	NA	NA	401.79		0.0	*
4Q13		10/1/2013	NE	43.55	NA	NA	NA	401.68		0.2	*
P-83B											
1Q11	445.47	1/13/2011	NE	38.20	NA	NA	NA	407.27	375.82 - 373.82 (69.65 - 71.65)	NA	*
2Q11		4/1/2011	NE	38.69	NA	NA	NA	406.78		NA	*
3Q11		7/5/2011	NE	36.57	NA	NA	NA	408.90		NA	*
4Q11		10/6/2011	NE	37.68	NA	NA	NA	407.79		NA	*
1Q12		1/3/2012	NE	38.58	NA	NA	NA	406.89		NA	*
2Q12		4/2/2012	NE	40.13	NA	NA	NA	405.34		0.0	*
3Q12		7/2/2012	NE	40.85	NA	NA	NA	404.62		0.0	*
4Q12		10/1/2012	NE	42.57	NA	NA	NA	402.90		0.0	*
1Q13		1/3/2013	NE	44.13	NA	NA	NA	401.34		0.0	*
2Q13		4/2/2013	NE	44.99	NA	NA	NA	400.48		0.0	*
3Q13		7/3/2013	NE	43.71	NA	NA	NA	401.76		0.0	*
4Q13		10/1/2013	NE	43.80	NA	NA	NA	401.67		0.2	*
P-83C											
1Q11	445.64	1/13/2011	NE	38.68	NA	NA	NA	406.96	353.25 - 351.25 (92.39 - 94.39)	NA	*
2Q11		4/1/2011	NE	38.85	NA	NA	NA	406.79		NA	*
3Q11		7/5/2011	NE	37.02	NA	NA	NA	408.62		NA	*
4Q11		10/6/2011	NE	38.15	NA	NA	NA	407.49		NA	*
1Q12		1/3/2012	NE	39.05	NA	NA	NA	406.59		NA	*
2Q12		4/2/2012	NE	40.61	NA	NA	NA	405.03		0.0	*
3Q12		7/2/2012	NE	40.96	NA	NA	NA	404.68		0.0	*
4Q12		10/1/2012	NE	43.04	NA	NA	NA	402.60		0.0	*
1Q13		1/3/2013	NE	44.59	NA	NA	NA	401.05		0.0	*
2Q13		4/2/2013	NE	45.41	NA	NA	NA	400.23		0.0	*
3Q13		7/3/2013	NE	44.17	NA	NA	NA	401.47		0.0	*
4Q13		10/1/2013	NE	44.27	NA	NA	NA	401.37		0.6	*

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TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-83D											
1Q11	445.55	1/13/2011	NE	38.59	NA	NA	NA	406.96	311.84 - 309.84 (133.71 - 135.71)	NA	*
2Q11		4/1/2011	NE	38.31	NA	NA	NA	407.24		NA	*
3Q11		7/5/2011	NE	36.98	NA	NA	NA	408.57		NA	*
4Q11		10/6/2011	NE	38.07	NA	NA	NA	407.48		NA	*
1Q12		1/3/2012	NE	39.01	NA	NA	NA	406.54		NA	*
2Q12		4/2/2012	NE	40.53	NA	NA	NA	405.02		0.0	*
3Q12		7/2/2012	NE	40.12	NA	NA	NA	405.43		0.0	*
4Q12		10/1/2012	NE	42.98	NA	NA	NA	402.57		0.0	*
1Q13		1/3/2013	NE	44.54	NA	NA	NA	401.01		0.0	*
2Q13		4/2/2013	NE	45.38	NA	NA	NA	400.17		0.0	*
3Q13		7/3/2013	NE	44.12	NA	NA	NA	401.43		0.0	*
4Q13		10/1/2013	NE	44.21	NA	NA	NA	401.34		0.1	*
P-84A											
1Q11	446.39	1/13/2011	NE	39.55	NA	NA	NA	406.84	397.89 - 382.89 (48.50 - 63.50)	NA	*
2Q11		4/25/2011	NE	40.11	NA	NA	NA	406.28		NA	*
3Q11		7/5/2011	NE	38.58	NA	NA	NA	407.81		NA	*
4Q11		10/6/2011	NE	34.36	NA	NA	NA	412.03		NA	*
1Q12		1/5/2012	NE	39.49	NA	NA	NA	406.90		1.3	*
2Q12		4/3/2012	NE	40.70	NA	NA	NA	405.69		0.0	*
3Q12		7/5/2012	NE	41.40	NA	NA	NA	404.99		0.0	*
4Q12		10/2/2012	NE	43.10	NA	NA	NA	403.29		0.0	*
1Q13		1/4/2013	NE	44.20	NA	NA	NA	402.19		0.0	*
2Q13		4/3/2013	NE	45.51	NA	NA	NA	400.88		0.0	*
3Q13		7/5/2013	NE	43.85	NA	NA	NA	402.54		0.0	*
4Q13		10/4/2013	NE	43.56	NA	NA	NA	402.83		0.2	*
P-84B											
1Q11	446.10	1/13/2011	NE	39.27	NA	NA	NA	406.83	372.60 - 370.60 (73.50 - 75.50)	NA	*
2Q11		4/25/2011	NE	39.85	NA	NA	NA	406.25		NA	*
3Q11		7/5/2011	NE	38.32	NA	NA	NA	407.78		NA	*
4Q11		10/6/2011	NE	38.09	NA	NA	NA	408.01		NA	*
1Q12		1/5/2012	NE	39.23	NA	NA	NA	406.87		0.1	*
2Q12		4/3/2012	NE	40.43	NA	NA	NA	405.67		0.0	*
3Q12		7/5/2012	NE	41.43	NA	NA	NA	404.67		0.0	*
4Q12		10/2/2012	NE	42.84	NA	NA	NA	403.26		0.1	*
1Q13		1/4/2013	NE	43.92	NA	NA	NA	402.18		0.0	*
2Q13		4/3/2013	NE	45.24	NA	NA	NA	400.86		0.0	*
3Q13		7/5/2013	NE	43.59	NA	NA	NA	402.51		0.0	*
4Q13		10/4/2013	NE	43.30	NA	NA	NA	402.80		0.0	*
P-84C											
1Q11	446.13	1/13/2011	NE	39.29	NA	NA	NA	406.84	352.08 - 350.08 (94.05 - 96.05)	NA	*
2Q11		4/25/2011	NE	39.86	NA	NA	NA	406.27		NA	*
3Q11		7/5/2011	NE	38.64	NA	NA	NA	407.49		NA	*
4Q11		10/6/2011	NE	38.41	NA	NA	NA	407.72		NA	*
1Q12		1/5/2012	NE	39.53	NA	NA	NA	406.60		7.3	*
2Q12		4/3/2012	NE	40.75	NA	NA	NA	405.38		0.0	*
3Q12		7/5/2012	NE	41.45	NA	NA	NA	404.68		0.0	*
4Q12		10/2/2012	NE	43.15	NA	NA	NA	402.98		0.0	*
1Q13		1/4/2013	NE	44.39	NA	NA	NA	401.74		0.0	*
2Q13		4/3/2013	NE	45.52	NA	NA	NA	400.61		0.0	*
3Q13		7/5/2013	NE	43.85	NA	NA	NA	402.28		0.0	*
4Q13		10/4/2013	NE	43.62	NA	NA	NA	402.51		0.0	*
P-84D											
1Q11	446.14	1/13/2011	NE	39.31	NA	NA	NA	406.83	324.99 - 322.99 (121.15 - 123.15)	NA	*
2Q11		4/25/2011	NE	39.87	NA	NA	NA	406.27		NA	*
3Q11		7/5/2011	NE	38.68	NA	NA	NA	407.46		NA	*
4Q11		10/6/2011	NE	38.43	NA	NA	NA	407.71		NA	*
1Q12		1/5/2012	NE	39.55	NA	NA	NA	406.59		0.4	*
2Q12		4/3/2012	NE	40.77	NA	NA	NA	405.37		0.0	*
3Q12		7/5/2012	NE	41.46	NA	NA	NA	404.68		0.0	*
4Q12		10/2/2012	NE	43.18	NA	NA	NA	402.96		0.4	*
1Q13		1/4/2013	NE	44.41	NA	NA	NA	401.73		0.0	*
2Q13		4/3/2013	NE	45.52	NA	NA	NA	400.62		0.0	*
3Q13		7/5/2013	NE	44.00	NA	NA	NA	402.14		0.0	*
4Q13		10/4/2013	NE	43.62	NA	NA	NA	402.52		0.0	*
P-88A											
1Q11	443.12	1/14/2011	NE	31.16	NA	NA	NA	411.96	404.72 - 389.72 (38.40 - 53.40)	NA	*
2Q11		4/1/2011	NE	31.36	NA	NA	NA	411.76		NA	*
3Q11		7/5/2011	NE	29.78	NA	NA	NA	413.34		NA	*
4Q11		10/5/2011	NE	29.92	NA	NA	NA	413.20		NA	*
1Q12		1/4/2012	NE	31.18	NA	NA	NA	411.94		0.0	*
2Q12		4/3/2012	NE	32.55	NA	NA	NA	410.57		0.0	*
3Q12		7/2/2012	NE	32.97	NA	NA	NA	410.15		0.0	*
4Q12		10/2/2012	NE	34.58	NA	NA	NA	408.54		0.0	*
1Q13		1/2/2013	NE	35.80	NA	NA	NA	407.32		0.0	*
2Q13		4/2/2013	NE	36.74	NA	NA	NA	406.38		0.0	*
3Q13		7/2/2013	NE	35.05	NA	NA	NA	408.07		0.0	*
4Q13		10/2/2013	NE	34.33	NA	NA	NA	408.79		0.0	*

TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-88B											
1Q11	443.17	1/14/2011	NE	31.37	NA	NA	NA	411.80	371.17 - 369.17 (72.00 - 74.00)	NA	*
2Q11		4/1/2011	NE	31.42	NA	NA	NA	411.75		NA	*
3Q11		7/5/2011	NE	29.71	NA	NA	NA	413.46		NA	*
4Q11		10/5/2011	NE	29.86	NA	NA	NA	413.31		NA	*
1Q12		1/4/2012	NE	31.16	NA	NA	NA	412.01		0.0	*
2Q12		4/3/2012	NE	32.50	NA	NA	NA	410.67		0.0	*
3Q12		7/2/2012	NE	33.01	NA	NA	NA	410.16		0.0	*
4Q12		10/2/2012	NE	34.56	NA	NA	NA	408.61		0.0	*
1Q13		1/2/2013	NE	35.82	NA	NA	NA	407.35		0.0	*
2Q13		4/2/2013	NE	36.79	NA	NA	NA	406.38		0.0	*
3Q13		7/2/2013	NE	35.15	NA	NA	NA	408.02		0.0	*
4Q13		10/2/2013	NE	34.33	NA	NA	NA	408.84		0.0	*
P-88C											
1Q11	443.16	1/14/2011	NE	31.17	NA	NA	NA	411.99	350.86 - 348.86 (92.30 - 94.30)	NA	*
2Q11		4/1/2011	NE	31.38	NA	NA	NA	411.78		NA	*
3Q11		7/5/2011	NE	30.02	NA	NA	NA	413.14		NA	*
4Q11		10/5/2011	NE	30.14	NA	NA	NA	413.02		NA	*
1Q12		1/4/2012	NE	31.44	NA	NA	NA	411.72		0.0	*
2Q12		4/3/2012	NE	32.78	NA	NA	NA	410.38		0.0	*
3Q12		7/2/2012	NE	33.15	NA	NA	NA	410.01		0.0	*
4Q12		10/2/2012	NE	34.83	NA	NA	NA	408.33		0.0	*
1Q13		1/2/2013	NE	36.10	NA	NA	NA	407.06		0.0	*
2Q13		4/2/2013	NE	37.07	NA	NA	NA	406.09		0.5	*
3Q13		7/2/2013	NE	35.44	NA	NA	NA	407.72		0.0	*
4Q13		10/2/2013	NE	34.61	NA	NA	NA	408.55		0.0	*
P-88D											
1Q11	443.23	1/14/2011	NE	31.35	NA	NA	NA	411.88	329.53 - 327.53 (113.70 - 115.70)	NA	*
2Q11		4/1/2011	NE	31.81	NA	NA	NA	411.42		NA	*
3Q11		7/5/2011	NE	30.08	NA	NA	NA	413.15		NA	*
4Q11		10/5/2011	NE	30.25	NA	NA	NA	412.98		NA	*
1Q12		1/4/2012	NE	31.57	NA	NA	NA	411.66		0.0	*
2Q12		4/3/2012	NE	32.91	NA	NA	NA	410.32		0.0	*
3Q12		7/2/2012	NE	33.41	NA	NA	NA	409.82		0.0	*
4Q12		10/2/2012	NE	34.99	NA	NA	NA	408.24		0.0	*
1Q13		1/2/2013	NE	36.23	NA	NA	NA	407.00		0.0	*
2Q13		4/2/2013	NE	37.21	NA	NA	NA	406.02		1.6	*
3Q13		7/2/2013	NE	35.51	NA	NA	NA	407.72		0.0	*
4Q13		10/2/2013	NE	34.72	NA	NA	NA	408.51		0.0	*
P-89B											
1Q11	447.35	1/14/2011	NE	37.78	NA	NA	NA	409.57	369.99 - 367.99 (77.36 - 79.36)	NA	*
2Q11		4/1/2011	NE	37.80	NA	NA	NA	409.55		NA	*
3Q11		7/5/2011	NE	35.99	NA	NA	NA	411.36		NA	*
4Q11		10/6/2011	NE	37.05	NA	NA	NA	410.30		NA	*
1Q12		1/3/2012	NE	38.10	NA	NA	NA	409.25		NA	*
2Q12		4/2/2012	NE	39.30	NA	NA	NA	408.05		0.0	*
3Q12		7/2/2012	NE	40.09	NA	NA	NA	407.26		0.0	*
4Q12		10/1/2012	NE	41.62	NA	NA	NA	405.73		0.0	*
1Q13		1/3/2013	NE	43.23	NA	NA	NA	404.12		0.0	*
2Q13		4/1/2013	NE	43.96	NA	NA	NA	403.39		0.0	*
3Q13		7/3/2013	NE	42.83	NA	NA	NA	404.52		0.0	*
4Q13		10/1/2013	NE	42.67	NA	NA	NA	404.68		25.2	*
P-89C											
1Q11	447.68	1/14/2011	NE	38.10	NA	NA	NA	409.58	350.05 - 348.05 (97.63 - 99.63)	NA	*
2Q11		4/1/2011	NE	38.14	NA	NA	NA	409.54		NA	*
3Q11		7/5/2011	NE	36.33	NA	NA	NA	411.35		NA	*
4Q11		10/6/2011	NE	37.39	NA	NA	NA	410.29		NA	*
1Q12		1/3/2012	NE	38.42	NA	NA	NA	409.26		NA	*
2Q12		4/2/2012	NE	39.63	NA	NA	NA	408.05		0.0	*
3Q12		7/2/2012	NE	40.42	NA	NA	NA	407.26		0.0	*
4Q12		10/1/2012	NE	41.94	NA	NA	NA	405.74		0.0	*
1Q13		1/3/2013	NE	43.58	NA	NA	NA	404.10		0.0	*
2Q13		4/2/2013	NE	44.28	NA	NA	NA	403.40		1.7	*
3Q13		7/3/2013	NE	43.20	NA	NA	NA	404.48		2.3	*
4Q13		10/1/2013	NE	43.02	NA	NA	NA	404.66		0.1	*
P-89D											
1Q11	447.54	1/14/2011	NE	38.11	NA	NA	NA	409.43	307.20 - 305.20 (140.34 - 142.34)	NA	*
2Q11		4/1/2011	NE	38.12	NA	NA	NA	409.42		NA	*
3Q11		7/5/2011	NE	36.23	NA	NA	NA	411.31		NA	*
4Q11		10/6/2011	NE	37.35	NA	NA	NA	410.19		NA	*
1Q12		1/3/2012	NE	38.47	NA	NA	NA	409.07		NA	*
2Q12		4/2/2012	NE	39.56	NA	NA	NA	407.98		0.0	*
3Q12		7/2/2012	NE	40.36	NA	NA	NA	407.18		0.0	*
4Q12		10/1/2012	NE	41.94	NA	NA	NA	405.60		0.0	*
1Q13		1/3/2013	NE	43.52	NA	NA	NA	404.02		0.0	*
2Q13		4/1/2013	NE	44.20	NA	NA	NA	403.34		0.0	*
3Q13		7/3/2013	NE	43.20	NA	NA	NA	404.34		0.0	*
4Q13		10/1/2013	NE	43.01	NA	NA	NA	404.53		0.2	*

TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-91A											
1Q11	447.19	1/14/2011	41.19	41.64	405.55	406.00	0.45	405.91	395.68 - 380.68 (51.52 - 66.52)	NA	*
2Q11		4/1/2011	NE	43.10	NA	NA	NA	404.09		NA	*
3Q11		7/5/2011	NE	40.42	NA	NA	NA	406.77		NA	*
4Q11		10/6/2011	NE	41.63	NA	NA	NA	405.56		NA	*
1Q12		1/3/2012	NE	42.91	NA	NA	NA	404.28		NA	*
2Q12		4/3/2012	NE	44.31	NA	NA	NA	402.88		0.0	*
3Q12		7/2/2012	NE	45.76	NA	NA	NA	401.43		0.0	*
4Q12		10/1/2012	NE	46.72	NA	NA	NA	400.47		0.5	*
1Q13		1/4/2013	NE	48.92	NA	NA	NA	398.27		0.0	*
2Q13		4/1/2013	NE	49.58	NA	NA	NA	397.61		0.4	*
3Q13		7/3/2013	NE	48.64	NA	NA	NA	398.55		182.3	*
4Q13		10/2/2013	NE	47.88	NA	NA	NA	399.31		14.8	*
P-91B											
1Q11	447.26	1/14/2011	NE	41.41	NA	NA	NA	405.85	372.57 - 370.57 (74.69 - 76.69)	NA	*
2Q11		4/1/2011	NE	43.28	NA	NA	NA	403.98		NA	*
3Q11		7/5/2011	NE	40.62	NA	NA	NA	406.64		NA	*
4Q11		10/6/2011	NE	41.53	NA	NA	NA	405.73		NA	*
1Q12		1/3/2012	NE	43.00	NA	NA	NA	404.26		NA	*
2Q12		4/3/2012	NE	44.11	NA	NA	NA	403.15		0.0	*
3Q12		7/2/2012	NE	45.74	NA	NA	NA	401.52		0.0	*
4Q12		10/1/2012	NE	46.79	NA	NA	NA	400.47		0.6	*
1Q13		1/4/2013	NE	49.10	NA	NA	NA	398.16		0.0	*
2Q13		4/1/2013	NE	49.70	NA	NA	NA	397.56		0.0	*
3Q13		7/3/2013	NE	48.72	NA	NA	NA	398.54		2.5	*
4Q13		10/2/2013	NE	48.04	NA	NA	NA	399.22		0.0	*
P-91C											
1Q11	447.02	1/14/2011	NE	41.18	NA	NA	NA	405.84	352.29 - 350.2 (94.73 - 96.73)	NA	*
2Q11		4/1/2011	NE	43.00	NA	NA	NA	404.02		NA	*
3Q11		7/5/2011	NE	40.35	NA	NA	NA	406.67		NA	*
4Q11		10/6/2011	NE	41.47	NA	NA	NA	405.55		NA	*
1Q12		1/3/2012	NE	42.74	NA	NA	NA	404.28		NA	*
2Q12		4/3/2012	NE	44.11	NA	NA	NA	402.91		0.0	*
3Q12		7/2/2012	NE	45.53	NA	NA	NA	401.49		0.0	*
4Q12		10/1/2012	NE	46.54	NA	NA	NA	400.48		0.0	*
1Q13		1/4/2013	NE	48.84	NA	NA	NA	398.18		0.0	*
2Q13		4/2/2013	NE	49.40	NA	NA	NA	397.62		0.2	*
3Q13		7/3/2013	NE	48.46	NA	NA	NA	398.56		0.0	*
4Q13		10/2/2013	NE	47.77	NA	NA	NA	399.25		0.6	*
P-91D											
1Q11	447.02	1/14/2011	NE	41.14	NA	NA	NA	405.88	278.70 - 276.70 (168.32 - 170.32)	NA	*
2Q11		4/1/2011	NE	42.97	NA	NA	NA	404.05		NA	*
3Q11		7/5/2011	NE	40.27	NA	NA	NA	406.75		NA	*
4Q11		10/6/2011	NE	41.44	NA	NA	NA	405.58		NA	*
1Q12		1/3/2012	NE	42.73	NA	NA	NA	404.29		NA	*
2Q12		4/3/2012	NE	44.35	NA	NA	NA	402.67		0.0	*
3Q12		7/2/2012	NE	45.55	NA	NA	NA	401.47		0.0	*
4Q12		10/1/2012	NE	46.53	NA	NA	NA	400.49		0.0	*
1Q13		1/4/2013	NE	48.82	NA	NA	NA	398.20		0.0	*
2Q13		4/1/2013	NE	49.42	NA	NA	NA	397.60		0.0	*
3Q13		7/3/2013	NE	48.46	NA	NA	NA	398.56		6.6	*
4Q13		10/2/2013	NE	47.76	NA	NA	NA	399.26		1.9	*
P-92A											
1Q11	446.12	1/14/2011	39.43	39.57	406.55	406.69	0.14	406.66	398.55 - 383.55 (47.57 - 62.57)	NA	*
2Q11		4/1/2011	NE	41.02	NA	NA	NA	405.10		NA	*
3Q11		7/5/2011	38.55	38.59	407.53	407.57	0.04	407.56		NA	*
4Q11		10/6/2011	39.70	39.76	406.36	406.42	0.06	406.41		NA	*
1Q12		1/4/2012	41.05	41.07	405.05	405.07	0.02	405.07		0.0	*
2Q12		4/3/2012	NE	42.77	NA	NA	NA	403.35		0.0	*
3Q12		7/3/2012	44.06	44.08	402.04	402.06	0.02	402.06		0.0	*
4Q12		10/1/2012	NE	45.04	NA	NA	NA	401.08		3.5	*
1Q13		1/4/2013	46.83	46.84	399.28	399.29	0.01	399.29		0.0	*
2Q13		4/1/2013	47.59	47.71	398.41	398.53	0.12	398.51		105.0	
3Q13		7/5/2013	46.31	46.40	399.72	399.81	0.09	399.79		17.0	*
4Q13		10/2/2013	45.36	45.42	400.70	400.76	0.06	400.75		55.1	*
P-92B											
1Q11	446.07	1/14/2011	NE	39.41	NA	NA	NA	406.66	372.42 - 370.42 (73.65 - 75.65)	NA	*
2Q11		4/1/2011	NE	40.92	NA	NA	NA	405.15		NA	*
3Q11		7/5/2011	NE	38.51	NA	NA	NA	407.56		NA	*
4Q11		10/6/2011	NE	39.68	NA	NA	NA	406.39		NA	*
1Q12		1/4/2012	NE	41.02	NA	NA	NA	405.05		0.1	*
2Q12		4/3/2012	NE	42.74	NA	NA	NA	403.33		0.0	*
3Q12		7/3/2012	NE	44.02	NA	NA	NA	402.05		0.0	*
4Q12		10/1/2012	NE	44.97	NA	NA	NA	401.10		3.4	*
1Q13		1/4/2013	NE	46.80	NA	NA	NA	399.27		0.0	*
2Q13		4/1/2013	NE	47.57	NA	NA	NA	398.50		1.9	*
3Q13		7/5/2013	NE	46.29	NA	NA	NA	399.78		0.0	*
4Q13		10/2/2013	NE	45.31	NA	NA	NA	400.76		0.3	*

TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-92C											
3Q11	445.98	7/5/2011	NE	38.33	NA	NA	NA	407.65	352.54 - 350.54 (93.44 - 95.44)	NA	*
4Q11		10/6/2011	NE	39.63	NA	NA	NA	406.35		NA	*
1Q12		1/4/2012	NE	39.95	NA	NA	NA	406.03		0.1	*
2Q12		4/3/2012	NE	42.61	NA	NA	NA	403.37		0.0	*
3Q12		7/3/2012	NE	44.07	NA	NA	NA	401.91		0.0	*
4Q12		10/1/2012	NE	45.04	NA	NA	NA	400.94		0.0	*
1Q13		1/4/2013	NE	46.83	NA	NA	NA	399.15		0.0	*
2Q13		4/1/2013	NE	47.47	NA	NA	NA	398.51		0.0	*
3Q13		7/5/2013	NE	46.31	NA	NA	NA	399.67		0.4	*
4Q13		10/2/2013	NE	45.33	NA	NA	NA	400.65		0.8	*
1Q11		1/14/2011	NE	39.32	NA	NA	NA	406.66		NA	*
2Q11		4/1/2011	NE	40.77	NA	NA	NA	405.21		NA	*
P-92D											
1Q11	445.90	1/14/2011	NE	39.24	NA	NA	NA	406.66	304.90 - 302.90 (141.00 - 143.00)	NA	*
2Q11		4/1/2011	NE	40.73	NA	NA	NA	405.17		NA	*
3Q11		7/5/2011	NE	38.33	NA	NA	NA	407.57		NA	*
4Q11		10/6/2011	NE	39.57	NA	NA	NA	406.33		NA	*
1Q12		1/4/2012	NE	39.89	NA	NA	NA	406.01		0.0	*
2Q12		4/3/2012	NE	42.67	NA	NA	NA	403.23		0.0	*
3Q12		7/3/2012	NE	43.96	NA	NA	NA	401.94		0.0	*
4Q12		10/1/2012	NE	44.82	NA	NA	NA	401.08		0.0	*
1Q13		1/4/2013	NE	46.72	NA	NA	NA	399.18		0.0	*
2Q13		4/1/2013	NE	47.47	NA	NA	NA	398.43		0.0	*
3Q13		7/5/2013	NE	46.22	NA	NA	NA	399.68		0.0	*
4Q13		10/2/2013	NE	45.21	NA	NA	NA	400.69		0.1	*
P-93A											
1Q11	446.58	1/14/2011	NE	40.97	NA	NA	NA	405.61	398.41 - 383.41 (48.17 - 63.17)	NA	*
2Q11		4/25/2011	NE	41.80	NA	NA	NA	404.78		NA	*
3Q11		7/5/2011	NE	39.40	NA	NA	NA	407.18		NA	*
4Q11		10/6/2011	NE	39.16	NA	NA	NA	407.42		NA	*
1Q12		1/4/2012	NE	41.32	NA	NA	NA	405.26		0.0	*
2Q12		4/3/2012	NE	42.72	NA	NA	NA	403.86		0.0	*
3Q12		7/5/2012	NE	42.95	NA	NA	NA	403.63		0.0	*
4Q12		10/2/2012	NE	44.72	NA	NA	NA	401.86		0.0	*
1Q13		1/8/2013	NE	45.73	NA	NA	NA	400.85		0.0	*
2Q13		4/2/2013	NE	46.58	NA	NA	NA	400.00		0.0	*
3Q13		7/5/2013	NE	43.68	NA	NA	NA	402.90		0.0	*
4Q13		10/2/2013	NE	44.00	NA	NA	NA	402.58		0.1	*
P-93B											
1Q11	446.46	1/14/2011	NE	41.03	NA	NA	NA	405.43	371.86 - 369.86 (74.60 - 76.60)	NA	*
2Q11		4/25/2011	NE	41.69	NA	NA	NA	404.77		NA	*
3Q11		7/5/2011	NE	39.44	NA	NA	NA	407.02		NA	*
4Q11		10/6/2011	NE	39.19	NA	NA	NA	407.27		NA	*
1Q12		1/4/2012	NE	41.38	NA	NA	NA	405.08		0.0	*
2Q12		4/3/2012	NE	42.80	NA	NA	NA	403.66		0.8	*
3Q12		7/5/2012	NE	42.86	NA	NA	NA	403.60		0.0	*
4Q12		10/2/2012	NE	44.80	NA	NA	NA	401.66		0.0	*
1Q13		1/8/2013	NE	45.77	NA	NA	NA	400.69		0.0	*
2Q13		4/2/2013	NE	46.70	NA	NA	NA	399.76		0.0	*
3Q13		7/5/2013	NE	43.71	NA	NA	NA	402.75		0.0	*
4Q13		10/2/2013	NE	44.09	NA	NA	NA	402.37		18.4	*
P-93C											
1Q11	446.51	1/14/2011	NE	40.91	NA	NA	NA	405.60	352.26 - 350.26 (94.26 - 96.26)	NA	*
2Q11		4/25/2011	NE	41.70	NA	NA	NA	404.81		NA	*
3Q11		7/5/2011	NE	39.32	NA	NA	NA	407.19		NA	*
4Q11		10/6/2011	NE	39.15	NA	NA	NA	407.36		NA	*
1Q12		1/4/2012	NE	41.27	NA	NA	NA	405.24		1.5	*
2Q12		4/3/2012	NE	42.62	NA	NA	NA	403.89		0.5	*
3Q12		7/5/2012	NE	42.98	NA	NA	NA	403.53		0.3	*
4Q12		10/2/2012	NE	44.68	NA	NA	NA	401.83		0.2	*
1Q13		1/8/2013	NE	45.66	NA	NA	NA	400.85		0.0	*
2Q13		4/2/2013	NE	46.51	NA	NA	NA	400.00		0.0	*
3Q13		7/5/2013	NE	43.59	NA	NA	NA	402.92		0.0	*
4Q13		10/2/2013	NE	43.94	NA	NA	NA	402.57		0.3	*
P-93D											
1Q11	446.36	1/14/2011	NE	40.81	NA	NA	NA	405.55	320.92 - 318.92 (125.44 - 127.44)	NA	*
2Q11	446.89	4/25/2011	NE	41.84	NA	NA	NA	405.05	321.14 - 319.14 (125.75 - 127.75)	NA	*
3Q11		7/5/2011	NE	39.46	NA	NA	NA	407.43		NA	*
4Q11		10/6/2011	NE	39.22	NA	NA	NA	407.67		NA	*
1Q12		1/4/2012	NE	41.41	NA	NA	NA	405.48		0.1	*
2Q12		4/3/2012	NE	42.81	NA	NA	NA	404.08		0.0	*
3Q12		7/5/2012	NE	43.02	NA	NA	NA	403.87		0.0	*
4Q12		10/2/2012	NE	44.43	NA	NA	NA	402.46		0.6	*
1Q13		1/8/2013	NE	45.84	NA	NA	NA	401.05		0.0	*
2Q13		4/2/2013	NE	46.67	NA	NA	NA	400.22		0.0	*
3Q13		7/5/2013	NE	43.75	NA	NA	NA	403.14		0.0	*
4Q13		10/2/2013	NE	44.06	NA	NA	NA	402.83		0.2	*

TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-94											
1Q11	444.65	1/13/2011	NE	34.66	NA	NA	NA	409.99	398.80 - 383.80 (45.85 - 60.85)	NA	*
2Q11		4/1/2011	NE	34.27	NA	NA	NA	410.38		NA	*
3Q11		7/5/2011	NE	32.14	NA	NA	NA	412.51		NA	*
4Q11		10/6/2011	NE	33.53	NA	NA	NA	411.12		NA	*
1Q12		1/3/2012	NE	34.75	NA	NA	NA	409.90		NA	*
2Q12		4/2/2012	NE	35.68	NA	NA	NA	408.97		0.1	*
3Q12		7/2/2012	NE	36.20	NA	NA	NA	408.45		0.0	*
4Q12		10/1/2012	NE	38.02	NA	NA	NA	406.63		0.0	*
1Q13		1/3/2013	NE	39.75	NA	NA	NA	404.90		0.0	*
2Q13		4/2/2013	NE	40.64	NA	NA	NA	404.01		0.0	*
3Q13		7/3/2013	NE	38.49	NA	NA	NA	406.16		0.0	*
4Q13		10/1/2013	NE	39.17	NA	NA	NA	405.48		2.6	*
P-95											
1Q11	443.44	1/13/2011	NE	29.68	NA	NA	NA	413.76	406.92 - 391.92 (36.52 - 51.52)	NA	*
2Q11		4/1/2011	NE	29.75	NA	NA	NA	413.69		NA	*
3Q11		7/5/2011	NE	28.12	NA	NA	NA	415.32		NA	*
4Q11		10/5/2011	NE	28.24	NA	NA	NA	415.20		NA	*
1Q12		1/5/2012	NE	29.50	NA	NA	NA	413.94		0.0	*
2Q12		4/3/2012	NE	30.58	NA	NA	NA	412.86		0.0	*
3Q12		7/3/2012	NE	31.04	NA	NA	NA	412.40		0.0	*
4Q12		10/2/2012	NE	32.52	NA	NA	NA	410.92		0.0	*
1Q13		1/2/2013	NE	33.87	NA	NA	NA	409.57		0.0	*
2Q13		4/2/2013	NE	34.91	NA	NA	NA	408.53		0.2	*
3Q13		7/2/2013	NE	33.31	NA	NA	NA	410.13		0.0	*
4Q13		10/2/2013	NE	32.59	NA	NA	NA	410.85		0.0	*
P-102											
1Q11	444.91	1/3/2011	NE	32.61	NA	NA	NA	412.30	402.16 - 382.16 (42.75 - 62.75)	NA	*
2Q11		4/1/2011	NE	32.41	NA	NA	NA	412.50		NA	*
3Q11		7/5/2011	NE	30.91	NA	NA	NA	414.00		NA	*
4Q11		10/6/2011	NE	31.47	NA	NA	NA	413.44		NA	*
1Q12		1/4/2012	NE	32.45	NA	NA	NA	412.46		0.0	*
2Q12		4/3/2012	NE	33.41	NA	NA	NA	411.50		0.0	*
3Q12		7/2/2012	NE	34.10	NA	NA	NA	410.81		0.0	*
4Q12		10/2/2012	NE	35.69	NA	NA	NA	409.22		0.0	*
1Q13		1/2/2013	NE	36.98	NA	NA	NA	407.93		0.0	*
2Q13		4/2/2013	NE	37.95	NA	NA	NA	406.96		0.2	*
3Q13		7/2/2013	NE	36.53	NA	NA	NA	408.38		0.0	*
4Q13		10/2/2013	NE	36.24	NA	NA	NA	408.67		20.0	*
P-114											
1Q11	432.41	1/13/2011	NE	26.84	NA	NA	NA	405.57	399.73 - 379.73 (32.67 - 52.67)	NA	*
2Q11		4/25/2011	NE	26.61	NA	NA	NA	405.80		NA	*
3Q11		7/5/2011	NE	23.48	NA	NA	NA	408.93		NA	*
4Q11		10/5/2011	NE	24.59	NA	NA	NA	407.82		NA	*
1Q12		1/3/2012	NE	26.88	NA	NA	NA	405.53		0.0	*
2Q12		4/2/2012	NE	28.33	NA	NA	NA	404.08		0.0	*
3Q12		7/3/2012	NE	28.39	NA	NA	NA	404.02		0.0	*
4Q12		10/2/2012	NE	30.51	NA	NA	NA	401.90		0.0	*
1Q13		1/7/2013	NE	30.22	NA	NA	NA	402.19		0.0	*
2Q13		4/2/2013	NE	31.99	NA	NA	NA	400.42		0.9	*
3Q13		7/2/2013	NE	27.65	NA	NA	NA	404.76		0.3	*
4Q13		10/2/2013	NE	29.03	NA	NA	NA	403.38		0.0	*
P-115											
1Q11	433.31	1/13/2011	NE	27.88	NA	NA	NA	405.43	401.01 - 381.01 (32.30 - 52.30)	NA	*
2Q11		4/25/2011	NE	27.38	NA	NA	NA	405.93		NA	*
3Q11		7/5/2011	NM	NM	NA	NA	NA	NA		NM	
4Q11		10/6/2011	NE	25.67	NA	NA	NA	407.64		NA	*
1Q12		1/3/2012	NE	27.86	NA	NA	NA	405.45		0.0	*
2Q12		4/2/2012	NE	29.30	NA	NA	NA	404.01		0.0	*
3Q12		7/3/2012	NE	29.35	NA	NA	NA	403.96		0.0	*
4Q12		10/2/2012	NE	31.51	NA	NA	NA	401.80		0.0	*
1Q13		1/7/2013	NE	32.60	NA	NA	NA	400.71		0.0	
2Q13		4/2/2013	NE	32.92	NA	NA	NA	400.39		0.5	
3Q13		7/2/2013	NE	28.30	NA	NA	NA	405.01		0.5	*
4Q13		10/2/2013	NE	29.99	NA	NA	NA	403.32		0.0	*
P-116											
1Q11	436.45	1/13/2011	NE	31.35	NA	NA	NA	405.10	399.01 - 379.01 (37.44 - 57.44)	NA	*
2Q11		4/25/2011	NE	30.76	NA	NA	NA	405.69		NA	*
3Q11		7/5/2011	NE	27.41	NA	NA	NA	409.04		NA	*
4Q11		10/5/2011	NE	28.96	NA	NA	NA	407.49		NA	*
1Q12		1/3/2012	NE	31.35	NA	NA	NA	405.10		0.0	*
2Q12		4/2/2012	NE	32.72	NA	NA	NA	403.73		0.0	*
3Q12		7/3/2012	NE	32.80	NA	NA	NA	403.65		0.0	*
4Q12		10/2/2012	NE	34.97	NA	NA	NA	401.48		0.0	*
1Q13		1/7/2013	NE	36.10	NA	NA	NA	400.35		0.0	*
2Q13		4/2/2013	NE	36.32	NA	NA	NA	400.13		3.9	*
3Q13		7/2/2013	NE	31.49	NA	NA	NA	404.96		0.0	*
4Q13		10/2/2013	NE	33.43	NA	NA	NA	403.02		18.3	*

TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-117											
1Q11	432.67	1/13/2011	NE	27.62	NA	NA	NA	405.05	399.74 - 379.74 (32.93 - 52.93)	NA	*
2Q11		4/25/2011	NE	26.96	NA	NA	NA	405.71		NA	*
3Q11		7/5/2011	NE	23.54	NA	NA	NA	409.13		NA	*
4Q11		10/5/2011	NE	25.16	NA	NA	NA	407.51		NA	*
1Q12		1/3/2012	NE	27.56	NA	NA	NA	405.11		0.0	*
2Q12		4/2/2012	NE	29.00	NA	NA	NA	403.67		0.0	*
3Q12		7/3/2012	NE	29.00	NA	NA	NA	403.67		0.0	*
4Q12		10/2/2012	NE	31.19	NA	NA	NA	401.48		0.0	*
1Q13		1/7/2013	NE	32.45	NA	NA	NA	400.22		0.0	*
2Q13		4/2/2013	NE	32.51	NA	NA	NA	400.16		75.8	*
3Q13		7/2/2013	NE	27.61	NA	NA	NA	405.06		0.0	*
4Q13		10/2/2013	NE	29.63	NA	NA	NA	403.04		0.0	*
P-118											
1Q11	431.32	1/13/2011	NE	26.95	NA	NA	NA	404.37	400.20 - 384.27 (31.12 - 47.05)	NA	*
2Q11		4/1/2011	NE	25.75	NA	NA	NA	405.57		NA	*
3Q11		7/5/2011	NE	22.11	NA	NA	NA	409.21		NA	*
4Q11		10/5/2011	NE	34.28	NA	NA	NA	397.04		NA	
1Q12		1/3/2012	NE	26.78	NA	NA	NA	404.54		0.0	*
2Q12		4/2/2012	NE	28.13	NA	NA	NA	403.19		0.0	*
3Q12		7/3/2012	NE	28.12	NA	NA	NA	403.20		0.0	*
4Q12		10/2/2012	NE	30.40	NA	NA	NA	400.92		0.0	*
1Q13		1/7/2013	NE	31.60	NA	NA	NA	399.72		0.0	
2Q13		4/2/2013	NE	31.53	NA	NA	NA	399.79		0.2	
3Q13		7/2/2013	NE	26.10	NA	NA	NA	405.22		0.0	*
4Q13		10/2/2013	NE	28.82	NA	NA	NA	402.50		0.0	*
P-119											
1Q11	431.92	1/13/2011	NE	25.64	NA	NA	NA	406.28	401.25 - 385.32 (30.67 - 46.60)	NA	*
2Q11		4/25/2011	NE	25.77	NA	NA	NA	406.15		NA	*
3Q11		7/5/2011	NE	23.06	NA	NA	NA	408.86		NA	*
4Q11		10/5/2011	NE	23.70	NA	NA	NA	408.22		NA	*
1Q12		1/3/2012	NE	29.80	NA	NA	NA	402.12		0.0	*
2Q12		4/2/2012	NE	27.21	NA	NA	NA	404.71		0.0	*
3Q12		7/3/2012	NE	27.40	NA	NA	NA	404.52		0.0	*
4Q12		10/2/2012	NE	29.45	NA	NA	NA	402.47		0.0	*
1Q13		1/7/2013	NE	30.46	NA	NA	NA	401.46		0.0	*
2Q13		4/2/2013	NE	31.10	NA	NA	NA	400.82		0.4	
3Q13		7/2/2013	NE	27.48	NA	NA	NA	404.44		0.0	*
4Q13		10/2/2013	NE	28.09	NA	NA	NA	403.83		0.0	*
P-120											
1Q11	432.78	1/13/2011	NE	26.14	NA	NA	NA	406.64	401.40 - 385.47 (31.38 - 47.31)	NA	*
2Q11		4/1/2011	NE	25.82	NA	NA	NA	406.96		NA	*
3Q11		7/5/2011	NE	22.85	NA	NA	NA	409.93		NA	*
4Q11		10/5/2011	NE	24.15	NA	NA	NA	408.63		NA	*
1Q12		1/3/2012	NE	26.22	NA	NA	NA	406.56		0.0	*
2Q12		4/4/2012	NE	27.58	NA	NA	NA	405.20		0.0	*
3Q12		7/3/2012	NE	27.84	NA	NA	NA	404.94		0.0	*
4Q12		10/2/2012	NE	29.90	NA	NA	NA	402.88		0.0	*
1Q13		1/7/2013	NE	31.00	NA	NA	NA	401.78		0.0	*
2Q13		4/2/2013	NE	31.42	NA	NA	NA	401.36		0.0	
3Q13		7/2/2013	NE	27.26	NA	NA	NA	405.52		0.0	*
4Q13		10/2/2013	NE	28.43	NA	NA	NA	404.35		0.0	*
P-129											
1Q11	432.46	1/1/2011	NE	29.82	NA	NA	NA	402.64	400.49 - 384.56 (31.97 - 47.90)	NA	*
2Q11		4/1/2011	NE	26.85	NA	NA	NA	405.61		NA	*
3Q11		7/5/2011	NE	22.74	NA	NA	NA	409.72		NA	*
4Q11		10/5/2011	NE	26.57	NA	NA	NA	405.89		NA	*
1Q12		1/5/2012	NE	29.31	NA	NA	NA	403.15		0.5	*
2Q12		4/2/2012	NE	30.31	NA	NA	NA	402.15		0.0	*
3Q12		7/3/2012	NE	30.33	NA	NA	NA	402.13		0.0	*
4Q12		10/2/2012	NE	32.84	NA	NA	NA	399.62		0.0	
1Q13		1/7/2013	NE	34.12	NA	NA	NA	398.34		0.0	
2Q13		4/2/2013	NE	33.30	NA	NA	NA	399.16		3.5	
3Q13		7/2/2013	NE	26.81	NA	NA	NA	405.65		0.0	*
4Q13		10/2/2013	NE	31.35	NA	NA	NA	401.11		0.0	*
GP-9-PZ											
1Q11	442.41	1/14/2011	NE	37.53	NA	NA	NA	404.88	404.81 - 394.81 (37.60 - 47.60)	NA	*
2Q11		4/25/2011	NE	38.85	NA	NA	NA	403.56		NA	
3Q11		7/5/2011	NM	NM	NA	NA	NA	NA		NM	
4Q11		10/6/2011	NE	36.65	NA	NA	NA	405.76		NA	*
1Q12		1/4/2012	NE	38.13	NA	NA	NA	404.28		40.0	
2Q12		4/3/2012	NE	39.51	NA	NA	NA	402.90		0.0	
3Q12		7/5/2012	NE	39.62	NA	NA	NA	402.79		0.0	
4Q12		10/2/2012	NE	41.32	NA	NA	NA	401.09		0.0	
1Q13		1/4/2013	NE	42.21	NA	NA	NA	400.20		0.0	
2Q13		4/2/2013	NE	42.90	NA	NA	NA	399.51		0.0	
3Q13		7/5/2013	NE	40.22	NA	NA	NA	402.19		0.0	
4Q13		10/2/2013	NE	40.98	NA	NA	NA	401.43		1.1	

TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
ROST-3-MW (ROST-3-PZ)											
1Q11	442.29	1/13/2011	NE	37.29	NA	NA	NA	405.00	402.29 - 392.29 (40.00 - 50.00)	NA	*
2Q11		4/25/2011	NE	38.21	NA	NA	NA	404.08		NA	*
3Q11		7/5/2011	NE	35.83	NA	NA	NA	406.46		NA	*
4Q11		10/5/2011	NE	35.18	NA	NA	NA	407.11		NA	*
1Q12		1/3/2012	NE	37.33	NA	NA	NA	404.96		0.0	*
2Q12		4/2/2012	NE	38.57	NA	NA	NA	403.72		0.0	*
3Q12		7/2/2012	NE	38.84	NA	NA	NA	403.45		0.0	*
4Q12		10/1/2012	NE	40.55	NA	NA	NA	401.74		0.0	
1Q13	442.29	1/2/2013	NE	41.50	NA	NA	NA	400.79	404.48 - 394.48 (37.81 - 47.81)	0.0	2" Well Installed to replace ROST-3-PZ
2Q13		4/1/2013	NE	42.26	NA	NA	NA	400.03		5.6	
3Q13		7/1/2013	NE	39.83	NA	NA	NA	402.46		147.0	
4Q13		10/1/2013	NE	39.98	NA	NA	NA	402.31		267.2	
ROST-4-PZ											
1Q11	442.27	1/13/2011	NE	36.97	NA	NA	NA	405.30	404.27 - 394.27 (38.00 - 48.00)	NA	*
2Q11	442.13	4/25/2011	NE	37.69	NA	NA	NA	404.44	407.20 - 397.20 (34.93 - 44.93)	NA	3/4" Piezometer replaced with 2" monitoring well
3Q11		7/5/2011	NE	35.85	NA	NA	NA	406.28		NA	
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA		NM	
1Q12		1/3/2012	NE	36.62	NA	NA	NA	405.51		0.0	
2Q12		4/2/2012	37.81	37.84	404.29	404.32	0.03	404.31		0.0	
3Q12		7/2/2012	NE	38.24	NA	NA	NA	403.89		0.0	
4Q12		10/1/2012	NE	39.52	NA	NA	NA	402.61		0.0	
1Q13		1/2/2013	NE	40.52	NA	NA	NA	401.61		0.0	
2Q13		4/1/2013	41.38	41.46	400.67	400.75	0.08	400.73		0.3	
3Q13		7/1/2013	NE	39.60	NA	NA	NA	402.53		0.0	
4Q13		10/1/2013	NE	38.88	NA	NA	NA	403.25		38.9	
ROST-4-PZ(A)											
2Q11	442.11	4/25/2011	NE	37.18	NA	NA	NA	404.93	407.34 - 397.34 (34.77 - 44.77)	NA	
3Q11		7/5/2011	NE	35.21	NA	NA	NA	406.90		NA	
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA		NM	
1Q12		1/3/2012	NE	35.92	NA	NA	NA	406.19		0.0	
2Q12		4/2/2012	NE	37.17	NA	NA	NA	404.94		0.0	
3Q12		7/2/2012	NE	38.64	NA	NA	NA	403.47		0.0	
4Q12		10/1/2012	NE	38.95	NA	NA	NA	403.16		0.0	
1Q13		1/2/2013	NE	40.60	NA	NA	NA	401.51		0.0	
2Q13		4/1/2013	NE	41.86	NA	NA	NA	400.25		0.7	
3Q13		7/1/2013	NE	39.66	NA	NA	NA	402.45		0.2	
4Q13		10/1/2013	NE	38.76	NA	NA	NA	403.35		0.0	
ROST-4-PZ(B)											
2Q11	442.38	4/25/2011	NE	37.80	NA	NA	NA	404.58	407.33 - 397.33 (35.05 - 45.05)	NA	
3Q11		7/5/2011	NE	35.93	NA	NA	NA	406.45		NA	
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA		NM	
1Q12		1/3/2012	NE	36.65	NA	NA	NA	405.73		0.0	
2Q12		4/2/2012	NE	37.87	NA	NA	NA	404.51		0.0	
3Q12		7/2/2012	NE	38.28	NA	NA	NA	404.10		0.0	
4Q12		10/1/2012	NE	39.62	NA	NA	NA	402.76		0.0	
1Q13		1/2/2013	NE	40.61	NA	NA	NA	401.77		0.0	
2Q13		4/1/2013	NE	41.55	NA	NA	NA	400.83		0.5	
3Q13		7/1/2013	NE	39.52	NA	NA	NA	402.86		0.0	
4Q13		10/1/2013	NE	38.58	NA	NA	NA	403.80		1.1	
ROST-4-PZ(C)											
2Q11	442.66	4/25/2011	NE	38.52	NA	NA	NA	404.14	407.71 - 397.71 (34.95 - 44.95)	NA	
3Q11		7/5/2011	NE	36.62	NA	NA	NA	406.04		NA	
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA		NM	
1Q12		1/3/2012	NE	37.40	NA	NA	NA	405.26		0.0	
2Q12		4/2/2012	NE	38.62	NA	NA	NA	404.04		0.0	
3Q12		7/2/2012	NE	39.09	NA	NA	NA	403.57		0.0	
4Q12		10/1/2012	NE	40.43	NA	NA	NA	402.23		0.0	
1Q13		1/2/2013	NE	41.42	NA	NA	NA	401.24		0.0	
2Q13		4/1/2013	NE	42.34	NA	NA	NA	400.32		0.0	
3Q13		7/1/2013	NE	40.57	NA	NA	NA	402.09		0.2	
4Q13		10/1/2013	NE	39.77	NA	NA	NA	402.89		0.0	
ROST-4-PZ(D)											
2Q11	442.98	4/25/2011	NE	38.41	NA	NA	NA	404.57	408.01 - 398.01 (34.97 - 44.97)	NA	
3Q11		7/5/2011	NE	36.58	NA	NA	NA	406.40		NA	
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA		NM	
1Q12		1/3/2012	37.23	37.68	405.30	405.75	0.45	405.66		0.0	
2Q12		4/2/2012	38.57	38.59	404.39	404.41	0.02	404.41		0.0	
3Q12		7/2/2012	NE	39.99	NA	NA	NA	402.99		0.0	
4Q12		10/1/2012	NE	NE	NA	NA	NA	NA		0.0	Unable to Gauge
1Q13		1/2/2013	NE	NE	NA	NA	NA	NA		0.0	Unable to Gauge
2Q13		4/1/2013	NE	NE	NA	NA	NA	NA		3.4	Unable to Gauge
3Q13		7/1/2013	NE	NE	NA	NA	NA	NA		0.0	Unable to Gauge
4Q13		10/1/2013	NE	39.63	NA	NA	NA	403.35		0.0	
ROST-4-PZ(E)											
2Q11	441.96	4/25/2011	NE	37.63	NA	NA	NA	404.33	407.21 - 397.21 (34.75 - 44.75)	NA	
3Q11		7/5/2011	NE	35.81	NA	NA	NA	406.15		NA	
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA		NM	
1Q12		1/3/2012	36.48	36.92	405.04	405.48	0.44	405.39		0.0	
2Q12		4/2/2012	37.72	38.11	403.85	404.24	0.39	404.16		0.0	
3Q12		7/2/2012	38.13	38.19	403.77	403.83	0.06	403.82		0.0	
4Q12		10/1/2012	39.28	39.31	402.65	402.68	0.03	402.67		0.0	
1Q13		1/2/2013	NE	40.02	NA	NA	NA	401.94		0.0	
2Q13		4/1/2013	NE	40.80	NA	NA	NA	401.16		1.2	
3Q13		7/1/2013	NE	39.58	NA	NA	NA	402.38		0.0	
4Q13		10/1/2013	NE	38.70	NA	NA	NA	403.26		1.9	

TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
ROST-4-PZ(F)											
2Q11	442.12	4/25/2011	NE	37.87	NA	NA	NA	404.25	407.59 - 397.59 (34.53 - 44.53)	NA	
3Q11		7/5/2011	NE	35.99	NA	NA	NA	406.13		NA	
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA		NM	
1Q12		1/3/2012	NE	36.83	NA	NA	NA	405.29		0.0	
2Q12		4/2/2012	NE	37.96	NA	NA	NA	404.16		0.0	
3Q12		7/2/2012	NE	38.29	NA	NA	NA	403.83		0.0	
4Q12		10/1/2012	NE	39.46	NA	NA	NA	402.66		0.0	
1Q13		1/2/2013	NE	40.30	NA	NA	NA	401.82		0.0	
2Q13		4/1/2013	NE	41.12	NA	NA	NA	401.00		0.8	
3Q13		7/1/2013	NE	39.67	NA	NA	NA	402.45		0.0	
4Q13		10/1/2013	NE	38.83	NA	NA	NA	403.29		1.0	
ROST-4-PZ(G)											
2Q11	442.13	4/25/2011	NE	38.08	NA	NA	NA	404.05	407.85 - 397.85 (34.28 - 44.28)	NA	
3Q11		7/5/2011	NE	35.76	NA	NA	NA	406.37		NA	
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA		NM	
1Q12		1/3/2012	NE	37.44	NA	NA	NA	404.69		0.0	
2Q12		4/2/2012	NE	38.61	NA	NA	NA	403.52		0.0	
3Q12		7/2/2012	NE	38.79	NA	NA	NA	403.34		0.0	
4Q12		10/1/2012	NE	40.54	NA	NA	NA	401.59		0.0	
1Q13		1/2/2013	NE	41.49	NA	NA	NA	400.64		0.0	
2Q13		4/1/2013	NE	42.14	NA	NA	NA	399.99		0.0	
3Q13		7/1/2013	NE	39.68	NA	NA	NA	402.45		49.3	
4Q13		10/1/2013	NE	40.22	NA	NA	NA	401.91		40.6	
ROST-5-PZ											
1Q11	442.22	1/13/2011	NE	NE	NA	NA	NA	NA	429.02 - 419.02 (13.20 - 23.20)	NA	Well Dry
2Q11		4/25/2011	NE	NE	NA	NA	NA	NA		NA	Well Dry
3Q11		7/5/2011	NE	NE	NA	NA	NA	NA		NA	Well Dry
4Q11		10/5/2011	NE	NE	NA	NA	NA	NA		NA	Well Dry
1Q12		1/3/2012	NE	NE	NA	NA	NA	NA		0.0	Well Dry
2Q12		4/2/2012	NE	NE	NA	NA	NA	NA		0.0	Well Dry
3Q12		7/2/2012	NE	NE	NA	NA	NA	NA		0.0	Well Dry
4Q12		10/1/2012	NE	NE	NA	NA	NA	NA		0.0	Well Dry
1Q13		1/2/2013	NE	NE	NA	NA	NA	NA		0.0	Well Dry
2Q13		4/1/2013	NE	NE	NA	NA	NA	NA		0.0	Well Dry
3Q13		7/1/2013	NE	22.98	NA	NA	NA	419.24		0.6	
4Q13		10/1/2013	NE	NE	NA	NA	NA	NA		0.0	Well Dry
ROST-7-PZ											
1Q11	442.19	1/13/2011	NE	23.74	NA	NA	NA	418.45	422.19 - 412.19 (20.00 - 30.00)	NA	
2Q11		4/25/2011	NE	23.72	NA	NA	NA	418.47		NA	
3Q11		7/5/2011	NE	22.05	NA	NA	NA	420.14		NA	
4Q11		10/5/2011	NE	22.52	NA	NA	NA	419.67		NA	
1Q12		1/3/2012	NE	23.64	NA	NA	NA	418.55		0.0	
2Q12		4/2/2012	NE	24.08	NA	NA	NA	418.11		0.0	
3Q12		7/2/2012	NE	23.33	NA	NA	NA	418.86		0.0	
4Q12		10/1/2012	NE	23.86	NA	NA	NA	418.33		0.0	
1Q13		1/3/2013	NM	NM	NA	NA	NA	NA		NM	
2Q13		4/1/2013	NE	25.51	NA	NA	NA	416.68		15.0	
3Q13		7/5/2013	NE	22.28	NA	NA	NA	419.91		12.5	
4Q13		10/1/2013	NE	22.41	NA	NA	NA	419.78		0.0	
ROST-10-PZ											
1Q11	444.51	1/13/2011	NE	NE	NA	NA	NA	NA	434.51 - 424.51 (10.00 - 20.00)	NA	Well Dry
2Q11		4/25/2011	NE	NE	NA	NA	NA	NA		NA	Well Dry
3Q11		7/5/2011	NE	19.67	NA	NA	NA	424.84		NA	
4Q11		10/5/2011	NE	NE	NA	NA	NA	NA		NA	Well Dry
1Q12		1/3/2012	NE	NE	NA	NA	NA	NA		0.0	Well Dry
2Q12		4/2/2012	NE	NE	NA	NA	NA	NA		0.0	Well Dry
3Q12		7/2/2012	NE	NE	NA	NA	NA	NA		0.0	Well Dry
4Q12		10/1/2012	NE	NE	NA	NA	NA	NA		0.0	Well Dry
1Q13		1/3/2013	NE	NE	NA	NA	NA	NA		0.0	Well Dry
2Q13		4/1/2013	NE	NE	NA	NA	NA	NA		1.5	Well Dry
3Q13		7/1/2013	NE	NE	NA	NA	NA	NA		0.5	Well Dry
4Q13		10/1/2013	NE	NE	NA	NA	NA	NA		0.0	Well Dry
ROST-21-PZ											
1Q11	443.72	1/13/2011	NE	19.59	NA	NA	NA	424.13	433.72 - 423.72 (10.00 - 20.00)	NA	
2Q11		4/25/2011	NE	19.04	NA	NA	NA	424.68		NA	
3Q11		7/5/2011	NE	18.37	NA	NA	NA	425.35		NA	
4Q11		10/5/2011	NE	NE	NA	NA	NA	NA		NA	Well Dry
1Q12		1/3/2012	NE	19.81	NA	NA	NA	423.91		0.0	
2Q12		4/2/2012	NE	NE	NA	NA	NA	NA		0.0	Well Dry
3Q12		7/2/2012	NE	19.34	NA	NA	NA	424.38		0.0	
4Q12		10/1/2012	NE	NE	NA	NA	NA	NA		0.0	Well Dry
1Q13		1/3/2013	NE	NE	NA	NA	NA	NA		0.0	Well Dry
2Q13		4/1/2013	NE	NE	NA	NA	NA	NA		4.6	Well Dry
3Q13		7/1/2013	NE	18.42	NA	NA	NA	425.30		0.2	
4Q13		10/1/2013	NE	19.38	NA	NA	NA	424.34		1.9	

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TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
S-1											
1Q11	443.79	1/13/2011	36.41	41.33	402.46	407.38	4.92	406.40	Unknown	NA	
2Q11		4/25/2011	38.70	38.73	405.06	405.09	0.03	405.08		NA	
3Q11		7/5/2011	36.50	36.54	407.25	407.29	0.04	407.28		NA	
4Q11		10/6/2011	NE	36.68	NA	NA	NA	407.11		NA	
1Q12		1/3/2012	NE	38.36	NA	NA	NA	405.43		NA	
2Q12		4/3/2012	NE	39.83	NA	NA	NA	403.96		0.0	
3Q12		7/3/2012	NE	40.38	NA	NA	NA	403.41		0.0	
4Q12		10/1/2012	NE	41.93	NA	NA	NA	401.86		32.0	
1Q13		1/4/2013	NE	43.35	NA	NA	NA	400.44		0.0	
2Q13		4/1/2013	NE	44.20	NA	NA	NA	399.59		15.1	
3Q13		7/5/2013	NE	42.12	NA	NA	NA	401.67		126.0	
4Q13		10/2/2013	NE	41.99	NA	NA	NA	401.80		52.0	
T-1											
1Q11	444.55	1/13/2011	NE	41.02	NA	NA	NA	403.53	398.40 - 388.40 (43.91 - 53.91)	NA	*
2Q11		4/25/2011	NE	46.65	NA	NA	NA	397.90		NA	
3Q11		7/5/2011	NE	35.99	NA	NA	NA	408.56		NA	*
4Q11		10/6/2011	NE	50.83	NA	NA	NA	393.72		NA	
1Q12	445.40	1/3/2012	NM	NM	NA	NA	NA	NA	398.40 - 388.40 (47.00 - 57.00)	NM	Well replaced during 4Q11
2Q12		4/2/2012	NE	40.09	NA	NA	NA	405.31		0.6	*
3Q12		7/2/2012	NE	41.19	NA	NA	NA	404.21		0.3	*
4Q12		10/1/2012	NE	42.90	NA	NA	NA	402.50		0.2	*
1Q13		1/3/2013	NE	44.17	NA	NA	NA	401.23		0.0	*
2Q13		4/2/2013	NE	44.94	NA	NA	NA	400.46		0.3	*
3Q13		7/3/2013	NE	42.85	NA	NA	NA	402.55		4.2	*
4Q13		10/1/2013	NE	42.61	NA	NA	NA	402.79		1.5	*
T-2											
1Q11	443.13	1/13/2011	NE	36.97	NA	NA	NA	406.16	392.63 - 372.48 (50.50 - 70.65)	NA	*
2Q11		4/25/2011	NE	38.03	NA	NA	NA	405.10		NA	*
3Q11		7/5/2011	NE	35.89	NA	NA	NA	407.24		NA	*
4Q11		10/6/2011	NE	35.97	NA	NA	NA	407.16		NA	*
1Q12		1/3/2012	NE	34.44	NA	NA	NA	408.69		NA	*
2Q12		4/2/2012	NE	38.68	NA	NA	NA	404.45		0.0	*
3Q12		7/2/2012	NE	39.15	NA	NA	NA	403.98		0.0	*
4Q12		10/1/2012	NE	41.11	NA	NA	NA	402.02		0.3	*
1Q13		1/3/2013	NE	43.39	NA	NA	NA	399.74		0.0	*
2Q13		4/2/2013	NE	43.35	NA	NA	NA	399.78		0.7	*
3Q13		7/3/2013	NE	41.48	NA	NA	NA	401.65		0.0	*
4Q13		10/1/2013	NE	41.34	NA	NA	NA	401.79		0.0	*
T-3											
1Q11	450.91	1/13/2011	NE	44.64	NA	NA	NA	406.27	403.65 - 388.65 (47.26 - 62.26)	NA	*
2Q11		4/1/2011	NE	46.50	NA	NA	NA	404.41		NA	*
3Q11		7/5/2011	NE	43.85	NA	NA	NA	407.06		NA	*
4Q11		10/6/2011	NE	45.68	NA	NA	NA	405.23		NA	*
1Q12		1/4/2012	NE	45.83	NA	NA	NA	405.08		0.0	*
2Q12		4/2/2012	NE	47.09	NA	NA	NA	403.82		0.0	*
3Q12		7/2/2012	NE	48.00	NA	NA	NA	402.91		0.0	
4Q12		10/1/2012	NE	50.04	NA	NA	NA	400.87		7.3	
1Q13		1/4/2013	NE	51.55	NA	NA	NA	399.36		2.1	
2Q13		4/1/2013	NE	52.35	NA	NA	NA	398.56		0.0	
3Q13		7/3/2013	NE	50.95	NA	NA	NA	399.96		4.8	
4Q13		10/1/2013	NE	50.78	NA	NA	NA	400.13		10.2	
T-4											
1Q11	447.95	1/13/2011	NE	41.38	NA	NA	NA	406.57	398.24 - 383.24 (49.71 - 64.71)	NA	*
2Q11		4/1/2011	NE	42.23	NA	NA	NA	405.72		NA	*
3Q11		7/5/2011	NE	39.83	NA	NA	NA	408.12		NA	*
4Q11		10/6/2011	NE	42.04	NA	NA	NA	405.91		NA	*
1Q12		1/3/2012	NE	43.35	NA	NA	NA	404.60		NA	*
2Q12		4/3/2012	NE	45.47	NA	NA	NA	402.48		0.0	*
3Q12		7/3/2012	NE	46.57	NA	NA	NA	401.38		0.0	*
4Q12		10/1/2012	NE	46.78	NA	NA	NA	401.17		0.0	*
1Q13		1/4/2013	NE	48.60	NA	NA	NA	399.35		0.0	*
2Q13		4/1/2013	NE	49.26	NA	NA	NA	398.69		0.0	*
3Q13		7/3/2013	NE	49.33	NA	NA	NA	398.62		1.1	*
4Q13		10/1/2013	NE	47.84	NA	NA	NA	400.11		0.1	*
T-5											
1Q11	443.46	1/1/2011	NE	36.09	NA	NA	NA	407.37	395.13 - 378.58 (48.33 - 64.88)	NA	*
2Q11		4/1/2011	NE	37.30	NA	NA	NA	406.16		NA	*
3Q11		7/5/2011	NE	35.28	NA	NA	NA	408.18		NA	*
4Q11		10/6/2011	NE	35.84	NA	NA	NA	407.62		NA	*
1Q12		1/3/2012	NE	37.31	NA	NA	NA	406.15		NA	*
2Q12		4/3/2012	NE	38.87	NA	NA	NA	404.59		0.0	*
3Q12		7/6/2012	NE	39.81	NA	NA	NA	403.65		0.0	*
4Q12		10/1/2012	NE	41.08	NA	NA	NA	402.38		9.8	*
1Q13		1/4/2013	NE	42.57	NA	NA	NA	400.89		0.0	*
2Q13		4/1/2013	NE	43.42	NA	NA	NA	400.04		0.0	*
3Q13		7/5/2013	NE	41.67	NA	NA	NA	401.79		0.0	*
4Q13		10/1/2013	NE	41.14	NA	NA	NA	402.32		18.2	*

TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
T-6											
1Q11	446.55	1/13/2011	NE	41.07	NA	NA	NA	405.48	394.79 - 380.54 (51.76 - 66.01)	NA	*
2Q11		4/25/2011	NE	42.01	NA	NA	NA	404.54		NA	*
3Q11		7/5/2011	NE	39.58	NA	NA	NA	406.97		NA	*
4Q11		10/6/2011	NE	39.26	NA	NA	NA	407.29		NA	*
1Q12		1/4/2012	NE	41.46	NA	NA	NA	405.09		1.1	*
2Q12		4/3/2012	NE	42.88	NA	NA	NA	403.67		0.0	*
3Q12		7/5/2012	NE	43.06	NA	NA	NA	403.49		0.0	*
4Q12		10/2/2012	NE	44.86	NA	NA	NA	401.69		0.1	*
1Q13		1/4/2013	NE	45.84	NA	NA	NA	400.71		0.0	*
2Q13		4/2/2013	NE	46.69	NA	NA	NA	399.86		0.0	*
3Q13		7/5/2013	NE	43.81	NA	NA	NA	402.74		0.0	*
4Q13		10/1/2013	NE	44.28	NA	NA	NA	402.27		10.0	*
T-7											
1Q11	444.01	1/13/2011	36.74	36.87	407.14	407.27	0.13	407.24	395.29 - 380.29 (48.72 - 63.72)	NA	*
2Q11		4/1/2011	37.20	37.25	406.76	406.81	0.05	406.80		NA	*
3Q11		7/5/2011	35.08	35.16	408.85	408.93	0.08	408.91		NA	*
4Q11		10/5/2011	35.36	35.43	408.58	408.65	0.07	408.64		NA	*
1Q12		1/4/2012	37.05	37.08	406.93	406.96	0.03	406.95		0.7	*
2Q12		4/3/2012	38.45	38.45	405.56	405.56	0.00	405.56		0.0	*
3Q12		7/2/2012	38.90	38.96	405.05	405.11	0.06	405.10		0.0	*
4Q12		10/2/2012	40.80	40.83	403.18	403.21	0.03	403.20		0.3	*
1Q13		1/2/2013	41.66	41.67	402.34	402.35	0.01	402.35		2.4	*
2Q13		4/2/2013	NE	42.78	NA	NA	NA	401.23		9.2	*
3Q13		7/2/2013	NE	40.21	NA	NA	NA	403.80		0.0	*
4Q13		10/2/2013	NE	39.72	NA	NA	NA	404.29		5.1	*
T-12											
1Q11	444.69	1/13/2011	NE	40.30	NA	NA	NA	404.39	398.23 - 372.23 (46.46 - 72.46)	NA	*
2Q11		4/25/2011	NE	41.40	NA	NA	NA	403.29		NA	*
3Q11		7/5/2011	NE	39.07	NA	NA	NA	405.62		NA	*
4Q11		10/6/2011	NE	38.23	NA	NA	NA	406.46		NA	*
1Q12		1/4/2012	NE	40.64	NA	NA	NA	404.05		0.0	*
2Q12		4/3/2012	NE	42.06	NA	NA	NA	402.63		0.0	*
3Q12		7/5/2012	NE	42.05	NA	NA	NA	402.64		0.0	*
4Q12		10/2/2012	NE	43.86	NA	NA	NA	400.83		0.5	*
1Q13		1/4/2013	NE	44.65	NA	NA	NA	400.04		0.2	*
2Q13		4/2/2013	NE	45.19	NA	NA	NA	399.50		0.0	*
3Q13		7/5/2013	NE	43.59	NA	NA	NA	401.10		1.4	*
4Q13		10/1/2013	NE	43.64	NA	NA	NA	401.05		5.5	*
T-13											
1Q11	443.46	1/13/2011	NE	37.57	NA	NA	NA	405.89	396.46 - 370.46 (47.00 - 73.00)	NA	*
2Q11		4/25/2011	NE	38.25	NA	NA	NA	405.21		NA	*
3Q11		7/5/2011	NM	NM	NA	NA	NA	NA		NM	
4Q11		10/5/2011	NE	35.78	NA	NA	NA	407.68		NA	*
1Q12		1/3/2012	NE	37.42	NA	NA	NA	406.04		NA	*
2Q12		4/2/2012	NE	38.69	NA	NA	NA	404.77		0.0	*
3Q12		7/2/2012	NE	39.09	NA	NA	NA	404.37		0.0	*
4Q12		10/2/2012	NE	40.81	NA	NA	NA	402.65		2.9	*
1Q13		1/2/2013	NE	41.96	NA	NA	NA	401.50		0.0	*
2Q13		4/3/2013	NE	42.96	NA	NA	NA	400.50		0.0	*
3Q13		7/5/2013	NE	40.79	NA	NA	NA	402.67		0.0	*
4Q13		10/3/2013	NE	40.72	NA	NA	NA	402.74		0.0	*
T-15											
1Q11	445.03	1/13/2011	NE	38.39	NA	NA	NA	406.64	396.99 - 370.99 (48.04 - 74.04)	NA	*
2Q11		4/1/2011	NE	39.55	NA	NA	NA	405.48		NA	*
3Q11		7/5/2011	NE	37.35	NA	NA	NA	407.68		NA	*
4Q11		10/6/2011	NE	37.79	NA	NA	NA	407.24		NA	*
1Q12		1/3/2012	NE	38.97	NA	NA	NA	406.06		NA	*
2Q12		4/2/2012	NE	40.28	NA	NA	NA	404.75		0.0	*
3Q12		7/2/2012	NE	40.90	NA	NA	NA	404.13		0.0	*
4Q12		10/1/2012	NE	42.81	NA	NA	NA	402.22		0.0	*
1Q13		1/3/2013	NE	44.24	NA	NA	NA	400.79		0.0	*
2Q13		4/2/2013	NE	45.11	NA	NA	NA	399.92		0.0	*
3Q13		7/3/2013	NE	43.58	NA	NA	NA	401.45		0.2	*
4Q13		10/1/2013	NE	43.48	NA	NA	NA	401.55		11.5	*
T-17											
1Q11	445.90	1/13/2011	NE	37.11	NA	NA	NA	408.79	401.80 - 375.80 (44.10 - 70.10)	NA	*
2Q11		4/1/2011	NE	37.30	NA	NA	NA	408.60		NA	*
3Q11		7/5/2011	NE	35.17	NA	NA	NA	410.73		NA	*
4Q11		10/6/2011	NE	36.23	NA	NA	NA	409.67		NA	*
1Q12		1/3/2012	NE	37.37	NA	NA	NA	408.53		NA	*
2Q12		4/2/2012	NE	38.79	NA	NA	NA	407.11		0.0	*
3Q12		7/2/2012	NE	39.29	NA	NA	NA	406.61		0.0	*
4Q12		10/1/2012	NE	40.92	NA	NA	NA	404.98		0.0	*
1Q13		1/3/2013	NE	42.70	NA	NA	NA	403.20		0.0	*
2Q13		4/2/2013	NE	43.61	NA	NA	NA	402.29		0.0	*
3Q13		7/3/2013	NE	42.34	NA	NA	NA	403.56		1.3	*
4Q13		10/1/2013	NE	42.46	NA	NA	NA	403.44		0.0	*

TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
T-19											
1Q11	446.71	1/13/2011	39.78	41.15	405.56	406.93	1.37	406.66	395.94 - 369.94 (50.77 - 76.77)	NA	*
2Q11		4/1/2011	40.88	40.90	405.81	405.83	0.02	405.83		NA	*
3Q11		7/5/2011	38.47	38.50	408.21	408.24	0.03	408.23		NA	*
4Q11		10/6/2011	40.65	40.69	406.02	406.06	0.04	406.05		NA	*
1Q12		1/3/2012	41.97	41.98	404.73	404.74	0.01	404.74		NA	*
2Q12		4/3/2012	NE	44.09	NA	NA	NA	402.62		0.0	*
3Q12		7/3/2012	NE	45.36	NA	NA	NA	401.35		0.0	*
4Q12		10/1/2012	NE	45.41	NA	NA	NA	401.30		0.0	*
1Q13		1/4/2013	NE	47.44	NA	NA	NA	399.27		0.0	*
2Q13		4/1/2013	NE	48.09	NA	NA	NA	398.62		0.7	*
3Q13		7/3/2013	NE	48.04	NA	NA	NA	398.67		37.2	*
4Q13		10/1/2013	NE	46.40	NA	NA	NA	400.31		0.8	*
T-21											
1Q11	444.00	1/13/2011	NE	29.96	NA	NA	NA	414.04	412.04 - 386.04 (31.96 - 57.96)	NA	*
2Q11		4/1/2011	NE	29.83	NA	NA	NA	414.17		NA	*
3Q11		7/5/2011	NE	28.17	NA	NA	NA	415.83		NA	*
4Q11		10/5/2011	NE	28.41	NA	NA	NA	415.59		NA	*
1Q12		1/4/2012	NE	29.56	NA	NA	NA	414.44		0.0	*
2Q12		4/3/2012	NE	30.65	NA	NA	NA	413.35		0.0	*
3Q12		7/2/2012	NE	31.14	NA	NA	NA	412.86		0.0	*
4Q12		10/2/2012	NE	32.62	NA	NA	NA	411.38		0.0	
1Q13		1/2/2013	NE	33.96	NA	NA	NA	410.04		0.0	
2Q13		4/2/2013	NE	34.98	NA	NA	NA	409.02		0.4	
3Q13		7/2/2013	NE	33.45	NA	NA	NA	410.55		0.0	
4Q13		10/2/2013	NE	32.82	NA	NA	NA	411.18		0.0	
T-22											
1Q11	442.21	1/13/2011	NE	31.04	NA	NA	NA	411.17	410.66 - 384.96 (31.55 - 57.25)	NA	*
2Q11		4/1/2011	NE	30.96	NA	NA	NA	411.25		NA	*
3Q11		7/5/2011	NE	29.00	NA	NA	NA	413.21		NA	*
4Q11		10/5/2011	NE	29.51	NA	NA	NA	412.70		NA	*
1Q12		1/4/2012	NE	30.91	NA	NA	NA	411.30		0.0	*
2Q12		4/3/2012	NE	32.34	NA	NA	NA	409.87		0.0	
3Q12		7/2/2012	NE	32.81	NA	NA	NA	409.40		0.0	
4Q12		10/2/2012	NE	34.45	NA	NA	NA	407.76		0.0	
1Q13		1/2/2013	NE	35.62	NA	NA	NA	406.59		0.0	
2Q13		4/2/2013	NE	36.44	NA	NA	NA	405.77		0.1	
3Q13		7/2/2013	NE	34.04	NA	NA	NA	408.17		0.0	
4Q13		10/2/2013	NE	33.85	NA	NA	NA	408.36		0.0	
T-23											
1Q11	432.64	1/13/2011	NE	23.83	NA	NA	NA	408.81	405.41 - 379.41 (27.23 - 53.23)	NA	*
2Q11		4/1/2011	NE	23.40	NA	NA	NA	409.24		NA	*
3Q11		7/5/2011	NE	21.22	NA	NA	NA	411.42		NA	*
4Q11		10/5/2011	NE	22.21	NA	NA	NA	410.43		NA	*
1Q12		1/3/2012	NE	23.75	NA	NA	NA	408.89		0.0	*
2Q12		4/2/2012	NE	25.10	NA	NA	NA	407.54		0.0	*
3Q12		7/2/2012	NE	25.60	NA	NA	NA	407.04		0.0	*
4Q12		10/2/2012	NE	27.37	NA	NA	NA	405.27		0.0	
1Q13		1/3/2013	NE	28.35	NA	NA	NA	404.29		0.0	
2Q13		4/2/2013	NE	29.04	NA	NA	NA	403.60		0.2	
3Q13		7/2/2013	NE	26.95	NA	NA	NA	405.69		0.0	*
4Q13		10/2/2013	NE	26.40	NA	NA	NA	406.24		0.0	*
T-24											
1Q11	443.72	1/13/2011	38.60	38.92	404.80	405.12	0.32	405.05	402.22 - 376.57 (41.50 - 67.15)	NA	*
2Q11		4/25/2011	NE	39.98	NA	NA	NA	403.74		NA	*
3Q11		7/5/2011	NE	37.53	NA	NA	NA	406.19		NA	*
4Q11		10/6/2011	NE	37.29	NA	NA	NA	406.43		NA	*
1Q12		1/3/2012	NE	38.36	NA	NA	NA	405.36		NA	*
2Q12		4/3/2012	NE	40.56	NA	NA	NA	403.16		0.0	*
3Q12		7/3/2012	NE	40.45	NA	NA	NA	403.27		0.0	*
4Q12		10/1/2012	42.02	44.87	398.85	401.70	2.85	401.13		5.8	
1Q13		1/4/2013	NE	43.20	NA	NA	NA	400.52		4.3	
2Q13		4/2/2013	44.58	44.64	399.08	399.14	0.06	399.13		0.0	
3Q13		7/2/2013	42.16	42.55	401.17	401.56	0.39	401.48		10.0	
4Q13		10/2/2013	42.20	42.22	401.50	401.52	0.02	401.51		0.8	
T-28											
1Q11	444.22	1/13/2011	NE	36.53	NA	NA	NA	407.69	Unknown	NA	
2Q11		4/1/2011	NE	37.18	NA	NA	NA	407.04		NA	
3Q11		7/5/2011	NE	34.89	NA	NA	NA	409.33		NA	
4Q11		10/6/2011	NE	35.98	NA	NA	NA	408.24		NA	
1Q12		1/3/2012	NE	36.98	NA	NA	NA	407.24		NA	
2Q12		4/2/2012	NE	38.68	NA	NA	NA	405.54		0.0	
3Q12		7/2/2012	NE	39.28	NA	NA	NA	404.94		0.0	
4Q12		10/1/2012	NE	40.88	NA	NA	NA	403.34		0.0	
1Q13		1/3/2013	NE	42.56	NA	NA	NA	401.66		0.0	
2Q13		4/2/2013	NE	43.42	NA	NA	NA	400.80		0.0	
3Q13		7/3/2013	NE	42.40	NA	NA	NA	401.82		0.0	
4Q13		10/1/2013	NE	39.17	NA	NA	NA	405.05		2.1	

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TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
T-37											
1Q11	447.15	1/13/2011	NE	37.61	NA	NA	NA	409.54	398.30 - 378.30 (48.86 - 68.86)	NA	*
2Q11		4/1/2011	NE	37.63	NA	NA	NA	409.52		NA	*
3Q11		7/5/2011	NE	35.84	NA	NA	NA	411.31		NA	*
4Q11		10/6/2011	NE	36.90	NA	NA	NA	410.25		NA	*
1Q12		1/3/2012	NE	37.95	NA	NA	NA	409.20		NA	*
2Q12		4/2/2012	NE	39.12	NA	NA	NA	408.03		0.0	*
3Q12		7/2/2012	NE	39.91	NA	NA	NA	407.24		0.0	*
4Q12		10/1/2012	NE	41.44	NA	NA	NA	405.71		0.0	*
1Q13		1/3/2013	NE	43.07	NA	NA	NA	404.08		0.0	*
2Q13		4/1/2013	NE	43.79	NA	NA	NA	403.36		0.0	*
3Q13		7/3/2013	NE	42.66	NA	NA	NA	404.49		0.0	*
4Q13		10/1/2013	NE	42.51	NA	NA	NA	404.64		0.1	*
T-38											
1Q11	445.62	1/1/2011	NE	35.38	NA	NA	NA	410.24	396.48 - 376.48 (49.14 - 69.14)	NA	*
2Q11		4/1/2011	NM	NM	NA	NA	NA	NA		NM	
3Q11		7/5/2011	NM	NM	NA	NA	NA	NA		NM	
4Q11		10/6/2011	NE	34.38	NA	NA	NA	411.24		NA	*
1Q12		1/3/2012	NE	35.40	NA	NA	NA	410.22		NA	*
2Q12		4/2/2012	NE	36.25	NA	NA	NA	409.37		0.0	*
3Q12		7/3/2012	NE	37.00	NA	NA	NA	408.62		0.0	*
4Q12		10/1/2012	NE	38.61	NA	NA	NA	407.01		0.0	*
1Q13		1/3/2013	NE	40.06	NA	NA	NA	405.56		0.0	*
2Q13		4/1/2013	NM	NM	NA	NA	NA	NA		NA	Unsafe condition; unable to gauge
3Q13		7/3/2013	NM	NM	NA	NA	NA	NA		NA	Unsafe condition; unable to gauge
4Q13		10/1/2013	NM	NM	NA	NA	NA	NA		NA	Unsafe condition; unable to gauge
T-62											
1Q11	431.73	1/13/2011	NE	25.48	NA	NA	NA	406.25	412.02 - 382.02 (19.71 - 49.71)	NA	
2Q11		4/25/2011	NE	25.33	NA	NA	NA	406.40		NA	
3Q11		7/5/2011	NE	22.37	NA	NA	NA	409.36		NA	
4Q11		10/5/2011	NE	23.46	NA	NA	NA	408.27		NA	
1Q12		1/3/2012	NE	25.62	NA	NA	NA	406.11		0.0	
2Q12		4/2/2012	NE	27.08	NA	NA	NA	404.65		0.0	
3Q12		7/3/2012	NE	27.20	NA	NA	NA	404.53		0.0	
4Q12		10/2/2012	NE	29.28	NA	NA	NA	402.45		0.0	
1Q13		1/7/2013	NE	30.39	NA	NA	NA	401.34		0.0	
2Q13		4/2/2013	NE	30.80	NA	NA	NA	400.93		0.0	
3Q13		7/2/2013	NE	26.91	NA	NA	NA	404.82		0.0	
4Q13		10/2/2013	NE	27.81	NA	NA	NA	403.92		0.0	
T-63											
1Q11	431.24	1/13/2011	NE	25.45	NA	NA	NA	405.79	411.26 - 381.26 (19.98 - 49.98)	NA	
2Q11		4/25/2011	NM	NM	NA	NA	NA	NA		NM	
3Q11		7/5/2011	NM	NM	NA	NA	NA	NA		NM	
4Q11		10/5/2011	NE	23.28	NA	NA	NA	407.96		NA	
1Q12		1/3/2012	NE	25.60	NA	NA	NA	405.64		0.0	
2Q12		4/2/2012	NM	NM	NA	NA	NA	NA		NM	
3Q12		7/3/2012	NE	27.08	NA	NA	NA	404.16		0.0	
4Q12		10/2/2012	NE	29.19	NA	NA	NA	402.05		0.0	
1Q13		1/7/2013	NE	30.45	NA	NA	NA	400.79		0.0	
2Q13		4/2/2013	NE	30.61	NA	NA	NA	400.63		0.0	
3Q13		7/2/2013	NE	25.92	NA	NA	NA	405.32		0.0	
4Q13		10/2/2013	NE	27.63	NA	NA	NA	403.61		0.0	
T-64											
1Q11	428.80	1/13/2011	NE	23.84	NA	NA	NA	404.96	408.99 - 378.99 (19.81 - 49.81)	NA	
2Q11		4/1/2011	NM	NM	NA	NA	NA	NA		NM	
3Q11		7/5/2011	NE	19.06	NA	NA	NA	409.74		NA	*
4Q11		10/5/2011	NE	21.36	NA	NA	NA	407.44		NA	
1Q12		1/3/2012	NE	23.86	NA	NA	NA	404.94		0.0	
2Q12		4/2/2012	NE	25.10	NA	NA	NA	403.70		0.0	
3Q12		7/3/2012	NE	25.24	NA	NA	NA	403.56		0.0	
4Q12		10/2/2012	NE	27.44	NA	NA	NA	401.36		0.0	
1Q13		1/7/2013	NE	28.89	NA	NA	NA	399.91		0.0	
2Q13		4/2/2013	NE	28.63	NA	NA	NA	400.17		0.1	
3Q13		7/2/2013	NE	23.15	NA	NA	NA	405.65		0.2	
4Q13		10/2/2013	NE	25.86	NA	NA	NA	402.94		0.0	
PZ-1-85											
4Q11	445.50	10/5/2011	NE	37.85	NA	NA	NA	407.65	369.70 - 359.70 (75.80 - 85.80)	NA	*
1Q12		1/3/2012	NE	39.80	NA	NA	NA	405.70		0.0	*
2Q12		4/4/2012	NE	41.05	NA	NA	NA	404.45		0.0	*
3Q12		7/2/2012	NE	41.35	NA	NA	NA	404.15		0.0	*
4Q12		10/1/2012	NE	43.06	NA	NA	NA	402.44		0.0	*
1Q13		1/3/2013	NE	44.35	NA	NA	NA	401.15		0.0	*
2Q13		4/1/2013	NE	45.12	NA	NA	NA	400.38		0.6	*
3Q13		7/1/2013	NE	42.68	NA	NA	NA	402.82		0.0	*
4Q13		10/1/2013	NE	42.63	NA	NA	NA	402.87		1.5	*
PZ-1-101											
4Q11	445.52	10/5/2011	NE	37.83	NA	NA	NA	407.69	354.52 - 344.52 (91.00 - 101.00)	NA	*
1Q12		1/3/2012	NE	39.73	NA	NA	NA	405.79		0.0	*
2Q12		4/4/2012	NE	41.14	NA	NA	NA	404.38		0.0	*
3Q12		7/2/2012	NE	41.28	NA	NA	NA	404.24		0.0	*
4Q12		10/1/2012	NE	42.95	NA	NA	NA	402.57		0.0	*
1Q13		1/3/2013	NE	44.21	NA	NA	NA	401.31		0.0	*
2Q13		4/1/2013	NE	45.04	NA	NA	NA	400.48		0.1	*
3Q13		7/1/2013	NE	42.50	NA	NA	NA	403.02		0.0	*
4Q13		10/1/2013	NE	42.50	NA	NA	NA	403.02		0.6	*

TABLE 1a
QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
PZ-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	*
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	*

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

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TABLE 1b
4Q13 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
GP-9-PZ											
Monthly	442.41	11/4/2013	NE	41.64	NA	NA	NA	400.77	404.81 - 394.81 (37.60 - 47.60)	0.9	
		12/2/2013	NE	41.87	NA	NA	NA	400.54		14.7	
MW-01											
Monthly	442.65	11/4/2013	NE	40.99	NA	NA	NA	401.66	393.85 - 383.85 (48.80 - 58.80)	2.6	*
		12/3/2013	NE	41.49	NA	NA	NA	401.16		0.0	*
MW-02											
Monthly	443.77	11/4/2013	NE	42.29	NA	NA	NA	401.48	393.90 - 383.90 (49.87 - 59.87)	201.7	*
		12/3/2013	NE	42.73	NA	NA	NA	401.04		63.4	*
MW-03											
Monthly	430.08	11/4/2013	NE	28.06	NA	NA	NA	402.02	395.41 - 385.41 (34.67 - 44.67)	2.2	*
		12/3/2013	NE	28.62	NA	NA	NA	401.46		0.0	*
MW-04											
Monthly	441.14	11/4/2013	NE	39.28	NA	NA	NA	401.86	395.08 - 385.08 (46.06 - 56.06)	87.5	*
		12/3/2013	NE	39.79	NA	NA	NA	401.35		34.3	*
MW-05											
Monthly	429.80	11/4/2013	NE	27.69	NA	NA	NA	402.11	395.83 - 385.83 (33.97 - 43.97)	2.6	*
		12/3/2013	NE	28.25	NA	NA	NA	401.55		0.0	*
MW-06A											
Monthly	432.14	11/4/2013	NE	29.62	NA	NA	NA	402.52	397.31 - 387.31 (34.83 - 44.83)	3.2	*
		12/3/2013	NE	30.29	NA	NA	NA	401.85		0.0	*
MW-06B											
Monthly	432.29	11/4/2013	NE	29.67	NA	NA	NA	402.62	368.24 - 363.24 (64.05 - 69.05)	2.4	*
		12/3/2013	NE	30.34	NA	NA	NA	401.95		0.0	*
MW-06C											
Monthly	432.11	11/4/2013	NE	29.45	NA	NA	NA	402.66	347.16 - 342.16 (84.95 - 89.95)	3.6	*
		12/3/2013	NE	30.13	NA	NA	NA	401.98		0.0	*
MW-06D											
Monthly	431.99	11/4/2013	NE	29.32	NA	NA	NA	402.67	327.27 - 322.27 (104.72 - 109.72)	2.9	*
		12/3/2013	NE	30.02	NA	NA	NA	401.97		0.0	*
MW-07											
Monthly	443.10	11/4/2013	NE	41.12	NA	NA	NA	401.98	400.18 - 390.18 (42.92 - 52.92)	51.8	*
		12/3/2013	NE	41.62	NA	NA	NA	401.48		34.0	*
MW-08											
Monthly	434.11	11/4/2013	NE	32.10	NA	NA	NA	402.01	400.51 - 390.51 (33.60 - 43.60)	364.1	*
		12/3/2013	NE	32.66	NA	NA	NA	401.45		196.8	*
MW-09											
Monthly	445.20	11/4/2013	NE	42.98	NA	NA	NA	402.22	398.75 - 388.75 (46.45 - 56.45)	0.4	*
		12/2/2013	NE	43.24	NA	NA	NA	401.96		0.0	*
MW-10											
Monthly	445.03	11/4/2013	NE	43.02	NA	NA	NA	402.01	400.60 - 390.60 (44.43 - 54.43)	0.1	*
		12/2/2013	NE	43.16	NA	NA	NA	401.87		0.0	*
MW-11											
Monthly	442.33	11/4/2013	NE	40.60	NA	NA	NA	401.73	400.67 - 390.67 (41.66 - 51.66)	1.3	*
		12/2/2013	NE	40.90	NA	NA	NA	401.43		0.0	*
MW-12											
Monthly	442.60	11/4/2013	NE	40.91	NA	NA	NA	401.69	400.68 - 390.68 (41.92 - 51.92)	0.2	*
		12/2/2013	NE	41.27	NA	NA	NA	401.33		0.0	*
MW-13											
Monthly	430.27	11/4/2013	NE	27.64	NA	NA	NA	402.63	404.70 - 394.70 (25.57 - 35.57)	0.8	
		12/2/2013	NE	28.21	NA	NA	NA	402.06		0.0	
MW-14											
Monthly	434.44	11/4/2013	NE	31.57	NA	NA	NA	402.87	401.02 - 391.02 (33.42 - 43.42)	68.3	*
		12/3/2013	NE	32.30	NA	NA	NA	402.14		25.6	*
MW-16											
Monthly	443.39	11/4/2013	NE	42.22	NA	NA	NA	401.17	406.33 - 396.33 (37.06 - 47.06)	0.2	
		12/2/2013	NE	42.50	NA	NA	NA	400.89		0.0	
MW-17											
Monthly	441.57	11/4/2013	NE	40.83	NA	NA	NA	400.74	407.28 - 392.28 (34.29 - 49.29)	0.7	
		12/2/2013	NE	41.07	NA	NA	NA	400.50		5.4	
MW-18											
Monthly	442.04	11/4/2013	NE	41.55	NA	NA	NA	400.49	407.12 - 392.12 (34.92 - 49.92)	0.2	
		12/2/2013	NE	41.78	NA	NA	NA	400.26		0.0	
MW-19											
Weekly	442.77	10/7/2013	NE	41.25	NA	NA	NA	401.52	406.43 - 391.43 (36.34 - 51.34)	0.0	
		10/14/2013	NE	41.50	NA	NA	NA	401.27		0.0	
		10/21/2013	NE	41.65	NA	NA	NA	401.12		0.2	
		10/28/2013	NE	41.75	NA	NA	NA	401.02		0.0	
Monthly		11/4/2013	NE	41.98	NA	NA	NA	400.79		0.2	
Weekly		11/12/2013	NE	42.16	NA	NA	NA	400.61		0.4	
		11/19/2013	NE	42.26	NA	NA	NA	400.51		1.2	
		11/25/2013	NE	42.16	NA	NA	NA	400.61		64.9	
Monthly		12/2/2013	NE	42.21	NA	NA	NA	400.56		0.0	
Weekly		12/9/2013	NE	42.53	NA	NA	NA	400.24		0.1	
		12/16/2013	NE	42.62	NA	NA	NA	400.15		0.3	
		12/26/2013	NE	42.84	NA	NA	NA	399.93		0.2	

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TABLE 1b
4Q13 WEEKLY/MONTHLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & EVENT	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
MW-20											
Monthly	443.67	11/4/2013	NE	42.55	NA	NA	NA	401.12	407.79 - 392.79 (35.88 - 50.88)	1.2	
		12/2/2013	NE	42.91	NA	NA	NA	400.76		0.0	
MW-21											
Monthly	443.81	12/4/2013	NE	42.15	NA	NA	NA	401.66	408.80 - 393.80 (35.01 - 50.01)	2.1	
		12/3/2013	NE	42.62	NA	NA	NA	401.19		0.0	
MW-22											
Weekly	442.16	10/7/2013	NE	40.35	NA	NA	NA	401.81	404.28 - 394.28 (37.88 - 47.88)	0.0	
		10/14/2013	NE	40.55	NA	NA	NA	401.61		0.0	
		10/21/2013	NE	40.69	NA	NA	NA	401.47		0.0	
		10/28/2013	NE	40.76	NA	NA	NA	401.40		0.0	
Monthly		11/4/2013	NE	40.99	NA	NA	NA	401.17		0.3	
Weekly		11/12/2013	NE	41.09	NA	NA	NA	401.07		0.3	
		11/20/2013	NE	41.22	NA	NA	NA	400.94		1.2	
		11/25/2013	NE	41.22	NA	NA	NA	400.94		3.0	
Monthly		12/2/2013	NE	41.24	NA	NA	NA	400.92		3.9	
Weekly		12/11/2013	NE	41.66	NA	NA	NA	400.50		0.9	
		12/16/2013	NE	41.67	NA	NA	NA	400.49		5.3	
		12/26/2013	NE	41.86	NA	NA	NA	400.30		0.1	
MW-24											
Monthly	443.42	11/4/2013	NE	41.88	NA	NA	NA	401.54	404.53 - 394.53 (38.89 - 48.89)	3.5	
		12/2/2013	NE	42.20	NA	NA	NA	401.22		0.0	
P-54											
Monthly	442.18	11/4/2013	NE	40.55	NA	NA	NA	401.63	404.18 - 379.18 (38.00 - 63.00)	0.2	
		12/2/2013	NE	40.91	NA	NA	NA	401.27		0.0	
P-60											
Weekly	446.57	10/7/2013	45.02	45.10	401.47	401.55	0.08	401.54	403.12- 383.12 (43.45 - 63.45)	1.8	
		10/21/2013	45.39	45.47	401.10	401.18	0.08	401.17		226.1	
		10/28/2013	45.37	45.38	401.19	401.20	0.01	401.20		0.5	
Monthly		11/4/2013	45.51	45.60	400.97	401.06	0.09	401.05		69.0	
Weekly		11/12/2013	NE	45.87	NA	NA	NA	400.70		7.2	
		11/19/2013	NE	45.76	NA	NA	NA	400.81		338.0	
		11/25/2013	45.72	45.81	400.76	400.85	0.09	400.84		142.2	
Monthly		12/2/2013	45.69	45.78	400.79	400.88	0.09	400.87		108.7	
Weekly		12/9/2013	46.13	46.21	400.36	400.44	0.08	400.43		14.5	
		12/16/2013	46.20	46.29	400.28	400.37	0.09	400.35		22.2	
		12/23/2013	46.37	46.46	400.11	400.20	0.09	400.19		14.1	
P-60-11											
Monthly	446.18	11/4/2013	NE	43.98	NA	NA	NA	402.20	413.03 - 383.03 (33.15 - 63.15)	44.0	
		12/2/2013	NE	44.06	NA	NA	NA	402.12		25.6	
P-60-12											
Monthly	443.31	11/4/2013	NE	42.33	NA	NA	NA	400.98	383.31 - 373.31 (60.00 - 70.00)	22.8	*
		12/2/2013	NE	42.50	NA	NA	NA	400.81		0.0	*
P-60-12S											
Monthly	443.33	11/4/2013	NE	19.17	NA	NA	NA	424.16	429.49 - 419.49 (13.84 - 23.84)	1.5	
		12/2/2013	NE	19.00	NA	NA	NA	424.33		0.0	
P-60-13											
Monthly	442.43	11/4/2013	NE	40.56	NA	NA	NA	401.87	402.43 - 382.43 (40.00 - 60.00)	2.1	
		12/2/2013	NE	40.58	NA	NA	NA	401.85		0.0	
P-60-13S											
Monthly	442.39	11/4/2013	NE	17.60	NA	NA	NA	424.79	432.39 - 422.39 (10.00 - 20.00)	6.9	
		12/2/2013	NE	17.56	NA	NA	NA	424.83		0.0	
P-93A											
Monthly	446.58	11/4/2013	NE	44.84	NA	NA	NA	401.74	398.41 - 383.41 (48.17 - 63.17)	1.6	*
		12/2/2013	NE	45.21	NA	NA	NA	401.37		0.0	*
P-93B											
Monthly	446.46	11/4/2013	NE	44.88	NA	NA	NA	401.58	371.86 - 369.86 (74.60 - 76.60)	31.8	*
		12/2/2013	NE	45.25	NA	NA	NA	401.21		0.0	*
P-93C											
Monthly	446.51	11/4/2013	NE	44.78	NA	NA	NA	401.73	352.26 - 350.26 (94.26 - 96.26)	2.1	*
		12/2/2013	NE	45.15	NA	NA	NA	401.36		0.0	*
P-93D											
Monthly	446.89	11/4/2013	NE	44.91	NA	NA	NA	401.98	321.14 - 319.14 (125.75 - 127.75)	1.0	*
		12/2/2013	NE	45.31	NA	NA	NA	401.58		0.1	*
PZ-1-85											
Monthly	445.50	11/4/2013	NE	43.31	NA	NA	NA	402.19	369.70 - 359.70 (75.80 - 85.80)	1.0	*
		12/2/2013	NE	43.56	NA	NA	NA	401.94		0.0	*
PZ-1-101											
Monthly	445.52	11/4/2013	NE	43.21	NA	NA	NA	402.31	354.52 - 344.52 (91.00 - 101.00)	7.1	*
		12/2/2013	NE	43.45	NA	NA	NA	402.07		0.0	*
PZ-2-70.5											
Monthly	443.15	11/4/2013	NE	41.47	NA	NA	NA	401.68	382.65 - 372.65 (60.50 - 70.50)	0.2	*
		12/2/2013	NE	41.83	NA	NA	NA	401.32		0.0	*
PZ-2-84											
Monthly	443.12	11/4/2013	NE	41.38	NA	NA	NA	401.74	371.12 - 359.12 (72.00 - 84.00)	0.8	*
		12/2/2013	NE	41.76	NA	NA	NA	401.36		0.0	*

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TABLE 1b
4Q13 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-3-MW											
Weekly	442.29	10/7/2013	NE	40.11	NA	NA	NA	402.18	404.48 - 394.48 (37.81 - 47.81)	250.0	
Weekly		10/14/2013	NE	40.25	NA	NA	NA	402.04		31.3	
Weekly		10/21/2013	NE	40.41	NA	NA	NA	401.88		7.9	
Weekly		10/28/2013	NE	40.50	NA	NA	NA	401.79		0.0	
Monthly		11/4/2013	NE	40.68	NA	NA	NA	401.61		15.0	
Weekly		11/12/2013	NE	40.86	NA	NA	NA	401.43		1.0	
Weekly		11/19/2013	NE	40.95	NA	NA	NA	401.34		2.1	
Weekly		11/25/2013	NE	40.94	NA	NA	NA	401.35		36.0	
Monthly		12/2/2013	NE	40.95	NA	NA	NA	401.34		149.2	
Weekly		12/9/2013	NE	41.29	NA	NA	NA	401.00		0.1	
Weekly		12/16/2013	NE	41.37	NA	NA	NA	400.92		2.9	
Weekly		12/26/2013	NE	41.58	NA	NA	NA	400.71		0.0	
ROST-4-PZ											
Weekly	442.13	10/7/2013	NE	38.91	NA	NA	NA	403.22	407.20 - 397.20 (34.93 - 44.93)	0.0	
Weekly		10/14/2013	NE	38.94	NA	NA	NA	403.19		0.0	
Weekly		10/21/2013	NE	39.08	NA	NA	NA	403.05		0.0	
Weekly		10/28/2013	NE	39.09	NA	NA	NA	403.04		0.0	
Monthly		11/4/2013	NE	39.32	NA	NA	NA	402.81		1.1	
Weekly		11/12/2013	NE	39.57	NA	NA	NA	402.56		0.4	
Weekly		11/19/2013	NE	39.53	NA	NA	NA	402.60		5.4	
Weekly		11/25/2013	NE	39.48	NA	NA	NA	402.65		9.7	
Monthly		12/2/2013	NE	39.55	NA	NA	NA	402.58		0.0	
Weekly		12/9/2013	NE	39.77	NA	NA	NA	402.36		2.2	
Weekly		12/16/2013	NE	39.81	NA	NA	NA	402.32		0.2	
Weekly		12/26/2013	NE	40.03	NA	NA	NA	402.10		0.0	
ROST-4-PZ(A)											
Weekly	442.11	10/7/2013	NE	38.93	NA	NA	NA	403.18	407.34 - 397.34 (34.77 - 44.77)	0.0	
Weekly		10/14/2013	NE	38.93	NA	NA	NA	403.18		0.0	
Weekly		10/21/2013	NE	38.99	NA	NA	NA	403.12		0.2	
Weekly		10/28/2013	NE	39.01	NA	NA	NA	403.10		0.0	
Monthly		11/4/2013	NE	39.11	NA	NA	NA	403.00		5.9	
Weekly		11/12/2013	NE	39.42	NA	NA	NA	402.69		0.5	
Weekly		11/19/2013	NE	39.40	NA	NA	NA	402.71		1.5	
Weekly		11/25/2013	NE	39.31	NA	NA	NA	402.80		5.5	
Monthly		12/2/2013	NE	39.34	NA	NA	NA	402.77		1.2	
Weekly		12/9/2013	NE	39.68	NA	NA	NA	402.43		11.1	
Weekly		12/16/2013	NE	39.76	NA	NA	NA	402.35		0.0	
Weekly		12/26/2013	NE	40.29	NA	NA	NA	401.82		0.0	
ROST-4-PZ(B)											
Weekly	442.38	10/7/2013	NE	38.78	NA	NA	NA	403.60	407.33 - 397.33 (35.05 - 45.05)	0.0	
Weekly		10/14/2013	NE	38.89	NA	NA	NA	403.49		0.0	
Weekly		10/21/2013	NE	39.04	NA	NA	NA	403.34		2.2	
Weekly		10/28/2013	NE	39.15	NA	NA	NA	403.23		0.0	
Monthly		11/4/2013	NE	39.38	NA	NA	NA	403.00		0.6	
Weekly		11/12/2013	NE	39.57	NA	NA	NA	402.81		0.5	
Weekly		11/19/2013	NE	39.65	NA	NA	NA	402.73		0.0	
Weekly		11/25/2013	NE	39.62	NA	NA	NA	402.76		53.3	
Monthly		12/2/2013	NE	39.66	NA	NA	NA	402.72		2.4	
Weekly		12/9/2013	NE	39.88	NA	NA	NA	402.50		121.3	
Weekly		12/16/2013	NE	40.02	NA	NA	NA	402.36		1.0	
Weekly		12/26/2013	NE	40.22	NA	NA	NA	402.16		0.1	
ROST-4-PZ(C)											
Weekly	442.66	10/7/2013	NE	39.96	NA	NA	NA	402.70	407.71 - 397.71 (34.95 - 44.95)	0.0	
Weekly		10/14/2013	NE	40.03	NA	NA	NA	402.63		5.8	
Weekly		10/21/2013	NE	40.18	NA	NA	NA	402.48		0.0	
Weekly		10/28/2013	NE	40.22	NA	NA	NA	402.44		0.0	
Monthly		11/4/2013	NE	40.38	NA	NA	NA	402.28		0.3	
Weekly		11/12/2013	NE	40.63	NA	NA	NA	402.03		0.2	
Weekly		11/19/2013	NE	40.68	NA	NA	NA	401.98		2.8	
Weekly		11/25/2013	NE	40.64	NA	NA	NA	402.02		34.2	
Monthly		12/2/2013	NE	40.69	NA	NA	NA	401.97		0.0	
Weekly		12/9/2013	NE	40.93	NA	NA	NA	401.73		0.0	
Weekly		12/16/2013	NE	41.04	NA	NA	NA	401.62		3.6	
Weekly		12/26/2013	NE	41.25	NA	NA	NA	401.41		0.0	
ROST-4-PZ(D)											
Weekly	442.98	10/7/2013	NE	39.82	NA	NA	NA	403.16	408.01 - 398.01 (34.97 - 44.97)	0.0	
Weekly		10/14/2013	NE	39.90	NA	NA	NA	403.08		7.3	
Weekly		10/21/2013	NE	40.10	NA	NA	NA	402.88		0.3	
Weekly		10/28/2013	NE	40.21	NA	NA	NA	402.77		0.0	
Monthly		11/4/2013	NE	40.33	NA	NA	NA	402.65		3.6	
Weekly		11/12/2013	40.60	40.61	402.37	402.38	0.01	402.38		0.6	
Weekly		11/19/2013	NE	40.64	NA	NA	NA	402.34		1.3	
Weekly		11/25/2013	40.45	40.46	402.52	402.53	0.01	402.53		53.5	
Monthly		12/2/2013	NE	40.51	NA	NA	NA	402.47		79.0	
Weekly		12/9/2013	NE	40.86	NA	NA	NA	402.12		1.1	
Weekly		12/16/2013	NE	40.94	NA	NA	NA	402.04		0.3	
Weekly		12/26/2013	NE	41.09	NA	NA	NA	401.89		0.0	

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TABLE 1b
4Q13 WEEKLY/MONTHLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & EVENT	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
ROST-4-PZ(E)											
Weekly	441.96	10/7/2013	NE	38.80	NA	NA	NA	403.16	407.21 - 397.21 (34.75 - 44.75)	0.0	
		10/14/2013	NE	38.94	NA	NA	NA	403.02		0.0	
		10/21/2013	NE	39.10	NA	NA	NA	402.86		3.6	
		10/28/2013	NE	39.17	NA	NA	NA	402.79		0.0	
Monthly		11/4/2013	NE	39.35	NA	NA	NA	402.61		1.2	
Weekly		11/12/2013	NE	39.56	NA	NA	NA	402.40		0.7	
		11/19/2013	NE	39.50	NA	NA	NA	402.46		0.5	
		11/25/2013	NE	39.33	NA	NA	NA	402.63		49.6	
Monthly		12/2/2013	NE	39.36	NA	NA	NA	402.60		0.0	
Weekly		12/9/2013	NE	39.58	NA	NA	NA	402.38		47.9	
		12/16/2013	NE	39.64	NA	NA	NA	402.32		0.7	
		12/26/2013	NE	39.84	NA	NA	NA	402.12		0.1	
ROST-4-PZ(F)											
Weekly	442.12	10/7/2013	NE	38.96	NA	NA	NA	403.16	407.59 - 397.59 (34.53 - 44.53)	0.0	
		10/14/2013	NE	39.00	NA	NA	NA	403.12		0.0	
		10/21/2013	NE	39.14	NA	NA	NA	402.98		4.2	
		10/28/2013	NE	39.17	NA	NA	NA	402.95		0.0	
Monthly		11/4/2013	NE	39.32	NA	NA	NA	402.80		1.3	
Weekly		11/12/2013	NE	39.46	NA	NA	NA	402.66		0.7	
		11/19/2013	NE	39.52	NA	NA	NA	402.60		1.1	
		11/25/2013	NE	39.45	NA	NA	NA	402.67		357.0	
Monthly		12/2/2013	NE	39.50	NA	NA	NA	402.62		6.9	
Weekly		12/9/2013	NE	39.60	NA	NA	NA	402.52		207.0	
		12/16/2013	NE	39.74	NA	NA	NA	402.38		0.1	
		12/26/2013	NE	39.86	NA	NA	NA	402.26		0.1	
ROST-4-PZ(G)											
Weekly	442.13	10/7/2013	NE	40.25	NA	NA	NA	401.88	407.85 - 397.85 (34.28 - 44.28)	0.0	
		10/14/2013	NE	40.50	NA	NA	NA	401.63		0.0	
		10/21/2013	NE	40.60	NA	NA	NA	401.53		0.0	
		10/28/2013	NE	40.70	NA	NA	NA	401.43		0.0	
Monthly		11/4/2013	NE	40.91	NA	NA	NA	401.22		0.4	
Weekly		11/12/2013	NE	41.07	NA	NA	NA	401.06		0.8	
		11/19/2013	NE	41.15	NA	NA	NA	400.98		4.7	
		11/25/2013	NE	41.05	NA	NA	NA	401.08		139.1	
Monthly		12/2/2013	NE	41.07	NA	NA	NA	401.06		0.0	
Weekly		12/9/2013	NE	41.39	NA	NA	NA	400.74		148.0	
		12/16/2013	NE	41.52	NA	NA	NA	400.61		0.1	
		12/26/2013	NE	41.70	NA	NA	NA	400.43		0.1	
ROST-5-PZ											
Monthly	442.22	11/4/2013	NE	NE	NA	NA	NA	NA	429.02 - 419.02 (13.20 - 23.20)	0.2	
		12/2/2013	NE	NE	NA	NA	NA	NA		0.0	
ROST-7-PZ											
Monthly	442.19	11/4/2013	NE	22.48	NA	NA	NA	419.71	422.19 - 412.19 (20.00 - 30.00)	53.5	
		12/2/2013	NE	22.92	NA	NA	NA	419.27		0.0	
ROST-10-PZ											
Monthly	444.51	11/4/2013	NE	NE	NA	NA	NA	NA	434.51 - 424.51 (10.00 - 20.00)	10.0	
		12/3/2013	NE	NE	NA	NA	NA	NA		0.0	
ROST-21-PZ											
Monthly	443.72	11/4/2013	NE	19.62	NA	NA	NA	424.10	433.72 - 423.72 (10.00 - 20.00)	22.2	
		12/3/2013	NE	19.66	NA	NA	NA	424.06		0.0	

NOTES:
1) Elevations presented in this table are relative to the 1988 USGS datum.
2) The Corrected W.L. Elevations presented in this table were corrected by a specific gravity of 0.80 for the wells in which LNAPL was identified.
3) PID values measured with a 10.6 electron volt (eV) lamp photoionization detector.
4) NA = Not Applicable; NE = Not Encountered; NM = Not Measured
5) * Indicates that the LNAPL and/or water level is above the top of the screened zone of the well.
6) Monthly groundwater monitoring well gauging began in July 2013, after receipt and incorporation of the conditions of the IEPA July 18, 2013 letter.

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

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-01							
1Q11	6.76	5.93	1.189	1.00	0.08	102	
2Q11	6.69	27.11	1.459	138.1	1.03	157	
3Q11	6.68	30.81	*	*	0.08	0.03	
4Q11	6.62	16.52	1.021	7.70	0.00	0.02	
1Q12	6.64	18.37	1.180	13.32	0.00	0.02	
2Q12	6.61	19.00	2.194	3.02	0.00	41	
3Q12	6.65	20.03	0.997	2.01	0.09	29	
4Q12	6.63	18.38	3.346	5.10	0.00	47	Initial Sample
	7.64	17.47	1.226	6.88	0.00	-12	Laboratory Error. Resample for VOCs
1Q13	6.73	64.65	2.192	8.16	0.20	-0.02	
2Q13	6.70	18.71	1.096	7.39	0.01	-117	
3Q13	6.76	19.26	1.068	28.82	0.90	-35	
4Q13	6.71	19.07	1.332	9.26	0.00	-27	
MW-02							
1Q11	6.72	15.19	2.048	8.00	0.97	-69	
2Q11	6.75	20.82	1.313	168.5	0.09	-69	
3Q11	6.76	25.10	*	2.10	0.00	-0.28	
4Q11	6.67	17.71	1.126	29.40	0.00	-0.08	
1Q12	6.55	18.13	1.165	45.20	0.00	-1.0	
2Q12	6.61	19.70	2.462	41.55	0.00	-60	
3Q12	6.66	20.80	1.082	4.01	0.00	-26	
4Q12	6.61	18.86	3.887	6.41	0.00	-37	
1Q13	6.67	18.53	2.027	12.39	0.05	-0.11	
2Q13	6.64	20.21	1.204	7.15	0.01	-159	
3Q13	6.76	21.55	1.320	9.69	0.00	-105	
4Q13	6.72	20.79	1.279	5.91	0.00	-99	
MW-03							
1Q11	6.88	22.83	2.349	2.00	0.26	-89	
2Q11	6.91	23.40	1.268	54.00	0.00	-74	
3Q11	7.15	34.21	1.280	0.00	0.00	195	
4Q11	6.75	17.94	1.151	0.89	0.07	-0.11	
1Q12	6.83	18.95	1.370	5.89	0.06	-0.09	
2Q12	6.72	19.61	2.219	2.26	0.00	-79	
3Q12	6.63	20.63	1.255	1.18	0.03	-67	
4Q12	6.80	20.10	2.205	1.81	0.00	-61	
1Q13	6.88	19.17	1.333	2.67	0.01	-243	
2Q13	6.92	19.83	1.078	2.64	0.02	-207	
3Q13	6.99	20.05	1.084	8.73	0.00	-143	
4Q13	6.93	19.92	1.402	9.94	0.00	-123	
MW-04							
1Q11	6.83	10.24	2.352	9.60	0.86	-51	
2Q11	6.73	24.20	1.106	7.30	0.15	-57	
3Q11	6.60	38.84	*	6.10	0.00	-0.01	
4Q11	6.89	19.04	1.111	13.20	0.00	-0.07	
1Q12	6.81	18.62	0.955	3.40	0.00	-0.08	
2Q12	6.74	20.35	2.417	9.39	0.00	-58	
3Q12	6.60	19.94	1.137	9.69	0.00	-82	
4Q12	6.78	19.13	3.319	8.68	0.00	-66	
1Q13	6.83	18.75	2.516	25.45	0.21	-113	Initial Sample
	7.26	18.37	1.296	6.07	0.04	-108	Confirmation Sample
2Q13	6.81	19.74	1.283	8.50	0.00	-151	
3Q13	6.76	20.36	1.481	8.03	0.00	-105	
4Q13	6.79	18.67	1.505	8.67	0.00	-103	
MW-05							
1Q11	6.82	19.51	2.051	2.80	0.95	-66	
2Q11	6.78	22.82	4.743	41.00	0.18	-68	
3Q11	6.88	25.11	*	9.80	0.00	0.29	
4Q11	6.70	17.87	0.956	10.03	0.02	-0.09	
1Q12	6.71	17.90	0.987	6.60	0.00	-13	
2Q12	6.68	19.74	1.956	4.57	0.00	-50	
3Q12	6.78	22.92	0.856	8.64	0.00	-120	
4Q12	6.79	18.67	2.428	8.72	0.00	-67	
1Q13	6.83	19.18	1.925	11.85	0.04	-124	
2Q13	6.79	19.64	1.010	8.72	0.00	-166	
3Q13	6.85	20.57	1.113	12.87	0.00	-129	
4Q13	6.86	19.97	1.115	9.55	0.00	-114	

SEE LAST PAGE OF TABLE FOR NOTES

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

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-06A							
1Q11	6.80	10.99	2.274	7.40	0.34	-75	
2Q11	6.72	17.98	1.049	8.20	0.07	-61	
3Q11	6.82	30.26	*	6.40	0.06	0.19	
4Q11	6.73	18.39	1.319	7.97	0.01	-0.10	
1Q12	6.64	17.62	1.295	6.30	0.00	-0.07	
2Q12	6.52	20.09	2.045	6.24	0.00	-55	
3Q12	6.56	20.14	1.098	1.46	0.00	-37	
4Q12	6.65	19.52	1.965	8.32	0.00	-57	
1Q13	7.00	20.21	0.690	20.50	0.02	-132	
2Q13	6.84	18.96	0.848	7.09	0.00	-255	
3Q13	6.77	20.15	0.928	9.62	0.00	-128	
4Q13	6.67	19.52	1.339	9.08	0.00	-116	
MW-06B							
1Q11	6.73	15.90	2.138	1.40	0.22	-46	
2Q11	6.76	19.87	0.630	2.10	0.17	-54	
3Q11	6.85	25.55	*	20.50	0.00	0.44	
4Q11	6.86	18.30	1.059	1.35	0.11	-0.06	
1Q12	6.90	17.13	1.080	10.59	0.00	-0.06	
2Q12	6.80	19.60	2.251	3.07	0.00	-35	
3Q12	6.80	20.81	1.437	5.88	0.00	-42	
4Q12	6.89	19.49	2.344	7.40	0.00	-34	
1Q13	6.82	18.11	1.127	7.34	0.00	-79	
2Q13	6.80	18.21	1.557	1.11	0.04	-132	
3Q13	6.92	19.68	1.210	9.92	0.19	-85	
4Q13	6.89	18.56	1.424	7.08	0.00	-88	
MW-06C							
1Q11	6.87	13.90	0.981	4.20	0.13	-66	
2Q11	6.84	18.93	0.713	2.10	0.43	-72	
3Q11	*	26.07	*	0.80	0.00	0.02	
4Q11	6.90	18.08	1.095	7.00	0.07	-0.08	
1Q12	6.93	17.04	1.127	4.02	0.00	-0.08	
2Q12	6.87	19.09	1.921	1.71	0.00	-68	
3Q12	6.92	20.05	1.036	2.16	0.00	-55	
4Q12	6.94	19.04	2.426	0.51	0.00	-63	
1Q13	6.94	17.60	0.828	6.48	0.01	-103	
2Q13	7.70	4.91	1.051	4.91	0.05	-178	
3Q13	7.03	19.24	1.050	6.30	0.10	-124	
4Q13	6.99	17.83	1.168	8.60	0.00	-122	
MW-06D							
1Q11	7.05	13.66	1.330	1.30	0.14	-74	
2Q11	6.86	18.82	0.614	13.20	0.09	-61	
3Q11	7.04	28.06	*	*	0.00	0.31	
4Q11	6.99	17.79	1.240	1.25	0.00	-107	
1Q12	6.94	16.69	1.192	5.48	0.02	-0.08	
2Q12	6.96	19.50	2.368	7.17	0.00	-77	
3Q12	6.43	20.56	1.030	1.05	0.04	-41	
4Q12	7.03	19.07	2.753	5.16	0.00	-61	
1Q13	7.07	17.15	0.929	6.69	0.00	-116	
2Q13	8.27	18.20	1.131	7.93	0.00	-172	
3Q13	7.04	18.60	1.373	8.93	0.00	-134	
4Q13	6.98	17.47	1.611	8.40	0.00	-124	
MW-07							
1Q11	6.53	14.40	1.869	3.20	0.74	-6.0	
2Q11	6.81	18.18	0.560	30.00	1.10	-53	
3Q11	6.83	18.79	*	19.00	*	0.01	
4Q11	6.65	19.79	1.100	2.22	0.28	-49	
1Q12	6.58	15.54	1.047	3.31	0.09	86	
2Q12	6.67	20.51	2.325	3.58	0.00	-31	
3Q12	6.69	21.88	1.062	1.69	0.03	-69	
4Q12	6.75	18.34	2973.000	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	

SEE LAST PAGE OF TABLE FOR NOTES

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

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-08							
1Q11	6.37	16.21	2.065	18.00	0.80	-14	
2Q11	6.55	19.98	0.791	20.40	0.06	-64	
3Q11	*	19.18	*	62.50	4.64	-0.15	
4Q11	6.56	19.16	1.159	5.28	1.22	-0.03	
1Q12	6.46	16.89	1.593	3.04	0.02	8.0	
2Q12	6.52	20.05	2.262	3.16	0.08	-11	
3Q12	6.46	21.97	1.299	7.27	0.00	17	Well was resampled on 08/07/12.
4Q12	6.52	17.81	4.075	5.83	0.12	0.00	
1Q13	6.58	17.83	0.863	9.84	0.00	-56	
2Q13	6.50	19.71	0.890	7.19	0.05	-124	
3Q13	6.57	19.86	2.092	8.65	0.07	-60	
4Q13	6.52	18.42	2.225	8.90	0.00	-46	
MW-09							
1Q11	6.73	12.97	1.524	17.20	0.03	-34	
2Q11	6.73	18.14	1.138	15.00	0.05	-58	
3Q11	6.68	22.67	*	*	0.00	-0.08	
4Q11	6.66	18.84	1.012	366.2	0.20	-75	
1Q12	6.56	17.30	1.160	7.35	0.00	-27	
2Q12	6.62	20.12	2.821	5.46	0.00	-15	
3Q12	6.67	19.87	1.127	8.71	0.01	-39	
4Q12	6.69	17.19	3.368	5.51	0.00	-10	
1Q13	6.73	17.96	1.367	25.29	0.00	-111	
2Q13	6.69	18.01	1.126	9.51	0.00	-125	
3Q13	6.75	18.84	1.213	9.52	0.13	-76	
4Q13	6.71	18.47	1.440	7.91	0.00	-91	
MW-10							
1Q11	6.72	13.08	1.344	4.30	0.35	-48	
2Q11	6.92	18.28	0.546	17.50	1.89	-48	
3Q11	6.93	21.44	*	*	0.00	-0.11	
4Q11	6.81	18.15	0.823	3.25	0.00	-0.10	
1Q12	6.76	18.29	0.973	28.75	0.00	-41	
2Q12	6.73	18.57	1.972	5.76	0.00	-63	
3Q12	6.87	21.46	0.623	2.57	0.02	-90	
4Q12	6.78	17.36	2.686	7.57	0.00	-20	Initial Sample
	7.61	17.42	1.222	6.93	0.00	-126	Laboratory Error. Resample for VOCs
1Q13	6.89	18.36	1.082	9.43	0.00	-173	Initial Sample
	6.88	16.98	6.226	8.89	0.04	-101	Resample
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	
MW-11							
1Q11	6.59	14.34	1.276	8.80	0.05	-59	
2Q11	6.75	17.51	1.284	21.90	0.05	-90	
3Q11	*	19.34	*	7.10	0.00	0.06	
4Q11	6.78	17.01	1.099	20.33	0.01	-0.06	
1Q12	6.74	16.18	1.077	7.87	0.00	22	
2Q12	6.76	18.13	2.204	5.40	0.00	-68	
3Q12	6.67	21.27	1.158	1.15	0.06	-69	
4Q12	6.68	18.82	4.141	8.44	0.00	-41	
1Q13	6.76	17.64	1.586	1.94	0.00	-179	
2Q13	6.75	18.16	1.313	5.58	0.01	-310	
3Q13	6.78	19.55	1.336	10.06	0.08	-94	
4Q13	6.73	17.76	1.676	9.66	0.00	-98	
MW-12							
1Q11	6.66	14.98	1.196	9.20	0.16	159	
2Q11	6.80	19.51	0.958	5.40	0.01	132	
3Q11	6.89	20.17	*	*	0.01	0.22	
4Q11	6.83	18.28	1.127	0.03	0.00	-0.10	
1Q12	6.78	17.26	1.074	8.26	0.10	146	
2Q12	6.80	18.23	1.736	4.57	0.00	38	
3Q12	6.78	20.11	0.912	2.66	0.03	4.0	
4Q12	6.81	19.19	2.515	6.47	0.00	90	
1Q13	6.79	17.34	1.006	5.83	0.06	1.0	
2Q13	6.86	19.24	0.958	1.01	0.09	-285	
3Q13	6.85	19.61	1.003	4.21	0.13	261	
4Q13	6.83	18.87	1.030	7.86	0.01	69	

SEE LAST PAGE OF TABLE FOR NOTES

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

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-13							
1Q11	6.52	17.78	1.379	19.20	0.10	-82	
2Q11	6.79	21.28	0.713	48.00	0.07	-71	
3Q11	6.89	20.78	1.230	18.50	0.57	-130	
4Q11	6.65	20.01	1.115	5.25	0.00	-102	
1Q12	6.68	18.94	1.202	5.78	0.00	-0.06	
2Q12	6.66	20.78	2.374	6.11	0.00	-78	
3Q12	6.64	22.65	1.435	7.16	0.00	-96	
4Q12	6.60	20.73	3.041	9.02	0.04	-35	
1Q13	6.64	18.59	1.019	3.55	0.01	-178	
2Q13	6.60	19.69	1.260	2.35	0.00	-152	
3Q13	6.69	20.60	1.355	9.26	0.04	-122	
4Q13	6.54	19.63	1.527	7.87	0.00	-93	
MW-14							
4Q11	6.71	18.41	0.966	1783.0	0.00	-0.09	
1Q12	NM	NM	NM	NM	NM	NM	Restricted Area.
2Q12	6.64	20.65	2.151	9.70	0.00	5.0	
3Q12	6.61	22.82	1.058	5.78	0.00	-63	
4Q12	6.61	19.59	1.137	7.69	0.03	-129	
1Q13	6.65	18.92	0.804	8.18	0.06	-100	
2Q13	6.48	19.09	1.138	5.68	0.03	-129	
3Q13	6.73	20.30	1.076	4.75	0.24	-113	
4Q13	6.70	19.37	1.262	1.83	0.05	-109	
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	
MW-22							
1Q13	*	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	
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	
P-54							
1Q11	6.69	14.47	0.970	25.40	1.29	56	
2Q11	6.74	17.70	0.885	48.00	1.62	-66	
3Q11	6.80	17.89	*	20.80	0.27	0.27	
4Q11	6.73	17.01	0.921	11.53	0.57	0.14	
1Q12	6.73	16.45	1.010	5.10	0.31	61	
2Q12	6.66	18.78	2.066	36.80	0.22	180	
3Q12	6.72	19.02	0.973	7.77	0.00	9.0	
4Q12	6.72	17.62	1.167	4.76	0.17	146	
1Q13	6.75	17.50	1.061	4.97	0.11	-23	
2Q13	6.70	18.08	1.105	2.88	0.11	-96	Initial Sample
	6.73	17.51	1.035	4.36	0.63	165	Resample
3Q13	6.80	18.42	1.091	8.66	4.22	293	
4Q13	6.80	18.09	1.475	6.74	2.46	68	
P-55							
4Q11	6.90	18.41	0.727	4.88	0.00	-0.13	Added to Interim GW Monitoring Program in 4Q11
1Q12	6.86	15.22	0.706	1.56	0.08	-0.07	
2Q12	6.78	19.69	2.098	4.55	0.00	-43	
3Q12	NM	NM	NM	NM	NM	NM	
4Q12	NM	NM	NM	NM	NM	NM	
1Q13	*	17.37	0.635	7.68	0.00	-125	Well Replaced during 4Q12
2Q13	6.86	21.33	0.799	0.06	0.02	-174	
3Q13	6.91	21.72	0.785	9.58	0.01	-133	
4Q13	6.87	21.40	0.950	3.17	0.03	-115	
P-56							
4Q11	6.68	18.24	1.063	1286.0	0.00	-0.12	Added to Interim GW Monitoring Program in 4Q11
1Q12	6.53	16.08	1.012	4.68	0.04	-5.0	
2Q12	6.57	21.78	2.385	1.04	0.00	0.00	
3Q12	6.58	22.08	1.245	3.47	0.00	12	
4Q12	6.51	22.60	3040.000	7.52	0.02	-7.0	
1Q13	*	20.98	1.106	4.56	0.00	-47	
2Q13	6.61	22.69	1.218	3.00	0.00	-122	
3Q13	6.70	25.57	1.395	6.56	0.02	-115	
4Q13	6.63	24.88	1.319	1.79	0.01	-91	

SEE LAST PAGE OF TABLE FOR NOTES

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

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
P-57							
4Q11	6.60	18.87	1.220	220.7	0.00	-0.10	Added to Interim GW Monitoring Program in 4Q11
1Q12	6.48	16.73	1.502	2.30	0.02	-73	
2Q12	6.55	19.24	2.718	2.28	0.00	-54	
3Q12	6.59	20.98	1.182	3.25	0.00	-5.0	
4Q12	6.59	18.72	3.841	5.19	0.00	-28	
1Q13	*	20.16	1.116	6.22	0.00	-104	
2Q13	6.53	20.78	1.331	6.97	0.00	-146	
3Q13	6.59	22.45	1.235	8.81	0.00	-109	
4Q13	6.60	21.55	1.284	4.52	0.00	-120	
P-58							
4Q11	6.53	18.22	1.144	10.71	0.00	-0.06	Added to Interim GW Monitoring Program in 4Q11
1Q12	6.54	16.97	1.252	14.38	0.01	-0.03	
2Q12	6.50	19.08	2.978	10.20	0.00	-5.0	
3Q12	6.56	19.51	1.199	12.67	0.00	19	
4Q12	6.49	18.76	2.836	8.22	0.00	11	Initial Sample
	7.45	18.15	1.259	13.60	0.01	-112	Laboratory Error. Resample for SVOCs and PAHs
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	
P-59							
4Q11	6.71	18.22	1.211	38.94	0.00	-0.11	Added to Interim GW Monitoring Program 4Q11
1Q12	6.56	16.14	1.152	8.31	0.00	-26	
2Q12	6.59	19.27	2.582	3.30	0.00	-23	
3Q12	6.63	21.74	1.220	9.00	0.00	-79	
4Q12	6.57	17.90	2.977	7.16	0.00	14	
1Q13	6.64	16.36	1.208	4.99	0.00	-82	
2Q13	6.54	18.74	1.109	3.91	0.00	-119	
3Q13	6.64	21.34	1.202	3.31	0.05	-107	
4Q13	6.63	20.31	1.318	4.96	0.00	-96	
P-66							
4Q11	6.38	18.49	1.228	29.77	0.00	-0.10	Added to Interim GW Monitoring Program 4Q11
1Q12	NM	NM	NM	NM	NM	NM	Restricted Area.
2Q12	6.42	20.82	2.898	19.95	0.00	-11	
3Q12	6.41	22.52	1.372	20.89	0.00	-53	
4Q12	6.44	18.80	1.353	21.29	0.00	-161	
1Q13	6.48	19.00	0.943	14.28	0.00	-79	
2Q13	6.40	19.20	1.198	13.65	0.00	-133	
3Q13	6.46	20.78	1.173	8.99	0.04	-81	
4Q13	6.46	20.11	1.429	13.42	0.02	-82	Initial Sample
	6.42	19.74	1.331	8.56	0.00	-100	Laboratory Error. Resample for VOCs
P-74							
4Q11	6.54	18.49	0.502	15.49	0.00	-0.10	
1Q12	6.84	11.70	0.233	6.86	0.87	101	
2Q12	6.84	19.17	0.367	8.55	0.37	28	
3Q12	6.68	20.31	0.580	10.52	0.00	1.0	
4Q12	6.60	18.13	2.047	14.87	0.00	-22	
1Q13	*	16.88	0.445	24.29	0.00	-39	
2Q13	6.99	16.19	0.175	14.65	1.42	-93	
3Q13	6.92	20.80	0.318	9.99	0.04	-122	
4Q13	6.68	18.27	0.447	19.33	0.00	-81	
P-93A							
1Q11	6.68	16.16	2.517	12.80	NM	NM	
2Q11	6.63	18.30	0.670	9.55	NM	NM	
3Q11	*	18.72	1.690	23.40	NM	NM	
4Q11	6.68	16.16	2.517	12.80	2.96	-68	
1Q12	6.65	15.81	1.195	9.38	6.14	5.0	
2Q12	7.34	18.04	1.247	18.22	5.80	11	
3Q12	6.71	20.89	1.144	43.60	5.20	-13	
4Q12	6.63	20.47	3.042	32.40	4.64	15	
1Q13	6.79	20.25	1.198	36.06	4.26	-66	
2Q13	6.85	19.70	1.433	33.41	5.83	-86	
3Q13	6.99	23.07	1.654	36.18	4.25	-83	
4Q13	7.15	26.33	1.618	72.75	5.89	-50	

SEE LAST PAGE OF TABLE FOR NOTES

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

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
P-93B							
1Q11	6.69	16.44	1.377	1.20	NM	NM	
2Q11	6.64	19.20	0.757	0.11	NM	NM	
3Q11	7.38	21.60	1.330	14.60	NM	NM	
4Q11	6.87	17.38	1.551	2.40	3.34	-104	
1Q12	6.87	13.39	1.250	2.11	0.21	28	
2Q12	7.51	18.52	1.555	4.99	1.84	-32	
3Q12	6.76	19.61	1.973	3.28	0.12	-65	
4Q12	6.78	18.27	2.904	0.00	0.02	19	
1Q13	6.80	17.81	1.731	2.92	0.12	-116	
2Q13	6.84	17.21	1.666	3.54	0.97	-99	
3Q13	6.80	20.05	1.644	1.56	0.05	-117	
4Q13	6.85	18.53	1.928	9.70	1.75	-0.10	
P-93C							
1Q11	7.14	16.51	1.832	0.50	NM	NM	
2Q11	6.81	18.40	0.693	0.52	NM	NM	
3Q11	6.96	21.41	1.320	5.10	NM	NM	
4Q11	6.92	17.34	1.176	1.14	0.92	-77	
1Q12	6.84	15.44	1.100	0.01	3.94	94	
2Q12	7.69	18.41	1.139	4.39	1.11	-49	
3Q12	6.77	20.55	1.416	8.66	0.16	-45	
4Q12	6.78	18.27	2.904	0.00	0.02	19	
1Q13	6.91	17.76	0.916	0.83	0.12	-118	
2Q13	6.91	17.09	0.961	0.00	0.89	-74	
3Q13	6.83	20.08	1.550	0.69	0.08	-81	Initial Sample
	6.87	20.60	1.270	0.03	0.08	-111	Resample
4Q13	6.91	18.92	1.366	0.28	0.87	-82	
P-93D							
1Q11	NM	NM	NM	NM	NM	NM	
2Q11	6.89	16.70	0.710	0.16	NM	NM	
3Q11	6.68	20.90	1.410	0.86	NM	NM	
4Q11	6.99	18.13	1.224	0.00	0.00	-166	
1Q12	6.93	15.16	1.222	1.77	0.08	-23	
2Q12	6.93	19.04	2.254	3.31	0.00	-0.03	
3Q12	6.93	21.54	1.446	2.93	0.00	-88	
4Q12	7.76	17.20	1.623	2.10	NM	NM	
1Q13	7.07	16.25	1.187	4.91	0.00	-77	
2Q13	7.08	18.02	1.211	3.37	0.17	-111	
3Q13	7.04	21.16	1.306	1.21	0.12	-120	
4Q13	6.98	20.50	1.467	0.43	0.00	-103	
P-114							
4Q11	7.16	20.29	1.287	12.60	3.19	-118	Added to Interim GW Monitoring Program 4Q11
1Q12	7.02	19.70	1.155	7.81	4.25	-6.0	
2Q12	7.01	21.38	1.212	8.60	1.33	-0.06	
3Q12	7.13	23.30	1.153	9.01	0.53	-64	
4Q12	7.12	21.18	2.274	12.12	3.00	15	
1Q13	7.25	19.52	0.782	9.14	1.53	-96	
2Q13	7.33	20.80	0.941	31.68	1.83	-144	
3Q13	7.45	22.10	1.095	17.89	3.10	-103	
4Q13	7.16	20.73	1.191	15.82	2.36	-95	
ROST-3-PZ							
2Q12	6.94	19.34	1.949	9.40	0.35	15	Added to Interim GW Monitoring Program in 2Q12
3Q12	6.83	24.31	0.813	6.90	0.29	-95	
4Q12	6.84	15.50	2.421	6.38	0.63	-9.0	
ROST-3-MW							
1Q13	*	16.92	0.723	6.82	0.00	-124	
2Q13	6.94	18.60	0.751	11.04	0.01	-319	
3Q13	6.95	18.57	0.773	33.57	0.00	-128	
4Q13	6.89	18.00	0.915	8.72	0.00	-111	
ROST-4-PZ(C)							
2Q12	6.77	20.00	2.128	0.40	0.00	-1.0	Added to Interim GW Monitoring Program 2Q12
3Q12	6.74	21.56	0.976	6.67	0.04	-94	
4Q12	6.75	18.50	2.754	0.81	0.02	-47	
1Q13	6.77	19.35	1.091	7.82	0.00	-173	
2Q13	6.75	19.22	1.334	1.67	0.01	-148	
3Q13	6.85	20.00	1.089	4.00	0.13	-111	
4Q13	6.69	18.87	1.769	5.71	0.00	-119	

SEE LAST PAGE OF TABLE FOR NOTES

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

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
T-12							
4Q11	6.87	16.98	0.919	6.28	0.00	-111	Added to Interim GW Monitoring Program 4Q11
1Q12	6.85	15.13	0.801	13.15	0.00	-0.09	
2Q12	6.66	17.63	2.382	1.18	0.00	-37	
3Q12	6.79	18.86	1.259	4.54	0.00	-125	
4Q12	6.68	16.69	3.955	1.47	0.00	-2.0	
1Q13	6.93	15.73	1.075	2.11	0.00	-117	
2Q13	6.81	18.64	1.177	10.67	0.00	-122	
3Q13	7.06	20.34	1.200	5.39	0.01	-164	
4Q13	6.65	19.39	1.324	6.84	0.00	-97	

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

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 2b
SUMMARY OF PERCHED GROUNDWATER MONITORING WELL FIELD PARAMETERS

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

Notes:
1) NM = Not Measured

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																
						Acetone[5]	Benzene	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cymene (p-Isopropyltoluene)	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate
					Screening Values (mg/L)		0.005 [1]	4.2	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.0002 [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-011711	1/17/2011	43.41 - 58.41	37.58	NE	<0.039 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	<0.0005		<0.001	
	MW1-ROX-042911	4/29/2011		38.37	NE	<0.0145 U	0.0363	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW1-ROX-072711	7/27/2011		35.77	NE	<0.005	0.0053	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW1-ROX-120511	12/5/2011		37.10	NE	<0.005 UJ	0.00097	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW1-ROX-011612	1/16/2012	48.80 - 58.80	37.75	NE	<0.005	0.0142	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW1-ROX-050112	5/1/2012		39.09	NE	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW1-ROX-073012	7/30/2012		39.39	NE	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW1-ROX-102612	10/26/2012		41.22	NE																	
	MW1-ROX-121712	12/17/2012		41.22	NE	<0.005 UJ	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW1-ROX-011013	1/10/2013		41.89	NE	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW1-ROX-040913	4/9/2013		42.55	NE	<0.005	0.0004 J	<0.01	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW1-ROX-070813	7/8/2013		39.56	NE	<0.01	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW1-ROX-100313	10/3/2013	48.80 - 58.80	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	<0.0005	<0.025	<0.001	<0.005
MW-02	MW2-ROX-011711	1/17/2011	47.19 - 62.19	38.67	NE	<0.005	0.294	<0.005	0.0078	0.0047 J	<0.005	<0.005	<0.001	<0.001	0.0077	<0.001	0.0019 J	0.0032 J	<0.0005		0.74	
	MW02-ROX-051011	5/10/2011		39.14	NE	<0.005	1.18	<0.005	<0.005	0.0029 J	0.0012 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0027 J	<0.0005	<0.025	1.24	<0.005
	MW2-ROX-072711	7/27/2011		37.04	NE	<0.05	1.98	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.005	<0.25	1.76	<0.05
	MW2-ROX-072711-DUP	7/27/2011		37.04	NE	<0.05	1.79	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.005	<0.25	1.57	<0.05
	MW2-ROX-112811	11/28/2011	49.87 - 59.87	38.03	NE	<0.005	0.0216	<0.005	<0.005	0.0106	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0121	<0.0005	<0.025	0.503	<0.005
	MW2-ROX-011612	1/16/2012		38.89	NE	<0.025	0.0161	<0.025	<0.025	<0.025	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	<0.025	<0.0025	<0.13	0.777	<0.025
	MW2-ROX-050112	5/1/2012		40.25	NE	<0.025	0.0145	<0.025	<0.025	0.0068 J	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	0.008 J	<0.0025	<0.13	0.948	<0.025
	MW2-ROX-073012	7/30/2012		40.60	NE	<0.005	0.01	<0.005	<0.005	0.0078	0.001 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.009	<0.0005	<0.025	0.952	<0.005
	MW2-ROX-102612	10/26/2012		42.35	NE	<0.025 UJ	0.0142	<0.025	<0.025	<0.025	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	<0.025	<0.0025	<0.13	0.763	<0.025
	MW2-ROX-011113	1/11/2013		42.94	NE	<0.01	0.0192	<0.01	0.0176 J	0.0077 J	0.002 J	<0.01	<0.002	<0.002	0.0083	<0.002	<0.004	0.0094 J	<0.001	<0.05	0.676	<0.01
	MW2-ROX-040913	4/9/2013		43.70	NE	<0.05	0.0174	<0.025	0.0191 J	0.0085 J	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	0.0101 J	<0.0025	<0.13	0.91	<0.025
	MW2-ROX-071113	7/11/2013		40.82	NE	<0.01 UJ	0.006	<0.005 UJ	<0.005	0.0073	0.0029 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0075	<0.0005		1.57	<0.005
	MW2-ROX-100813	10/8/2013	49.87 - 59.87	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	0.0104	<0.0005	<0.025	0.942	<0.005
MW-03	MW3-ROX-011811	1/18/2011	30.98 - 45.98	24.92	NE	<0.005	0.00056	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	0.00077 J	<0.001	0.00082 J	<0.005	<0.0005		0.00082 J	
	MW03-ROX-051011	5/10/2011		24.79	NE	<0.005	0.013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW3-ROX-080311	8/3/2011		22.72	NE	<0.005	0.00056	<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW3-ROX-112911	11/29/2011	34.67 - 44.67	24.06	NE	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW3-ROX-112911-DUP	11/29/2011		24.06	NE	<0.005	0.00052	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW3-ROX-011612	1/16/2012		24.93	NE	<0.005	0.00091	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW3-ROX-043012	4/30/2012		26.19	NE	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW3-ROX-072712	7/27/2012		26.60	NE	<0.005 UJ	0.0089	<0.005 UJ	<0.005	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.002 UJ	<0.001	<0.002	<0.005	<0.0005		<0.001	<0.005
	MW3-ROX-102512	10/25/2012		28.39	NE	<0.005 UJ	0.0017	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW3-ROX-010913	1/9/2013		29.35	NE	<0.005	0.0014	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW3-ROX-040813	4/8/2013		29.74	NE	<0.005 UJ	0.008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW3-ROX-071113	7/11/2013		26.32	NE	<0.01 UJ	0.0059	<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	<0.005
	MW3-ROX-100813	10/8/2013	34.67 - 44.67	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	<0.0005	<0.025	0.0025	<0.005

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																
						Acetone [5]	Benzene	2-Butanone [5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cymene (p-Isopropyltoluene)	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate
					Screening Values (mg/L)		0.005 [1]	4.2	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.0002 [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-011811	1/18/2011	42.63 - 57.63	36.04	NE	<0.005	0.0567	<0.005	0.0006 J	0.00063 J	0.00069 J	<0.005	<0.001	<0.001	0.00096 J	<0.001	<0.002	<0.005	<0.0005		<0.001	
	MW04-ROX-051111	5/11/2011		36.19	NE	<0.005	0.0625	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW4-ROX-072611	7/26/2011		34.15	NE	<0.005	0.114	<0.005	<0.005	0.0058	0.0063	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0023	<0.005
	MW4-ROX-072611-DUP	7/26/2011		34.15	NE	<0.005	0.108	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0021	<0.005
	MW4-ROX-121511	12/15/2011		33.99	NE	<0.005	0.0381	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW4-ROX-011612	1/16/2012	46.06 - 56.06	36.00	NE	<0.005	0.115	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	0.0017 J
	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	<0.0005	<0.025	<0.001	<0.005
	MW4-ROX-050312-DUP	5/3/2012		37.45	NE	<0.063 U	0.0933	<0.005	<0.005	<0.005	0.0012 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW4-ROX-072512	7/25/2012		37.63	NE	<0.005	0.191	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.00082 J	<0.005
	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	<0.0005	<0.025	0.00083 J	<0.005
	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	<0.001	<0.05	<0.002	<0.01
	MW4-ROX-011113	1/11/2013		40.20	NE	<0.005	9.04 J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.00052 J	<0.005
	MW4-ROX-011113-DUP	1/11/2013		40.20	NE	<0.005	8.96 J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.00056 J	<0.005
	MW4-ROX-030413	3/4/2013		40.20	NE	<0.5	21.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.05	<2.5	<0.1	<0.5
	MW4-ROX-040913	4/9/2013		40.90	NE	<0.02	64.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.004	<0.002	<0.004	<0.01	<0.001	<0.05	<0.002	<0.01
	MW4-ROX-040913-DUP	4/9/2013		40.90	NE	<0.01	72.9	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.00081 J	<0.005
	MW4-ROX-071713	7/17/2013		37.61	NE	<0.01	12.2	<0.005	<0.005	0.0016 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.001	<0.05	0.0015	<0.005
	MW4-ROX-101613	10/16/2013	46.06 - 56.06	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	<0.005	<0.25	<0.01	<0.05 UJ
MW-05	MW5-ROX-011811	1/18/2011	31.13 - 46.13	24.15	NE	<0.0344 U	0.0048	<0.005	<0.005	<0.005	0.0014 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	
	MW05-ROX-051211	5/12/2011		23.98	NE	<0.005 UJ	0.0055	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW5-ROX-072611	7/26/2011		22.00	NE	<0.005	0.0222	<0.005	0.0054	0.0061	0.0078	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW5-ROX-072611-DUP	7/26/2011		22.00	NE	<0.005	0.0221	<0.005	0.0054	0.0061	0.0078	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW5-ROX-112111	11/21/2011	33.97 - 43.97	23.46	NE	<0.005 UJ	0.0109	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	<0.005
	MW5-ROX-011712	1/17/2012		24.76	NE	<0.005	0.0442	<0.005	<0.005	<0.005	0.0057	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW5-ROX-050312	5/3/2012		25.89	NE	<0.005	0.0532	<0.005	<0.005	0.0029 J	0.0073	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0014 J	<0.0005	<0.025	<0.001	<0.005
	MW5-ROX-072512	7/25/2012		26.18	NE	<0.005	0.0925	<0.005	<0.005	0.0015 J	0.007	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.00099 J	<0.0005	<0.025	<0.001	<0.005
	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	<0.0005	<0.025	<0.001	<0.005
	MW5-ROX-011113	1/11/2013		28.75	NE	<0.005	0.0072	<0.005	<0.005	0.0016 J	0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW5-ROX-040913	4/9/2013		29.41	NE	<0.005	0.0018	<0.01	<0.005	0.0018 J	0.0063	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW5-ROX-070913	7/9/2013		26.04	NE	<0.01	0.0075	<0.005	<0.005	<0.005	0.0085	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	<0.005
	MW5-ROX-100813	10/8/2013	33.97 - 43.97	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	<0.0005	<0.025	<0.001	<0.005
MW-06A	MW6A-ROX-011911	1/19/2011	31.98 - 46.98	26.36	NE	<0.0135 U	0.0113	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002 UJ	<0.001	<0.002	<0.005	<0.0005		<0.001	
	MW6A-ROX-051611	5/16/2011		26.10	NE	<0.005 UJ	0.0031	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6A-ROX-072611	7/26/2011		23.76	NE	<0.005 U	0.0032	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6A-ROX-112111	11/21/2011	34.83 - 44.83	25.49	NE	<0.0059 UJ	0.0105 J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	<0.005
	MW6A-ROX-112111-DUP	11/21/2011		25.49	NE	<0.005 UJ	0.0137 J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	<0.005
	MW6A-ROX-011712	1/17/2012		26.74	NE	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6A-ROX-050212	5/2/2012		27.77	NE	<0.005	0.00077	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6A-ROX-080112	8/1/2012		28.36	NE	<0.005	0.0016	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6A-ROX-102412	10/24/2012		30.06	NE	<0.12 UJ	0.00073	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6A-ROX-011413	1/14/2013		31.00	NE	<0.005	0.0276	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6A-ROX-040313	4/3/2013		31.62	NE	<0.005 UJ	0.0017	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6A-ROX-070913	7/9/2013		28.25	NE	<0.01	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	<0.005
	MW6A-ROX-070913-DUP	7/9/2013		28.25	NE	<0.01	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	<0.005
	MW6A-ROX-100713	10/7/2013	34.83 - 44.83	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	<0.0005	<0.025	<0.001	<0.005
	MW6A-ROX-100713-DUP	10/7/2013		28.87	NE	<0.01 UJ	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																
						Acetone[5]	Benzene	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cymene (p-Isopropyltoluene)	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate
					Screening Values (mg/L)		0.005 [1]	4.2	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.0002 [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-011911	1/19/2011	64.05 - 69.05	26.21	NE	<0.005	0.0082	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	
	MW6B-ROX-011911-DUP	1/19/2011		26.21	NE	<0.005	0.0082	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	
	MW6B-ROX-051611	5/16/2011		25.95	NE	<0.005 UJ	0.0033	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6B-ROX-051611-DUP	5/16/2011		25.95	NE	<0.005 UJ	0.0033	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6B-ROX-072311	7/23/2011		23.60	NE	<0.005 UJ	0.0022	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6B-ROX-110311	11/3/2011		24.67	NE	<0.05	0.961	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02 UJ	<0.05	<0.005	<0.25	<0.01	<0.05
	MW6B-ROX-011712	1/17/2012		26.77	NE	<0.005	0.0013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6B-ROX-050212	5/2/2012		27.82	NE	<0.005	0.00086	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6B-ROX-080112	8/1/2012		28.39	NE	<0.0032 U	0.00045 J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6B-ROX-102412	10/24/2012		30.11	NE	<0.005 UJ	0.0015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6B-ROX-011713	1/17/2013		31.11	NE	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6B-ROX-040313	4/3/2013		31.68	NE	<0.005 UJ	0.00043 J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6B-ROX-070913	7/9/2013		28.25	NE	<0.01	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	<0.005
	MW6B-ROX-100713	10/7/2013	64.05 - 69.05	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	<0.0005	<0.025	<0.001	<0.005
MW-06C	MW6C-ROX-012111	1/21/2011	84.95 - 89.95	25.97	NE	<0.005	0.0085	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	
	MW6C-ROX-051611	5/16/2011		25.76	NE	<0.005 UJ	0.0071	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6C-ROX-072411	7/24/2011		23.43	NE	<0.005 UJ	0.0027	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6C-ROX-110311	11/3/2011		24.47	NE	<0.005	0.0017	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6C-ROX-011712	1/17/2012		26.50	NE	<0.005	0.0028	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6C-ROX-050212	5/2/2012		27.62	NE	<0.005	0.0015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6C-ROX-080112	8/1/2012		28.15	NE	<0.003 U	0.00061	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6C-ROX-102412	10/24/2012		27.85	NE	<0.005 UJ	0.00035 J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6C-ROX-011713	1/17/2013		30.88	NE	<0.005 UJ	<0.0005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.005 UJ	<0.0005 UJ	<0.025 UJ	<0.001 UJ	<0.005 UJ
	MW6C-ROX-040313	4/3/2013		31.41	NE	<0.005 UJ	0.00062	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6C-ROX-070913	7/9/2013		28.03	NE	<0.01	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	<0.005
	MW6C-ROX-100713	10/7/2013	84.95 - 89.95	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	<0.0005	<0.025	<0.001	<0.005
MW-06D	MW6D-ROX-012111	1/21/2011	104.72 - 109.72	25.87	NE	<0.005	0.0104	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	
	MW6D-ROX-051611	5/16/2011		25.60	NE	<0.005 UJ	0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6D-ROX-072311	7/23/2011		23.29	NE	<0.005 UJ	0.0027	<0.005	<0.005	<0.005	<0.005	0.007	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6D-ROX-110311	11/3/2011		24.31	NE	<0.005	0.013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6D-ROX-011712	1/17/2012		26.33	NE	<0.005	0.0022	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6D-ROX-050212	5/2/2012		27.45	NE	<0.005	0.0015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6D-ROX-080212	8/2/2012		30.56	NE	<0.005 UJ	0.00068	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	<0.005
	MW6D-ROX-102412	10/24/2012		29.71	NE	<0.005 UJ	0.00055	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6D-ROX-011713	1/17/2013		30.75	NE	<0.005 UJ	0.00053 J	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.005 UJ	<0.0005 UJ	<0.025 UJ	<0.001 UJ	<0.005 UJ
	MW6D-ROX-040313	4/3/2013		31.27	NE	<0.005 UJ	0.00055	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW6D-ROX-070913	7/9/2013		27.91	NE	<0.01	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	<0.005
	MW6D-ROX-100713	10/7/2013	104.72 - 109.72	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	<0.0005	<0.025	<0.001	<0.005

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																
						Acetone[6]	Benzene	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cymene (p-Isopropyltoluene)	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate
					Screening Values (mg/L)		0.005 [1]	4.2	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.0002 [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-012511	1/25/2011	42.92 - 52.92	37.52	NE	<0.005 UJ	1150 J	<0.005 UJ	0.0015 J J	0.0011 J J	0.0012 J J	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.005 UJ	<0.0005 UJ		0.0325 J	
	MW07-ROX-051311	5/13/2011		37.50	NE	<0.005 UJ	1030 J	<0.005 UJ	<0.005 UJ	0.0011 J J	0.0016 J J	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.005 UJ	<0.0005 UJ	<0.025 UJ	0.0494 J	<0.005 UJ
	MW07-ROX-051311D	5/13/2011		37.50	NE	<0.005	922 J	<0.005	<0.005	0.0013 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0487	<0.005
	MW7-ROX-072411	7/24/2011		35.65	NE	<25 UJ	1840	<25	<25	<25	<25	<25	<5	<5	<10	<5	<10	<25	<2.5	<130	<5	<25
	MW-7-ROX-110211	11/2/2011		35.95	NE	<5	774	<5	<5	<5	<5	<5	<1	<1	<2	<1	<2 UJ	<5	<0.5	<25	<1	<5
	MW7-ROX-011812	1/18/2012		38.10	NE	<0.166 U	1330 J	<0.005	0.0026 J	0.0021 J	0.003 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0727	<0.005
	MW7-ROX-011812-DUP	1/18/2012		38.10	NE	<0.146 U	1110	<0.005	0.0027 J	0.0022 J	0.0029 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0015 J	<0.0005	<0.025	0.0718	<0.005
	MW7-ROX-050412	5/4/2012		39.19	NE	<0.5	738	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.05	<2.5	<0.1	<0.5
	MW7-ROX-080712	8/7/2012		39.50	NE	0.199	591	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.005	<0.25	0.0619	<0.05
	MW7-ROX-103012	10/30/2012		41.23	NE	<10 UJ	833	<10	<10	<10	<10	<10	<2	<2	<4	<2	<4 UJ	<10	<1	<50	<2	<10
	MW7-ROX-103012-DUP	10/30/2012		41.23	NE	<10 UJ	863	<10	<10	<10	<10	<10	<2	<2	<4	<2	<4 UJ	<10	<1	<50	<2	<10
	MW7-ROX-011513	1/15/2013		42.21	NE	<20	1230	<20	<20	<20	<20	<20	<4	<4	<8	<4	<8	<20	<2	<100	<4	<20
	MW7-ROX-011513-DUP	1/15/2013		42.21	NE	<20	1320	<20	<20	<20	<20	<20	<4	<4	<8	<4	<8	<20	<2	<100	<4	<20
	MW7-ROX-041013	4/10/2013		42.70	NE	<20	475	<20	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<1	<50	<2	<10
	MW7-ROX-041013-DUP	4/10/2013		42.70	NE	<20	499	<20	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<1	<50	<2	<10
	MW7-ROX-071713	7/17/2013		39.60	NE	<0.01	1000 J	<0.005	<0.005	0.0023 J J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0016 J J	<0.001	<0.05	0.2 J	<0.005
	MW7-ROX-101613	10/16/2013	42.92 - 52.92	40.64	NE	<20	553	<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<1	<50	<2	<10 UJ
MW-08	MW8-ROX-012511	1/25/2011	33.60 - 43.60	28.59	NE	<0.0469 U	986	<0.005 UJ	0.0021 J J	0.0014 J J	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	0.0012 J J	<0.0005 UJ		0.234 J	
	MW8-ROX-012511-DUP	1/25/2011		28.59	NE	<0.0403 U	1030	<0.005 UJ	0.002 J J	0.0014 J J	0.0011 J J	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	0.001 J J	<0.0005 UJ		0.237 J	
	MW08-ROX-051311	5/13/2011		28.35	NE	<50	1310	<50	<50	<50	<50	<50	<10	<10	<20	<10	<20	<50	<5	<250	<10	<50
	MW08-ROX-051311D	5/13/2011		28.35	NE	<5	952 J	<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<0.5	<25	<1	<5
	MW8-ROX-072411	7/24/2011		26.02	NE	<25	1650	<25 UJ	<25	<25	<25	<25	<5	<5	<10	<5	<10 UJ	<25	<2.5	<130	<5	<25
	MW8-ROX-072411-DUP	7/24/2011		26.02	NE	<25 UJ	1860	<25	<25	<25	<25	<25	<5	<5	<10	<5	<10	<25	<2.5	<130	<5	<25
	MW-8-ROX-110211	11/2/2011		27.02	NE	<5	934	<5	<5	<5	<5	<5	<1	<1	<2	<1	<2 UJ	<5	<0.5	<25	<1	<5
	MW8-ROX-011812	1/18/2012		29.15	NE	<0.005	386	<0.005	0.0043 J	0.003 J	0.002 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0022 J	<0.0005	<0.025	0.285	<0.005
	MW8-ROX-050412	5/4/2012		30.21	NE	<0.5	1070	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.05	<2.5	0.393	<0.5
	MW8-ROX-050412-DUP	5/4/2012		30.21	NE	<0.5	1040	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.05	<2.5	0.396	<0.5
	MW8-ROX-080712	8/7/2012		30.97	NE	<0.378 U	397 J	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.01	<0.5	0.249	<0.1
	MW8-ROX-080712-DUP	8/7/2012		30.97	NE	<0.235 U	653 J	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.005	<0.25	0.232	<0.05
	MW8-ROX-103012	10/30/2012		32.32	NE	<5 UJ	523	<5	<5	<5	<5	<5	<1	<1	<2	<1	<2 UJ	<5	<0.5	<25	<1	<5
	MW8-ROX-011513	1/15/2013		33.30	NE	<10	1120 J	<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<1	<50	<2	<10
	MW8-ROX-041013	4/10/2013		33.77	NE	<50	969	<50	<25	<25	<25	<25	<5	<5	<10	<5	<10	<25	<2.5	<130	<5	<25
	MW8-ROX-071713	7/17/2013		30.43	NE	<0.008 U	532	<0.005	<0.005	0.0033 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0023 J	<0.001	<0.05	0.508	<0.005
	MW8-ROX-071713-DUP	7/17/2013		30.43	NE	<0.01	494	<0.005	<0.005	0.0031 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0024 J	<0.001	<0.05	0.442 J	<0.005
	MW8-ROX-101613	10/16/2013	33.60 - 43.60	31.59	NE	<20	360	<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<1	<50	<2	<10 UJ
	MW8-ROX-101613-DUP	10/16/2013		31.59	NE	<20	351	<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<1	<50	<2	<10 UJ
MW-09	MW9-ROX-012111	1/21/2011	46.45 - 56.45	39.62	NE	<0.005	0.0037	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	
	MW09-ROX-050611	5/6/2011		40.12	NE	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW9-ROX-072311	7/23/2011		38.06	NE	<0.005 UJ	0.0024	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW9-ROX-110111	11/1/2011		37.78	NE	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW9-ROX-011612	1/16/2012		39.50	NE	<0.005	0.0031	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW9-ROX-050312	5/3/2012		41.03	NE	<0.005	0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW9-ROX-072712	7/27/2012		41.30	NE	<0.005 UJ	0.00058	<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005		<0.001	<0.005
	MW9-ROX-102912	10/29/2012		43.17	NE	<0.005 UJ	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW9-ROX-011113	1/11/2013		43.90	NE	<0.123 U	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW9-ROX-040913	4/9/2013		44.67	NE	<0.005	<0.0005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW9-ROX-070813	7/8/2013		42.35	NE	<0.01	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW9-ROX-100313	10/3/2013	46.45 - 56.45	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	<0.0005	<0.025	<0.001	<0.005

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						VOCs																
						Acetone[5]	Benzene	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cymene (p-Isopropyltoluene)	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate
					Screening Values (mg/L)		0.005 [1]	4.2	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.0002 [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-10	MW10-ROX-012411	1/24/2011	44.43 - 54.43	39.40	NE	<0.0122 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	<0.0005		<0.001	
	MW10-ROX-012411-DUP	1/24/2011		39.40	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	<0.0005		<0.001	
	MW10-ROX-042811	4/28/2011		40.20	NE	<0.0088 U	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW10-ROX-072311	7/23/2011		38.01	NE	<0.005 UJ	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW10-ROX-110111	11/1/2011		37.72	NE	<0.005	0.0022	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW10-ROX-011612	1/16/2012		39.28	NE	<0.005	0.0026	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW10-ROX-050112	5/1/2012		40.86	NE	<0.005	0.00079	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW10-ROX-072712	7/27/2012		41.21	NE	<0.005 UJ	0.00058	<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005		<0.001	<0.005
	MW10-ROX-102612	10/26/2012		43.08	NE																	
	MW10-ROX-121712	12/17/2012		43.08	NE	<0.005 UJ	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	0.00095 J	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW10-ROX-011013	1/10/2013		44.10	NE	<0.101 U	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	0.0074	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW10-ROX-012113	1/21/2013		44.10	NE	<0.025	0.003	<0.0051 U	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.001	<0.01	<0.005	<0.001		<0.005	<0.005
	MW10-ROX-040913	4/9/2013		44.60	NE	<0.005	0.00067	<0.01	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW10-ROX-070813	7/8/2013		42.27	NE	<0.01	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW10-ROX-100313	10/3/2013	44.43 - 54.43	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	<0.0005	<0.025	<0.001	<0.005
MW-11	MW11-ROX-012411	1/24/2011	41.66 - 51.66	37.15	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	<0.0005		<0.001	
	MW11-ROX-050611	5/6/2011		37.60	NE	<0.005	0.00041 J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW11-ROX-072411	7/24/2011		34.3	NE	<0.005 UJ	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW-11-ROX-110211	11/2/2011		35.44	NE	<0.005	0.0019	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW11-ROX-011712	1/17/2012		37.44	NE	<0.005	0.0024	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW11-ROX-043012	4/30/2012		38.66	NE	<0.005	0.00087	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW11-ROX-072712	7/27/2012		38.90	NE	<0.005 UJ	0.00073	<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005		<0.001	<0.005
	MW11-ROX-102512	10/25/2012		40.59	NE	<0.005 UJ	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW11-ROX-011013	1/10/2013		41.43	NE	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW11-ROX-040813	4/8/2013		42.02	NE	<0.005 UJ	<0.00065 U	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW11-ROX-070813	7/8/2013		39.24	NE	<0.01	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW11-ROX-100713	10/7/2013	41.66 - 51.66	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	<0.0005	<0.025	<0.001	<0.005
MW-12	MW12-ROX-012411	1/24/2011	41.92 - 51.92	37.42	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	<0.0005		<0.001	
	MW12-ROX-051211	5/12/2011		37.58	NE	<0.005 UJ	0.0016	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW12-ROX-072411	7/24/2011		35.55	NE	<0.005 UJ	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002 UJ	<0.001	<0.002	<0.005 UJ	<0.0005	<0.025	<0.001	<0.005
	MW-12-ROX-110211	11/2/2011		35.70	NE	<0.005	0.0012	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW-12-ROX-110211-DUP	11/2/2011		35.70	NE	<0.005	0.0014	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW12-ROX-011712	1/17/2012		37.70	NE	<0.005	0.0023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW12-ROX-011712-DUP	1/17/2012		37.70	NE	<0.005	0.0028	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW12-ROX-043012	4/30/2012		38.98	NE	<0.005	0.00066	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW12-ROX-072712	7/27/2012		39.22	NE	<0.005 UJ	0.0013	<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005		<0.001	<0.005
	MW12-ROX-102512	10/25/2012		40.95	NE	<0.005 UJ	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW12-ROX-011013	1/10/2013		41.83	NE	<0.35 U	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW12-ROX-040813	4/8/2013		42.46	NE	<0.005 UJ	<0.00088 U	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW12-ROX-070913	7/9/2013		39.28	NE	<0.01	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	<0.005
	MW12-ROX-100713	10/7/2013	41.92 - 51.92	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	<0.0005	<0.025	<0.001	<0.005

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																
						Acetone[5]	Benzene	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cymene (p-Isopropyltoluene)	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate
					Screening Values (mg/L)		0.005 [1]	4.2	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.0002 [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-13	MW13-ROX-012511	1/25/2011	25.57 - 35.57	24.28	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	<0.0005		<0.001	
	MW13-ROX-051311	5/13/2011		23.65	NE	<0.005 UJ	0.0005 J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW13-ROX-080311	8/3/2011		21.67	NE	<0.005	<0.0005	<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW13-ROX-110311	11/3/2011		22.85	NE	<0.005	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW13-ROX-012012	1/20/2012		24.77	NE	<0.005	0.0742 J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW13-ROX-050712	5/7/2012		25.79	NE	<0.005	0.009	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW13-ROX-080812	8/8/2012		26.67	NE	<0.037 U	0.0069 J	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.005 UJ	<0.0005 UJ	<0.025 UJ	<0.001 UJ	<0.005 UJ
	MW13-ROX-110812	11/8/2012		25.30	NE	<0.005	0.0048	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW13-ROX-012313	1/23/2013		29.26	NE	<0.005	0.0067 J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025 UJ	<0.001	<0.005
	MW13-ROX-041213	4/12/2013		29.44	NE	<0.0319 UJ	0.0102 J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW13-ROX-071213	7/12/2013		25.67	NE	<0.01	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001 UJ	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW13-ROX-100913	10/9/2013	25.57 - 35.57	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	<0.0005	<0.025	<0.001	<0.005
MW-14	MW14-ROX-110911	11/9/2011	Unknown			<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW14-ROX-051012	5/10/2012	33.42 - 43.42	NM	NE	<0.005	0.009	<0.005	0.0014 J	0.0026 J	0.0012 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW14-ROX-080312	8/3/2012		29.87	NE	<0.005	0.0131	<0.005	0.0015 J	0.0027 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.00065 J	<0.005
	MW14-ROX-103112	10/31/2012		32.02	NE	<0.005 UJ	0.00093	<0.005	<0.005	0.0028 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW14-ROX-011813	1/18/2013		33.05	NE	<0.005	0.0017	<0.005	0.0014 J	0.0032 J	0.0011 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW14-ROX-041113	4/11/2013		33.31	NE	<0.01	0.0125 J	<0.01	0.0021 J	0.0048 J	0.0016 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW14-ROX-071213	7/12/2013		30.36	NE	<0.01	0.00064	<0.005	0.00066 J	0.002 J	0.0013 J	<0.005	<0.001 UJ	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW14-ROX-101013	10/10/2013	33.42 - 43.42	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	0.0011 J	<0.0005	<0.025	<0.001	<0.005
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	<0.0005	<0.025 UJ	<0.001	<0.005
	MW16-ROX-040813	4/8/2013		43.39	NE	<0.005 UJ	<0.00058 U	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW16-ROX-070813	7/8/2013		40.62	NE	<0.01	<0.00062 U	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	MW16-ROX-100813	10/8/2013	37.06 - 47.06	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	<0.0005	<0.025	<0.001	<0.005
MW-22	MW22-ROX-012313	1/23/2013	37.88 - 47.88	41.80	NE	<0.25	2.12	<0.295 U	<0.25	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.025	<1.3 UJ	3.45	<0.25
	MW22-ROX-012313-DUP	1/23/2013		41.80	NE	<0.25	2.09	<0.31 U	<0.25	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.025	<1.3 UJ	3.19	<0.25
	MW22-ROX-040513	4/5/2013		42.23	NE	<0.005 UJ	1.5	<0.005	0.0413 J	0.0142 J	0.0171 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0122 J	<0.0005	<0.025	2.44	<0.005
	MW22-ROX-071113	7/11/2013		39.35	NE	<0.01 UJ	1.19	<0.005 UJ	<0.005	0.0116	0.0142	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0087	<0.0005		2.07	<0.005
	MW22-ROX-071113-DUP	7/11/2013		39.35	NE	<0.01 UJ	1.11	<0.005 UJ	<0.005	0.0116	0.0148	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0087	<0.0005		1.79	<0.005
	MW22-ROX-100913	10/9/2013	37.88 - 47.88	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	0.01	<0.0005	<0.025	3.79	<0.005
	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	0.0095	<0.0005	<0.025	3.97	<0.005
MW-24	MW24-ROX-040513	4/5/2013	38.89 - 48.89	43.39	NE	<0.005	0.0029	<0.01	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0012	<0.005
	MW24-ROX-071113	7/11/2013		40.35	NE	<0.0157 UJ	<0.0005	<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	<0.005
	MW24-ROX-100913	10/9/2013	38.89 - 48.89	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	<0.0005	<0.025	<0.001	<0.005

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																
						Acetone[5]	Benzene	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cymene (p-Isopropyltoluene)	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate
					Screening Values (mg/L)		0.005 [1]	4.2	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.0002 [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-54	P54-ROX-012411	1/24/2011	38.00 - 63.00	37.24	NE	<0.0048 U	<0.00039 U	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	
	P54-ROX-051111	5/11/2011		37.37	NE	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P54-ROX-072411	7/24/2011		35.38	NE	<0.005 UJ	0.0023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002 UJ	<0.001	<0.002	<0.005 UJ	<0.0005	<0.025	<0.001	<0.005
	P54-ROX-110311	11/3/2011		35.49	NE	<0.005	0.013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005	<0.025	<0.001	<0.005
	P54-ROX-011712	1/17/2012		37.17	NE	<0.005	0.0025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P54-ROX-050412	5/4/2012		38.77	NE	<0.005	0.00082	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P54-ROX-080212	8/2/2012		38.95	NE	<0.005 UJ	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	<0.005
	P54-ROX-103012	10/30/2012		40.70	NE	<0.005 UJ	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P54-ROX-011113	1/11/2013		41.56	NE	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P54-ROX-041013	4/10/2013		41.80	NE	<0.01	0.172	<0.01	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P54-ROX-050313	5/3/2013		41.80	NE	<0.01 UJ	0.0028	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P54-ROX-071113	7/11/2013		39.07	NE	<0.01 UJ	<0.0005	<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		<0.001	<0.005
	P54-ROX-100813	10/8/2013	38.00 - 63.00	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	<0.0005	<0.025	<0.001	<0.005
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	<0.0005	<0.025	0.0143	<0.005
	P55-ROX-011912	1/19/2012		41.09	NE	<0.005	<0.197 U	<0.005	<0.005	0.0036 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0656	<0.005
	P55-ROX-011912-D	1/19/2012		41.09	NE	<0.005	<0.202 U	<0.005	<0.005	0.0038 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0683	<0.005
	P55-ROX-050912	5/9/2012		42.44	NE	<0.005	0.388	<0.005	0.0099	0.0093	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0031 J	<0.0005	<0.025	0.41	<0.005
	P55-ROX-012113	1/21/2013	40.43 - 50.43	43.60	NE	<0.25	0.571	<0.25	0.0533	0.011 J	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.1	<0.05	<0.01		0.316	<0.05
	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	0.0055	<0.0005	<0.025	0.366	<0.005
	P55-ROX-041513	4/15/2013		43.63	NE	<0.02 UJ	0.434	<0.01	0.0052 J	0.0196	<0.01	<0.01	<0.002	<0.002	<0.004	<0.002	<0.004	<0.01	<0.001	<0.05	0.35	<0.01
	P55-ROX-071613	7/16/2013		40.06	NE	<0.01	0.573	<0.005	0.0256	0.0155	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0065	<0.0005	<0.025	0.495	<0.005
	P55-ROX-101013	10/10/2013	40.43 - 50.43	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	0.0066	<0.0005	<0.025	0.602	<0.005
P-56	P56-ROX-102711	10/27/2011	40.82 - 65.82	39.42	NE	<0.005	0.144	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.457 J	<0.005
	P56-ROX-011912	1/19/2012		41.81	NE	<0.005	0.335	<0.005	<0.005	0.0035 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.227	<0.005
	P56-ROX-050812	5/8/2012		43.09	NE	<0.23 U	0.144	<0.005	0.0086	0.0051	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	0.0069	0.0044 J	<0.0005	<0.025	1.14	<0.005
	P56-ROX-080612	8/6/2012		43.60	NE	<0.025 UJ	0.164	<0.025 UJ	<0.025	<0.025	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	<0.025	<0.0025		0.101	<0.025
	P56-ROX-103112	10/31/2012		44.80	NE	<0.005 UJ	0.176	<0.005	<0.005	0.005	0.0021 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0041 J	<0.0005	<0.025	1.29	<0.005
	P56-ROX-011713	1/17/2013		45.65	NE	<0.025	0.191	<0.025	0.0031 J	<0.025	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	<0.025	<0.0025	<0.13	0.0088	<0.025
	P56-ROX-041213	4/12/2013		46.12	NE	<0.02 U	0.131	<0.01	<0.01	0.0142	<0.01	<0.01	<0.002	<0.002	<0.004	<0.002	<0.004	<0.01	<0.001	<0.05	0.691	<0.01
	P56-ROX-071513	7/15/2013		43.25	NE	<0.156 U	0.131	<0.005	0.0141	0.0072	0.0038 J	<0.005	<0.001	<0.001	0.0047	<0.001	<0.002	0.0061	<0.0005	<0.025	2	<0.005
	P56-ROX-101013	10/10/2013	40.82 - 65.82	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	0.0046 J	0.001	<0.025	1.58	<0.005
P-57	P57-ROX-110811	11/8/2011	40.46 - 65.46	39.20	NE	<0.5	123	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.05	<2.5	1.1	<0.5
	P57-ROX-021312	2/13/2012		42.13	NE	<2.5 UJ	126	<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<0.25	<13	0.719	<2.5
	P57-ROX-050712	5/7/2012		42.92	NE	<0.5	147	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.05	<2.5	1.07	<0.5
	P57-ROX-080612	8/6/2012		43.53	NE	<0.25 UJ	99.4	<0.25 UJ	<0.25	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.025		0.795	<0.25
	P57-ROX-080612-DUP	8/6/2012		43.53	NE	<0.005 UJ	106	<0.005 UJ	<0.005	0.0107	0.0124	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0109	<0.0005		0.759 E	<0.005
	P57-ROX-110512	11/5/2012		44.98	NE	<2.5	142	<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<0.25	<13	1.09	<2.5
	P57-ROX-012913	1/29/2013		45.92	NE	<2.5	114	<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	1.43	<1	<0.5	<1	<2.5	<0.25	<13	1.1	<2.5
	P57-ROX-041113	4/11/2013		46.29	NE	<5	141	<5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<0.25	<13	1.19	<2.5
	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	0.0119 J	<0.0005	<0.025	1.59	<0.005
	P57-ROX-101413	10/14/2013	40.46 - 65.46	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	0.0113	<0.0005	<0.025	1.1	<0.005

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																
						Acetone[5]	Benzene	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cymene (p-isopropyltoluene)	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate
					Screening Values (mg/L)		0.005 [1]	4.2	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.0002 [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	0.0113	<0.0005	<0.025	<5	<0.005
	P58-ROX-011912	1/19/2012		39.73	NE	<0.005	487	<0.005	0.027	0.0215	0.056 J	<0.005	<0.001	0.0013	<0.002	<0.001	<0.002	0.0149	<0.0005	<0.025	0.97 J	<0.005
	P58-ROX-011912-D	1/19/2012		39.73	NE	<0.005	474	<0.005	0.0235 J	0.0168 J	0.0387 J	<0.005	<0.001	0.0014 J	<0.002	<0.001	<0.002	0.0123 J	<0.0005	<0.025	1.03	<0.005
	P58-ROX-050712	5/7/2012		40.90	NE	<0.5	477	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.05	<2.5	1.03	<0.5
	P58-ROX-050712-DUP	5/7/2012		40.90	NE	<0.5	440	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.05	<2.5	1	<0.5
	P58-ROX-080612	8/6/2012		41.63	NE	<0.1 UJ	313	<0.1 UJ	<0.1	<0.1	0.0317 J	<0.1	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.01		0.889	<0.1
	P58-ROX-080612-DUP	8/6/2012		41.63	NE	<0.05	308	<0.05	<0.05	0.0176 J	0.0339 J	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	0.0118 J	<0.005	<0.25	0.931	<0.05
	P58-ROX-110612	11/6/2012		43.09	NE	<0.5 UJ	415	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1 UJ	<0.1	<0.2	<0.1	<0.2	<0.5	<0.05	<2.5	0.844	<0.5
	P58-ROX-121012	12/10/2012		43.09	NE																	
	P58-ROX-012213	1/22/2013		44.21	NE	<5	552	<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<0.5	<25	1.27	<5
	P58-ROX-041113	4/11/2013		44.40	NE	<20	532	<20	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<1	<50	1.28 J	<10
	P58-ROX-071613	7/16/2013		41.49	NE	<0.01	398	<0.005	0.0239	0.0215	0.0532	<0.005	<0.001	0.0017	<0.002	<0.001	<0.002	0.0152	<0.0005	<0.025	1.07	<0.005
	P58-ROX-101413	10/14/2013	40.21 - 65.21	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	0.0143	<0.0005	<0.025	1.53	<0.005
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	<0.025	<1.3	1.49	<0.25
	P59-ROX-011912	1/19/2012		42.88	NE	<0.005	6.61	<0.158 U	<0.005 UJ	0.0054	0.0031 J J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0036 J	<0.0005	<0.025	1.28	<0.005
	P59-ROX-011912-DUP	1/19/2012		42.88	NE	<0.005	7.04	<0.185 U	0.0264 J	0.0055	0.0372 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0038 J	<0.0005	<0.025	1.4	<0.005
	P59-ROX-050912	5/9/2012		44.11	NE	<0.25	7.86	<0.25	<0.25	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.025	<1.3	1.93	<0.25
	P59-ROX-080212	8/2/2012		44.07	NE	<0.1 UJ	11	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.01		1.74	<0.1
	P59-ROX-110212	11/2/2012		45.98	NE	<0.5 UJ	10.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.05	<2.5	1.87	<0.5
	P59-ROX-110212-DUP	11/2/2012		45.98	NE	<0.5 UJ	10.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.05	<2.5	1.94	<0.5
	P59-ROX-013013	1/30/2013		46.60	NE	<0.25	12.1	<0.25	<0.25	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.025	<1.3	1.9	<0.25
	P59-ROX-041213	4/12/2013		46.95	NE	<0.5 UJ	15	<0.25	<0.25	0.289	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.025	<1.3	2.85	<0.25
	P59-ROX-041213-DUP	4/12/2013		46.95	NE	<0.5 UJ	13.4	<0.25	<0.25	0.288	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.025	<1.3	2.57	<0.25
	P59-ROX-071613	7/16/2013		44.13	NE	<0.01	10.2	<0.005	0.0213 J	0.0068 J	0.0027 J J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0046 J J	<0.0005	<0.025	2.4	<0.005
	P59-ROX-101013	10/10/2013	47.91 - 72.91	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	0.0051	<0.0005	<0.025	3.19	<0.005
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	<0.0005	<0.025	0.0016	<0.005
	P66-ROX-051012	5/10/2012		32.48	NE	<0.005	0.0193	<0.005	0.0139	0.019	0.0059	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0015	<0.005
	P66-ROX-080312	8/3/2012		30.51	NE	<0.005	0.0994	<0.005	0.0118	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0013	<0.005
	P66-ROX-103112	10/31/2012		34.75	NE	<0.005	0.223	<0.005	0.0145	0.02	0.0054	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0012	<0.005
	P66-ROX-011813	1/18/2013		35.70	NE	<0.005	0.0896	<0.005	0.0129	0.0227	0.0087	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0014	<0.005
	P66-ROX-041113	4/11/2013		36.03	NE	<0.01	0.0444	<0.01	0.0199	0.0249	0.0104	<0.005	<0.001	<0.001	0.00065 J	<0.001	<0.002	0.0093	<0.0005	<0.025	0.0036	<0.005
	P66-ROX-071213	7/12/2013		33.20	NE	<0.01	0.187	<0.005	0.0146	0.0221	0.006	<0.005	<0.001 UJ	0.00059 J	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0022	<0.005
	P66-ROX-101013	10/10/2013	34.72 - 59.72	33.66	NE	0.0095	0.0646	<0.005	0.0141	0.0186	0.0067	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0045	<0.005
	P66-ROX-110713	11/7/2013		33.66	NE	<0.01	0.03	<0.005	0.0088	0.0102	0.0071	<0.005	<0.001	0.0007 J	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0016	<0.005
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	<0.0005	<0.025	0.229	<0.005
	P74-ROX-011912	1/19/2012		38.77	NE	<0.005	<0.205 U	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0095	<0.005
	P74-ROX-050712	5/7/2012		39.92	NE	<0.005	0.336	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0081	<0.005
	P74-ROX-080612	8/6/2012		40.71	NE	<0.05 UJ	2.46	<0.05 UJ	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.005		0.0782	<0.05
	P74-ROX-110112	11/1/2012		41.72	NE	<0.1	3.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.01	<0.5	0.0493	<0.1
	P74-ROX-011713	1/17/2013		42.65	NE	<0.1	4.99	<0.1	0.0143 J	<0.1	<0.1	<0.1	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.01	<0.5	0.0997	<0.1
	P74-ROX-041113	4/11/2013		42.83	NE	<0.01	0.144	<0.01	0.0026 J	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0086	<0.005
	P74-ROX-071513	7/15/2013		40.11	NE	<0.0046 U	0.117	<0.005	0.0088	0.002 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0017 J	<0.0005	<0.025	0.0306	<0.005
	P74-ROX-101413	10/14/2013	44.43 - 69.43	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	0.0031 J	<0.0005	<0.025	0.0653	<0.005

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																
						Acetone[5]	Benzene	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cymene (p-Isopropyltoluene)	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate
					Screening Values (mg/L)		0.005 [1]	4.2	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.0002 [2]			0.001 [2]	0.0077 [1]	0.7 [1]	
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																
P-93A	P93A-ROX_012611	1/26/2011	48.17 - 63.17	40.97	NE	<0.005	491	<0.005	0.0059	0.0096	0.0213	<0.005	0.00081 J	0.00061 J	<0.002	<0.001	<0.002	0.0047 J	<0.0005		0.373	
	P93A-ROX-050511	5/5/2011		41.88	NE	<0.005	551	<0.005	<0.005	0.0054 J	0.0133 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0034 J J	<0.0005	<0.025	<5	<0.005
	P93A-ROX-081811	8/18/2011		39.40	NE	<0.005	467	<0.005	<0.005	0.0071	0.0177	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0049 J	<0.0005	<0.025	<10	<0.005
	P93A-ROX-102611	10/26/2011		39.43	NE	<0.005 UJ	543	<0.005	<0.005	0.006	0.015	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0081	<0.0005	<0.025	0.304	<0.005
	P93A-ROX-012012	1/20/2012		41.66	NE	<0.005	164 J	<0.005	0.0037 J J	0.0045 J	0.0122	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0023 J	<0.0005	<0.025	0.185	<0.005
	P93A-ROX-050812	5/8/2012		42.75	NE	<0.0441 U	200	<0.005 UJ	0.005 J	0.0069 J	0.0179 J	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	0.0035 J J	<0.0005 UJ	<0.025 UJ	0.38 J	<0.005 UJ
	P93A-ROX-080912	8/9/2012		43.66	NE	<1.63 U	87	<0.005	0.0027 J	0.0048 J	0.0128	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0022 J	<0.0005	<0.025	0.225	<0.005
	P93A-ROX-110712	11/7/2012		45.00	NE	<0.5 UJ	148	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.05	<2.5	0.265	<0.5
	P93A-ROX-110712-DUP	11/7/2012		45.00	NE	<0.5 UJ	156	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.05	<2.5	0.262	<0.5
	P93A-ROX-012313	1/23/2013		45.89	NE	<2.5	101	<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<0.25	<13 UJ	<0.5	<2.5
	P93A-ROX-012313-DUP	1/23/2013		45.89	NE	<2.5	98.5	<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<0.25	<13 UJ	<0.5	<2.5
	P93A-ROX-041113	4/11/2013		46.29	NE	<5	120	<5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<0.25	<13	0.255 J	<2.5
	P93A-ROX-041113-DUP	4/11/2013		46.29	NE	<5	120	<5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<0.25	<13	<0.5	<2.5
	P93A-ROX-071813	7/18/2013		43.25	NE	<0.0053 U	89.1	<0.005	<0.005	0.0056	0.0916	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0024 J	<0.001	<0.05	0.162	<0.005
	P93A-ROX-101113	10/11/2013		44.18	NE	<0.01 UJ	197	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0025 J	<0.0005	<0.025	0.264	<0.005
P-93B	P93B-ROX_012611	1/26/2011	74.60 - 76.60	41.03	NE	<0.005	105	<0.005	<0.005	<0.005	0.00058 J	<0.005	<0.001	<0.001	0.00077 J	<0.001	0.0014 J	<0.005	<0.0005		0.0104	
	P93B-ROX-050511	5/5/2011		41.96	NE	<0.005	134	<0.005	<0.005	0.0045 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0169	<0.005
	P93B-ROX-081811	8/18/2011		39.44	NE	<5	304	<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<0.5	<25	<1	<5
	P93B-ROX-102611	10/26/2011		39.48	NE	<0.005 UJ	590	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0533	<0.005
	P93B-ROX-012012	1/20/2012		41.72	NE	<0.005	337	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	0.0831 J	0.0274 J	<0.005
	P93B-ROX-050812	5/8/2012		42.79	NE	<0.0747 U	304	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0379 J	<0.005
	P93B-ROX-080912	8/9/2012		43.69	NE	<0.0672 U	317	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0741	<0.005
	P93B-ROX-110712	11/7/2012		44.98	NE	<0.5 UJ	162 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.05	<2.5	<0.1	<0.5
	P93B-ROX-110712-DUP	11/7/2012		44.98	NE	<0.5 UJ	413 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.05	<2.5	0.0695 J	<0.5
	P93B-ROX-012313	1/23/2013		45.89	NE	<5	415	<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<0.5	<25 UJ	<1	<5
	P93B-ROX-041113	4/11/2013		46.32	NE	<5	618	<5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<0.25	<13	<0.5	<2.5
	P93B-ROX-071813	7/18/2013		43.30	NE	<0.01	296	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.001	<0.05	0.0652	<0.005
	P93B-ROX-101613	10/16/2013	74.60 - 76.60	44.43	NE	<20	187	<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<1	<50	<2	<10 UJ
	P93B-ROX-101613-DUP	10/16/2013		44.43	NE	<20	180	<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<1	<50	<2	<10 UJ
P-93C	P93C-ROX_012611	1/26/2011	94.26 - 96.26	40.91	NE	<0.005	86.5	<0.005	<0.005	<0.005	0.00056 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		0.0175	
	P93C-ROX-050611	5/6/2011		41.84	NE	<0.005	15.7	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0029	<0.005
	P93C-ROX-081811	8/18/2011		39.32	NE	<0.005	1.2	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P93C-ROX-102611	10/26/2011		39.36	NE	<0.005 UJ	0.0014	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P93C-ROX-012012	1/20/2012		41.57	NE	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P93C-ROX-050812	5/8/2012		42.68	NE	<0.005	0.0057	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P93C-ROX-080912	8/9/2012		43.57	NE	<0.0056 U	0.00084	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P93C-ROX-110812	11/8/2012		45.12	NE	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P93C-ROX-012313	1/23/2013		45.78	NE	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025 UJ	<0.001	<0.005
	P93C-ROX-041213	4/12/2013		46.21	NE	<0.0056 UJ	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P93C-ROX-071813	7/18/2013		43.31	NE	<0.01	101	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.001	<0.05	0.0041	<0.005
	P93C-ROX-080813	8/8/2013		43.31	NE	<0.5	19.1	<0.25	<0.25	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.025	<1.3	<0.05	<0.25
	P93C-ROX-101613	10/16/2013	94.26 - 96.26	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	<0.0005	<0.025	<0.001	<0.005 UJ

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SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																
						Acetone [5]	Benzene	2-Butanone [5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cymene (p-Isopropyltoluene)	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate
					Screening Values (mg/L)		0.005 [1]	4.2	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.0002 [2]			0.001 [2]	0.0077 [1]	0.7 [1]	
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																
P-93D	P93D-ROX-050511	5/5/2011	125.75 - 127.75	41.96	NE	<0.005	0.0287	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.0005	<0.025	<0.001	<0.005
	P93D-ROX-081811	8/18/2011		39.46	NE	<0.005	0.0059	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P93D-ROX-102711	10/27/2011		39.59	NE	<0.005	0.00097	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P93D-ROX-012012	1/20/2012		41.77	NE	<0.005	0.0513	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P93D-ROX-050812	5/8/2012		42.96	NE	<0.005	0.0056	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P93D-ROX-080812	8/8/2012		43.71	NE	<0.005 UJ	0.0134	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P93D-ROX-110812	11/8/2012		NM	NE	<0.005	0.049	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P93D-ROX-012213	1/22/2013		44.21	NE	<0.005	0.106	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.00069 J	<0.005
	P93D-ROX-041113	4/11/2013		46.37	NE	<0.01	<0.0005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P93D-ROX-071213	7/12/2013		43.51	NE	<0.01	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001 UJ	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P93D-ROX-101113	10/11/2013	125.75 - 127.75	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	<0.0005	<0.025	<0.001	<0.005 UJ
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	<0.0005	<0.025	<0.001	<0.005
	P114-ROX-012012	1/20/2012		27.17	NE	<0.005	0.0011 J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P114-ROX-050912	5/9/2012		28.09	NE	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P114-ROX-080912	8/9/2012		29.13	NE	<0.0756 U	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P114-ROX-110912	11/9/2012		30.90	NE	<0.0144 UJ	<0.0005	<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P114-ROX-012313	1/23/2013		30.22	NE	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025 UJ	<0.001	<0.005
	P114-ROX-041513	4/15/2013		31.80	NE	<0.0059 UJ	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P114-ROX-071813	7/18/2013		27.22	NE	<0.251 U	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P114-ROX-071813-DUP	7/18/2013		27.22	NE	<0.245 U	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	P114-ROX-101713	10/17/2013	32.67 - 52.67	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	<0.0005	<0.025	<0.001	<0.005
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	<0.0005	<0.025	0.0167	<0.005
	ROST3PZ-ROX-080712	8/7/2012		39.00	NE	<0.005	0.0041	<0.005	<0.005	<0.005	0.00072 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0047	<0.005
	ROST3PZ-ROX-110112	11/1/2012		40.82	NE	<0.005	0.0052	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0018	<0.005
ROST-3-MW	ROST3MW-ROX-012313	1/23/2013	37.81 - 47.81	41.50	NE	<0.005 UJ	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	0.0011 J	<0.0005	<0.025 UJ	0.0296	<0.005
	ROST3MW-ROX-040513	4/5/2013				<0.005	0.0605	<0.005	<0.005	0.0011 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0012 J	<0.0005	<0.025	0.0136	<0.005
	ROST3MW-ROX-071113	7/11/2013		39.50	NE	<0.01 UJ	0.0125	<0.005 UJ	<0.005	0.0014 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0014 J	<0.0005		0.218	<0.005
	ROST3-MW-ROX-100913	10/9/2013	37.81 - 47.81	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	<0.0005	<0.025	0.0182	<0.005
ROST-4-PZ(C)	ROST4PZ-C-051412	5/14/2012	34.95 - 44.95	39.04	NE	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	<0.001	<0.005
	ROST4PZ-C-ROX-072512	7/25/2012		39.10	NE	<0.005	0.0849	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.177	<0.005
	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	<0.0005	<0.025	0.0014	<0.005
	ROST4PZ(C)-ROX-011113	1/11/2013		41.42	NE	<0.005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005	<0.025	0.0013	<0.005
	ROST4PZC-ROX-041013	4/10/2013		42.27	NE	<0.01	0.0153 J	<0.01	<0.005	<0.005	<0.005	<0.005	<0.001 UJ	<0.001 UJ	<0.002	<0.001	<0.002	<0.005	<0.0005 UJ	<0.025	0.0028 J	<0.005
	ROST4PZC-ROX-071113	7/11/2013		40.18	NE	<0.01 UJ	0.0497	<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.0005		0.0651	<0.005
	ROST4PZC-ROX-100913	10/9/2013	34.95 - 44.95	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	<0.0005	<0.025	0.0064	<0.005

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs															
						Acetone[5]	Benzene	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cymene (p-Isopropyltoluene)	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate
					Screening Values (mg/L)		0.005 [1]	4.2	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.0002 [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	<0.005	<0.25	0.648	<0.05
	T12-ROX-011912	1/19/2012		41.0	NE	<0.005	1.51	<0.005	0.0062	0.0022 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0024 J	<0.0005	<0.025	0.285	<0.005
	T12-ROX-050912	5/9/2012		42.62	NE	<0.025	1.48	<0.025	<0.025	<0.025	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	<0.025	<0.0025	<0.13	1.88	<0.025
	T12-ROX-080212	8/2/2012		41.92	NE	<0.05 UJ	1.64	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.005		0.573	<0.05
	T12-ROX-110512	11/5/2012		43.91	NE	<0.05	1.71	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.005	<0.25	1.73	<0.05
	T12-ROX-011813	1/18/2013		44.50	NE	<0.025	2.03	<0.0795 U	0.0056 J	0.0036 J	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	<0.025	<0.0025	<0.13 UJ	0.426	<0.025
	T12-ROX-041513	4/15/2013		44.99	NE	<0.1 UJ	1.61	<0.05	<0.05	0.0595	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.005	<0.25	1.03	<0.05
	T12-ROX-071613	7/16/2013		42.33	NE	<0.01	1.65	<0.005	0.0069 J	0.003 J J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	0.0025 J J	<0.0005	<0.025	0.45	<0.005
	T12-ROX-101513	10/15/2013	46.46 - 72.46	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	<0.0025	<0.13	1.82	<0.025

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																
						Hexachlorobutadiene	2-Hexanone (Methyl N-Butyl Ketone)	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene [4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
					Screening Values (mg/L)	0.007 [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-011711	1/17/2011	43.41 - 58.41	37.58	NE	<0.005		<0.005		0.0032	<0.0063	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	0.0013	
	MW1-ROX-042911	4/29/2011		38.37	NE	<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	0.0016	<0.001	0.0016
	MW1-ROX-072711	7/27/2011		35.77	NE	<0.005	<0.005	<0.005	<0.005	0.0055	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-120511	12/5/2011		37.10	NE	<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	48.80 - 58.80	37.75	NE	<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	0.0031	<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	0.0022	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	0.0022	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-011013	1/10/2013		41.89	NE	<0.005	<0.005	<0.005	<0.005	0.0015	<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	0.0012	<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	0.0049	<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	48.80 - 58.80	40.28	NE	<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
MW-02	MW2-ROX-011711	1/17/2011	47.19 - 62.19	38.67	NE	<0.005		0.0617		<0.001	0.0312	0.0652	0.737	<0.005	<0.005	<0.001	0.279	0.0744	<0.005	0.892	0.191	
	MW02-ROX-051011	5/10/2011		39.14	NE	<0.005	<0.005	0.0539	<0.005	<0.001	0.0545 J	0.0669	3.51	<0.005	<0.005	<0.001	0.339	0.103	<0.005	2.05	0.549	2.6
	MW2-ROX-072711	7/27/2011		37.04	NE	<0.05	<0.05	0.0995	<0.05	<0.01	0.0671	0.111	4.69	<0.05	<0.05	<0.01	0.338	0.116	<0.05	2.91	0.823	3.74
	MW2-ROX-072711-DUP	7/27/2011		37.04	NE	<0.05	<0.05	0.0967	<0.05	<0.01	0.0659	0.1	4.67	<0.05	<0.05	<0.01	0.298	0.108	<0.05	2.63	0.728	3.36
	MW2-ROX-112811	11/28/2011	49.87 - 59.87	38.03	NE	<0.005	<0.005	0.128	<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	0.0832	<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	0.0886	<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	0.0818	<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	0.0764	<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	0.0879	<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	0.085	<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 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	49.87 - 59.87	41.73	NE	<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
MW-03	MW3-ROX-011811	1/18/2011	30.98 - 45.98	24.92	NE	<0.005		<0.005		0.0021	<0.0053	<0.005	<0.001	<0.005	<0.005	<0.001	0.00085 J	<0.005	<0.005	0.0012	0.0014	
	MW03-ROX-051011	5/10/2011		24.79	NE	<0.005	<0.005	<0.005	<0.005	0.0026	0.00011 J	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	0.0022	<0.001	0.0022
	MW3-ROX-080311	8/3/2011		22.72	NE	<0.005	<0.005	0.0012 J	<0.005	<0.001	<0.000083 U	<0.005	0.0015	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW3-ROX-112911	11/29/2011	34.67 - 44.67	24.06	NE	<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	0.0014	<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	<0.001	<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	0.0039	<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 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	0.0027	<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	0.0008 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	<0.001	<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 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	34.67 - 44.67	27.38	NE	<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

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																
						Hexachlorobutadiene	2-Hexanone (Methyl N-Butyl Ketone)	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene [4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
					Screening Values (mg/L)	0.007 [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-011811	1/18/2011	42.63 - 57.63	36.04	NE	<0.005		0.002 J		0.007	<0.0052	0.0022 J	0.0071	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	0.0062	0.0021	
	MW04-ROX-051111	5/11/2011		36.19	NE	<0.005	<0.005	0.0036 J	<0.005	0.0096	<0.0001 UJ	0.0037 J	0.0125	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	0.0096	0.0016	0.0111
	MW4-ROX-072611	7/26/2011		34.15	NE	<0.005	<0.005	0.0088	<0.005	0.0113	0.00025	0.0085	0.017	<0.005	<0.005	<0.001	<0.005	0.0052	<0.005	0.0067	<0.001	0.0067
	MW4-ROX-072611-DUP	7/26/2011		34.15	NE	<0.005	<0.005	0.0088	<0.005	0.0103	0.00021	0.0083	0.0162	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	0.0063	<0.001	0.0063
	MW4-ROX-121511	12/15/2011		33.99	NE	<0.005	<0.005	<0.005	<0.005	0.0073 J	0.00023	<0.005	0.0092	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	0.0069	0.001	0.0079
	MW4-ROX-011612	1/16/2012	46.06 - 56.06	36.00	NE	<0.005	<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	0.0038 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	0.0036 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 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 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	0.0029 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	0.0012 J	<0.005	0.0654	<0.005	0.0026 J	0.0075	<0.005	<0.005	<0.001	0.0019 J	0.0024 J	<0.005	0.0056	<0.001	0.0056
	MW4-ROX-011113-DUP	1/11/2013		40.20	NE	<0.005	<0.005	0.0014 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	0.112	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1
	MW4-ROX-040913	4/9/2013		40.90	NE	<0.01	<0.01	<0.01	<0.01	0.112	<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	0.125	<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	0.0041 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	46.06 - 56.06	38.80	NE	<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
MW-05	MW5-ROX-011811	1/18/2011	31.13 - 46.13	24.15	NE	<0.005		<0.005		0.0066	<0.0053	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	0.00087 J	0.0014	
	MW05-ROX-051211	5/12/2011		23.98	NE	<0.005	<0.005	<0.005	<0.005	0.0085	<0.00011 UJ	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005 UJ	0.0035	<0.001	0.0035
	MW5-ROX-072611	7/26/2011		22.00	NE	<0.005	<0.005	0.0161	<0.005	0.0031	<0.0001 U	0.0105	0.0017	<0.005	<0.005	<0.001	<0.005	0.0055	<0.005	0.0074	<0.001	0.0074
	MW5-ROX-072611-DUP	7/26/2011		22.00	NE	<0.005	<0.005	0.016	<0.005	0.0031	<0.00015 U	0.0104	0.0016	<0.005	<0.005	<0.001	<0.005	0.0055	<0.005	0.0068	<0.001	0.0068
	MW5-ROX-112111	11/21/2011	33.97 - 43.97	23.46	NE	<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	0.0187	<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	0.001 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 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	0.002 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	0.00086 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	0.00085 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	0.0268	<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	33.97 - 43.97	26.97	NE	<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
MW-06A	MW6A-ROX-011911	1/19/2011	31.98 - 46.98	26.36	NE	<0.005		<0.005		0.0181	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	
	MW6A-ROX-051611	5/16/2011		26.10	NE	<0.005	<0.005 UJ	<0.005	<0.005	0.0277	<0.0001 UJ	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-072611	7/26/2011		23.76	NE	<0.005	<0.005	<0.005	<0.005	0.0237	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-112111	11/21/2011	34.83 - 44.83	25.49	NE	<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	0.0181	<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	0.0185	<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	<0.001	<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	0.0019	<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	<0.001	<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	<0.001	<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	<0.001	<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	0.0027	<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	0.0025	<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	34.83 - 44.83	28.87	NE	<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 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

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																
						Hexachlorobutadiene	2-Hexanone (Methyl N-Butyl Ketone)	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene [4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
					Screening Values (mg/L)	0.007 [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-011911	1/19/2011	64.05 - 69.05	26.21	NE	<0.005		<0.005		0.0016	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	
	MW6B-ROX-011911-DUP	1/19/2011		26.21	NE	0.0014 J		<0.005		0.0016	<0.0051	<0.005	<0.001	0.0016 J	0.0011 J	<0.001	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	
	MW6B-ROX-051611	5/16/2011		25.95	NE	<0.005	<0.005 UJ	<0.005	<0.005	0.0029	UJ	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6B-ROX-051611-DUP	5/16/2011		25.95	NE	<0.005	<0.005 UJ	<0.005	<0.005	0.0031	0.000044 J J	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6B-ROX-072311	7/23/2011		23.60	NE	<0.005	<0.005	<0.005	<0.005	0.0049	0.0012 B	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW6B-ROX-110311	11/3/2011		24.67	NE	<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	0.0049	<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	0.0115	<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	0.0122	<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	0.0091	<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	0.0166	<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	0.0132	<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	0.0069	<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	64.05 - 69.05	28.93	NE	<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
MW-06C	MW6C-ROX-012111	1/21/2011	84.95 - 89.95	25.97	NE	<0.005		<0.005		0.0021	<0.0053	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	
	MW6C-ROX-051611	5/16/2011		25.76	NE	<0.005	<0.005 UJ	<0.005	<0.005	0.0034	<0.0001 UJ	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6C-ROX-072411	7/24/2011		23.43	NE	<0.005	<0.005	<0.005	<0.005	0.0027	0.00075 B	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW6C-ROX-110311	11/3/2011		24.47	NE	<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	<0.001	<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	<0.001	<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	<0.001	<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	<0.001	<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	0.0012 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	0.0022	<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	<0.001	<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	84.95 - 89.95	28.72	NE	<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
MW-06D	MW6D-ROX-012111	1/21/2011	104.72 - 109.72	25.87	NE	<0.005		<0.005		<0.001	<0.0053	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	
	MW6D-ROX-051611	5/16/2011		25.60	NE	<0.005	<0.005 UJ	<0.005	<0.005	<0.001	<0.00011 UJ	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6D-ROX-072311	7/23/2011		23.29	NE	<0.005	<0.005	<0.005	<0.005	<0.001	0.00074 B	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW6D-ROX-110311	11/3/2011		24.31	NE	<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	<0.001	<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	<0.001	<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	<0.001	<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	<0.001	<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	<0.001 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	<0.001	<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	<0.001	<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	104.72 - 109.72	28.58	NE	<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

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																
						Hexachlorobutadiene	2-Hexanone (Methyl N-Butyl Ketone)	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene [4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
					Screening Values (mg/L)	0.007 [3]	0.035 [3]	0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]		0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																
MW-07	MW7-ROX-012511	1/25/2011	42.92 - 52.92	37.52	NE	<0.005 UJ	<0.005 UJ	0.004 J J	<0.005 UJ	<0.0057 U	0.0058	0.0058 J	0.0907 J	<0.005 UJ	<0.005 UJ	<0.001 UJ	0.0552 J	0.0133 J	<0.005 UJ	0.0694 J	0.0235 J	
	MW07-ROX-051311	5/13/2011		37.50	NE	<0.005 UJ	<0.005 UJ	0.0061 J	<0.005 UJ	0.0109 J	0.0114 J	0.0078 J	0.128 J	<0.005 UJ	<0.005 UJ	<0.001 UJ	0.0822 J	0.0193 J	<0.005 UJ	0.101 J	0.0418 J	0.143 J
	MW07-ROX-051311D	5/13/2011		37.50	NE	<0.005	<0.005	0.006	<0.005	0.012	0.011 J	0.0078	0.126	<0.005	<0.005	<0.001	0.0825	0.0193	<0.005	0.0984	0.0405	0.139
	MW7-ROX-072411	7/24/2011		35.65	NE	<25	<25	<25	<25	<5	0.0081	<25	<5	<25	<25	<5	<25	<25	<25 UJ	<5	<5	<5
	MW-7-ROX-110211	11/2/2011		35.95	NE	<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	0.0101	<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	0.01	<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	<0.1	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	<0.01	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	<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	<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	<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	<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	<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	<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	0.0096 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	42.92 - 52.92	40.64	NE	<10	<10	<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2	<10	<10	<10 UJ	<2	<2	<2
MW-08	MW8-ROX-012511	1/25/2011	33.60 - 43.60	28.59	NE	<0.005 UJ	<0.005 UJ	0.0104 J	<0.005 UJ	0.21 J	0.026	0.0173 J	1.2 E J	<0.005 UJ	<0.005 UJ	<0.001 UJ	0.109 J	0.0332 J	<0.005 UJ	0.499 J	0.188 J	
	MW8-ROX-012511-DUP	1/25/2011		28.59	NE	<0.005 UJ	<0.005 UJ	0.0105 J	<0.005 UJ	0.205 J	0.0288	0.017 J	1.12 E J	<0.005 UJ	<0.005 UJ	<0.001 UJ	0.11 J	0.0336 J	<0.005 UJ	0.518 J	0.191 J	
	MW08-ROX-051311	5/13/2011		28.35	NE	<50	<50	<50	<50	<10	0.0241 J	<50	<10	<50	<50	<10	<50	<50	<50	<10	<10	<10
	MW08-ROX-051311D	5/13/2011		28.35	NE	<5	<5	<5	<5	0.657 J	0.0288 J	<5	<1	<5	<5	<1	<5	<5	<5	<1	<1	<1
	MW8-ROX-072411	7/24/2011		26.02	NE	<25	<25	<25	<25	<5	0.0237	<25	<5	<25	<25	<5	<25	<25	<25 UJ	<5	<5	<5
	MW8-ROX-072411-DUP	7/24/2011		26.02	NE	<25	<25	<25	<25	<5	0.023	<25	<5	<25	<25	<5	<25	<25	<25 UJ	<5	<5	<5
	MW-8-ROX-110211	11/2/2011		27.02	NE	<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	0.0162	<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	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	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	0.878	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	0.885	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	<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	<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	<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	0.0173	<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	0.0174	<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	33.60 - 43.60	31.59	NE	<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	<10	<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2	<10	<10	<10 UJ	<2	<2	<2
MW-09	MW9-ROX-012111	1/21/2011	46.45 - 56.45	39.62	NE	<0.005		<0.005		<0.001	<0.0053	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	
	MW09-ROX-050611	5/6/2011		40.12	NE	<0.005	<0.005 UJ	<0.005	<0.005	<0.001	UJ	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW9-ROX-072311	7/23/2011		38.06	NE	<0.005	<0.005	<0.005	<0.005	<0.001	0.001 B	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW9-ROX-110111	11/1/2011		37.78	NE	<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	<0.001	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	<0.001		<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 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	<0.001	<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	<0.001	<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	<0.001	<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	<0.001	<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	46.45 - 56.45	42.27	NE	<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
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																
						Hexachlorobutadiene	2-Hexanone (Methyl N-Butyl Ketone)	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene [4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
					Screening Values (mg/L)	0.007 [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-10	MW10-ROX-012411	1/24/2011	44.43 - 54.43	39.40	NE	<0.005	<0.005	<0.005	<0.005	<0.001	<0.0051	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	
	MW10-ROX-012411-DUP	1/24/2011		39.40	NE	<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	
	MW10-ROX-042811	4/28/2011		40.20	NE	<0.005	<0.005	<0.005	<0.005	<0.001	<0.0048	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW10-ROX-072311	7/23/2011		38.01	NE	<0.005	<0.005	<0.005	<0.005	<0.001	0.00062 B	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW10-ROX-110111	11/1/2011		37.72	NE	<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	<0.001	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	<0.001	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 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	<0.001	<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	<0.001	<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	<0.025	<0.005	<0.025	<0.002	<0.0001	<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	<0.001	<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	<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	44.43 - 54.43	42.38	NE	<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	MW11-ROX-012411	1/24/2011	41.66 - 51.66	37.15	NE	<0.005	<0.005	<0.005	<0.005	<0.001	<0.0052	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	
	MW11-ROX-050611	5/6/2011		37.60	NE	<0.005	<0.005 UJ	<0.005	<0.005	<0.001	UJ	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW11-ROX-072411	7/24/2011		34.3	NE	<0.005	<0.005	<0.005	<0.005	<0.001	0.00027 B	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW-11-ROX-110211	11/2/2011		35.44	NE	<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	<0.001		<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	<0.001	<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 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	<0.001	<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	<0.001	<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	<0.001	<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	<0.001	<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	41.66 - 51.66	39.95	NE	<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
MW-12	MW12-ROX-012411	1/24/2011	41.92 - 51.92	37.42	NE	<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	
	MW12-ROX-051211	5/12/2011		37.58	NE	<0.005	<0.005	<0.005	<0.005	<0.001	<0.0001 UJ	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW12-ROX-072411	7/24/2011		35.55	NE	<0.005	<0.005	<0.005	<0.005	<0.001	0.00098 B	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW-12-ROX-110211	11/2/2011		35.70	NE	<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	<0.001	<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	<0.001	<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	<0.001	<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	<0.001	<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 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	<0.001	<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	<0.001	<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	<0.001	<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	<0.001	<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	41.92 - 51.92	40.22	NE	<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

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																
						Hexachlorobutadiene	2-Hexanone (Methyl N-Butyl Ketone)	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene [4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
					Screening Values (mg/L)	0.007 [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-13	MW13-ROX-012511	1/25/2011	25.57 - 35.57	24.28	NE	<0.005	<0.005	<0.005	<0.005	<0.001	<0.0052	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	
	MW13-ROX-051311	5/13/2011		23.65	NE	<0.005	<0.005	<0.005	<0.005	0.0061 J	<0.000095 U	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW13-ROX-080311	8/3/2011		21.67	NE	<0.005	<0.005	<0.005	<0.005	0.004	<0.000045 U	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW13-ROX-110311	11/3/2011		22.85	NE	<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	0.0066 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	0.0083	<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	0.0133 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	0.0093	<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	0.0082	<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	0.0093	<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 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	25.57 - 35.57	26.94	NE	<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
MW-14	MW14-ROX-110911	11/9/2011	Unknown			<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	0.0104	<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		29.87	NE	<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	0.0161	<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	0.021	<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	0.0346	<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 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	33.42 - 43.42	30.80	NE	<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
MW-16	MW16-ROX-012313	1/23/2013	37.06 - 47.06	43.05	NE	<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	<0.001	<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	<0.001	<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	37.06 - 47.06	41.62	NE	<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-22	MW22-ROX-012313	1/23/2013	37.88 - 47.88	41.80	NE	<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	0.124 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	0.159 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 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 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	37.88 - 47.88	40.39	NE	<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 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
MW-24	MW24-ROX-040513	4/5/2013	38.89 - 48.89	43.39	NE	<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 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	38.89 - 48.89	41.27	NE	<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

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																
						Hexachlorobutadiene	2-Hexanone (Methyl N-Butyl Ketone)	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene [4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
					Screening Values (mg/L)	0.007 [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-54	P54-ROX-012411	1/24/2011	38.00 - 63.00	37.24	NE	<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	
	P54-ROX-051111	5/11/2011		37.37	NE	<0.005	<0.005	<0.005	<0.005	<0.001	0.00013 J	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-072411	7/24/2011		35.38	NE	<0.005	<0.005	<0.005	<0.005	<0.001	0.000066 JB	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-110311	11/3/2011		35.49	NE	<0.005	<0.005	<0.005	<0.005	<0.001	<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	<0.001	<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	<0.001	<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	<0.001	<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	<0.001	<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	<0.001	<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	<0.001	<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	<0.001	<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 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	38.00 - 63.00	39.94	NE	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
P-55	P55-ROX-103111	10/31/2011	39.82 - 64.82	39.15	NE	<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	0.0105 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	0.0105 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	0.0392	<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	<0.01	<0.25	0.0678	<0.25	<0.02	0.079 J	0.14	0.189	<0.05	<0.01	<0.05	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	0.0937	<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	0.068	<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 UJ	<0.005	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	40.43 - 50.43	41.67	NE	<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	0.0512	<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	0.0787 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	0.0876	<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 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	0.0752	<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	0.0398	<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	0.0581	<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	0.0968	<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	40.82 - 65.82	44.48	NE	<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
P-57	P57-ROX-110811	11/8/2011	40.46 - 65.46	39.20	NE	<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	<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	0.453	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 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 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	<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	<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	<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 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	40.46 - 65.46	44.38	NE	<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

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																
						Hexachlorobutadiene	2-Hexanone (Methyl N-Butyl Ketone)	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene [4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
					Screening Values (mg/L)	**0.007** [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	0.0734	<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	0.0097	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	0.0832 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	<0.1	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	<0.1	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 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	0.0718	<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	<0.1	<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	<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	<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 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	40.21 - 65.21	42.19	NE	<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
P-59	P59-ROX-102711	10/27/2011	47.91 - 72.91	41.06	NE	<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	0.0713	<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	0.0733	<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	0.0585 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	0.0452 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	<0.1	<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	<0.1	<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	0.0455 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	0.062 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	0.0543 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 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	47.91 - 72.91	45.50	NE	<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
P-66	P66-ROX-110111	11/1/2011	34.72 - 59.72	28.92	NE	<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	0.123	<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	0.0874	<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	0.122	<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	0.146	<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	0.287	<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 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	34.72 - 59.72	33.66	NE	<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	0.0958	<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
P-74	P74-ROX-103111	10/31/2011	44.43 - 69.43	36.26	NE	<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	<0.001	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	<0.001	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 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	<0.02	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	<0.02	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	<0.001	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	0.0031 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	44.43 - 69.43	41.72	NE	<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

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																
						Hexachlorobutadiene	2-Hexanone (Methyl N-Butyl Ketone)	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene [4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
					Screening Values (mg/L)	0.007 [3]	0.035 [3]	0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]		0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																
P-93A	P93A-ROX_012611	1/26/2011	48.17 - 63.17	40.97	NE	0.0016 J		0.0225		0.124	0.0803	0.0254	0.0654	0.0026 J	0.0015 J	0.0017	0.21	0.045	<0.005 UJ	0.622	0.0705	
	P93A-ROX-050511	5/5/2011		41.88	NE	<0.005	<0.005 UJ	0.0206 J	<0.005	0.0684 J	0.0795 J	0.0228 J	0.0718 J	<0.005	<0.005	<0.001	0.169 J	0.0293 J	<0.005	0.628 J	0.0707 J	0.699 J
	P93A-ROX-081811	8/18/2011		39.40	NE	<0.005	<0.005	0.0236 J	<0.005	0.0356	0.0868	0.0254	0.0678	<0.005	<0.005	<0.001	0.237	0.0495	<0.005 UJ	0.745	0.09	0.835
	P93A-ROX-102611	10/26/2011		39.43	NE	<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	0.0041 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	0.0218 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	0.0126	<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	<0.1	<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	<0.1	<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	<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	<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	<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	<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	0.0101	<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	48.17 - 63.17	44.18	NE	<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
P-93B	P93B-ROX_012611	1/26/2011	74.60 - 76.60	41.03	NE	<0.005		0.0108		0.0088	0.0011 J	0.011	0.0321	<0.005	<0.005	<0.001	0.0052	0.0016 J	<0.005 UJ	0.0555	0.0092	
	P93B-ROX-050511	5/5/2011		41.96	NE	<0.005	<0.005 UJ	0.0142	<0.005	0.0113	0.0013 J	0.0151	0.0488	<0.005	<0.005	<0.001	0.0057	0.0014 J	<0.005	0.0502	0.0112	0.0614
	P93B-ROX-081811	8/18/2011		39.44	NE	<5	<5	<5	<5	<1	0.0037	<5	<1	<5	<5	<1	<5	<5	<5	<1	<1	<1
	P93B-ROX-102611	10/26/2011		39.48	NE	<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	0.022 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	0.0188 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	0.0266	<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		44.98	NE	<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		44.98	NE	<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	<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	<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	0.0247	<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	74.60 - 76.60	44.43	NE	<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	<10	<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2	<10	<10	<10 UJ	<2	<2	<2
P-93C	P93C-ROX_012611	1/26/2011	94.26 - 96.26	40.91	NE	<0.005		0.0019 J		0.0014	<0.0051	0.0013 J	0.0067	<0.005	<0.005	<0.001	0.0025 J	<0.005	<0.005 UJ	0.0051	0.0035	
	P93C-ROX-050611	5/6/2011		41.84	NE	<0.005	<0.005 UJ	<0.005	<0.005	0.0052	0.00003 J J	<0.005	0.0018	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	0.00059 J
	P93C-ROX-081811	8/18/2011		39.32	NE	<0.005	<0.005	<0.005	<0.005	0.0067	<0.000054 U	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	P93C-ROX-102611	10/26/2011		39.36	NE	<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	0.006	<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	0.004	<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	0.0053	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	0.0056	<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	0.0044	<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	0.0045	<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	0.002 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	<0.05	<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	94.26 - 96.26	44.31	NE	<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

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																
						Hexachlorobutadiene	2-Hexanone (Methyl N-Butyl Ketone)	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene [4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
					Screening Values (mg/L)	0.007 [3]	0.035 [3]	0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]		0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																
P-93D	P93D-ROX-050511	5/5/2011	125.75 - 127.75	41.96	NE	<0.005	<0.005 UJ	<0.005	<0.005	0.0014	0.000036 J J	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93D-ROX-081811	8/18/2011		39.46	NE	<0.005	<0.005	<0.005	<0.005	0.00095 J	<0.000087 U	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	P93D-ROX-102711	10/27/2011		39.59	NE	<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	<0.001	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	0.00077 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	<0.001	<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	0.0023	<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	<0.001	<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	<0.001	<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 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	125.75 - 127.75	44.24	NE	<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
P-114	P114-ROX-102811	10/28/2011	32.67 - 52.67	24.73	NE	<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	<0.001	<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	0.0035 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	0.00083 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	0.0076 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	0.003 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	0.0051	<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	0.0023 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	0.0022 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	32.67 - 52.67	29.43	NE	<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
ROST-3-PZ	ROST3PZ-ROX-051412	5/14/2012	40.00 - 50.00	38.82	NE	<0.005	<0.005	<0.005	<0.005	<0.001	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	<0.001	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	<0.001	<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	0.0066	<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	0.0032 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 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	37.81 - 47.81	40.16	NE	<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
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	<0.001	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 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	<0.001	<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	<0.001	<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 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 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	34.95 - 44.95	39.91	NE	<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

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																
						Hexachlorobutadiene	2-Hexanone (Methyl N-Butyl Ketone)	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene [4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
					Screening Values (mg/L)	**0.007** [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	<0.01	0.105	<0.05	0.233	<0.05	<0.05	<0.01	0.358	0.0527	<0.05	1.13	0.108	1.24
	T12-ROX-011912	1/19/2012		41.0	NE	<0.005	<0.005	0.022	<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	0.0572	<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	0.0297 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	0.0468 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	0.031	<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	0.0405 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 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	46.46 - 72.46	43.73	NE	<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

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
			Screening Values (mg/L)			0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.006 [2]	1.4 [2]		0.0015 [2]	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-011711	1/17/2011	43.41 - 58.41	37.58	NE	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.013		<0.0025	<0.0063	<0.013	<0.0063	<0.0063	<0.0063	<0.013	<0.0063	<0.013	<0.0063
	MW1-ROX-042911	4/29/2011		38.37	NE	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.013 UJ	<0.013	<0.00077 U	<0.0063	<0.013	<0.0063	<0.0063	<0.0063	<0.013	<0.0063	<0.013	<0.0063
	MW1-ROX-072711	7/27/2011		35.77	NE	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005
	MW1-ROX-120511	12/5/2011		37.10	NE	<0.0001	<0.0001	<0.0001	<0.000051	<0.0001	<0.000056 U	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051
	MW1-ROX-011612	1/16/2012	48.80 - 58.80	37.75	NE	0.000077 J	0.000035 J	0.000062 J	0.00011	0.0001	0.00011	<0.00011 U	0.00012	<0.01 UJ	<0.01	<0.002	<0.00039 U	<0.01	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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.002	<0.0051	<0.01	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<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	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011 UJ	<0.011	0.00099 J	<0.0057	<0.011	<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		41.89	NE	<0.000024 U	<0.0001	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0021	<0.0052	<0.01	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<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	<0.0001	<0.000051	<0.0001	0.000027 J	<0.0001	<0.0001	<0.01	<0.01	<0.0024 U	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051
	MW1-ROX-100313	10/3/2013	48.80 - 58.80	40.28	NE	<0.00011	<0.00011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	0.00065 J	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
MW-02	MW2-ROX-011711	1/17/2011	47.19 - 62.19	38.67	NE	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	0.0082 J		0.25	<0.0048	<0.0095	<0.0048	<0.0048	<0.0048	<0.0095	<0.0048	0.0022 J	<0.0048
	MW02-ROX-051011	5/10/2011		39.14	NE	<0.0001 UJ	<0.0001 UJ	<0.0001 UJ	<0.000052 UJ	<0.0001 UJ	UJ	<0.0001 UJ	<0.0001 UJ	<0.01	0.0019 J	<0.0029 U	<0.0052 UJ	<0.01	<0.0001 UJ	<0.0001 UJ	<0.0052	<0.01	0.0016 J J	<0.01	<0.0052 UJ
	MW2-ROX-072711	7/27/2011		37.04	NE	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005
	MW2-ROX-072711-DUP	7/27/2011		37.04	NE	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005
	MW2-ROX-112811	11/28/2011	49.87 - 59.87	38.03	NE	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.002	<0.005	<0.01	<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	<0.00011	<0.000053	0.000033 J	0.00004 J	<0.000047 U	<0.00011	<0.011 UJ	<0.011	<0.00083 U	<0.00047 U	<0.011	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0021	<0.0052	<0.01	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	0.00059 J	<0.0053	<0.011	<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	<0.00011	0.00016	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0022	<0.0054	<0.011	<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	<0.00011	<0.000056	0.000027 J	0.000039 J	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0056	<0.011	<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	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<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	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	0.00063 J	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	0.005 J	<0.0055
	MW2-ROX-100813	10/8/2013	49.87 - 59.87	41.73	NE	<0.00011	<0.00011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
MW-03	MW3-ROX-011811	1/18/2011	30.98 - 45.98	24.92	NE	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.011		0.00062 J	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.0053	<0.011	<0.0053
	MW03-ROX-051011	5/10/2011		24.79	NE	<0.0001 UJ	<0.0001 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.0025 U	0.0064 J	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005	<0.01	<0.005 UJ	<0.01	<0.005 UJ
	MW3-ROX-080311	8/3/2011		22.72	NE	<0.000095	<0.000095	<0.000095	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.0095 UJ	<0.0095	0.0084	<0.0048	<0.0095	<0.000095	<0.000095	<0.0048	<0.0095	<0.0048	<0.0095	<0.0048
	MW3-ROX-112911	11/29/2011	34.67 - 44.67	24.06	NE	<0.0001	<0.0001	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0021	<0.0052	<0.01	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.002	<0.0051	<0.01	<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	0.000063 J	0.00011	0.00012	0.00013	<0.00013 U	0.00012	<0.01 UJ	<0.01	<0.0004 U	<0.00039 U	<0.01	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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0021	<0.0052	<0.01	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011 UJ	<0.00011	<0.011	<0.011	<0.00067 U	<0.0053	<0.011	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.0051	<0.01	<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	0.000037 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0023	<0.0057	<0.011	<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	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	0.0038	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
	MW3-ROX-100813	10/8/2013	34.67 - 44.67	27.38	NE	<0.00011	<0.00011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
					Screening Values (mg/L)	0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.006 [2]	1.4 [2]		0.0015 [2]	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-011811	1/18/2011	42.63 - 57.63	36.04	NE	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.01		<0.0021	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.0052	<0.01	<0.0052
	MW04-ROX-051111	5/11/2011		36.19	NE	<0.0001 UJ	<0.0001 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.0023 U	0.0063 J	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005	<0.01	<0.005 UJ	<0.01	<0.005 UJ
	MW4-ROX-072611	7/26/2011		34.15	NE	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	0.0102	<0.01	<0.0057 U	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005
	MW4-ROX-072611-DUP	7/26/2011		34.15	NE	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	0.0103	<0.01	<0.002 U	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005
	MW4-ROX-121511	12/15/2011		33.99	NE	<0.0001	0.00011	<0.0001	<0.000052	0.00012	<0.000087 U	<0.00063 U	<0.0001	<0.01 UJ	<0.01	<0.0028 U	<0.0052	<0.01	<0.0001	<0.00035 U	<0.0052	<0.01	<0.0052	<0.01	<0.0052
	MW4-ROX-011612	1/16/2012	46.06 - 56.06	36.00	NE	<0.0001	<0.0001	0.00003 J	0.00012	0.00012	0.00013	<0.0002 U	0.00015	<0.01 UJ	<0.01	<0.0005 U	<0.00073 U	<0.01	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	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.0051	<0.01	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	0.0056 J	<0.01	<0.00079 U	0.00039 J	<0.01	<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	<0.0001	<0.000051	<0.0001	<0.000046 U	<0.0001	<0.0001	<0.01	<0.01	<0.00069 U	<0.0051	<0.01	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0021	<0.0052	<0.01	<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	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056 UJ
	MW4-ROX-011113-DUP	1/11/2013		40.20	NE	<0.00012	<0.00012	<0.00012	<0.00006	<0.00012	<0.00006	<0.00012	<0.00012	<0.012	<0.012	<0.0024	<0.006	<0.012	<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	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<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	<0.00011	<0.000055	0.00004 J	0.000034 J	0.000061 J	<0.00011	<0.011	<0.011	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055
	MW4-ROX-101613	10/16/2013	46.06 - 56.06	38.80	NE	<0.00011	<0.00011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0022	<0.0054	<0.011 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.0054	<0.011 UJ	<0.0054
MW-05	MW5-ROX-011811	1/18/2011	31.13 - 46.13	24.15	NE	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.011		<0.0021	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.0009 J	<0.011	<0.0053
	MW05-ROX-051211	5/12/2011		23.98	NE	<0.00011 UJ	<0.00011 UJ	<0.00011 UJ	<0.000053 UJ	<0.00011 UJ	UJ	<0.00011 UJ	<0.00011 UJ	<0.011	<0.011	<0.0021	<0.0053	<0.011	<0.00011 UJ	<0.00011 UJ	<0.0053	<0.011	<0.0053	<0.011	<0.0053
	MW5-ROX-072611	7/26/2011		22.00	NE	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005
	MW5-ROX-072611-DUP	7/26/2011		22.00	NE	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005
	MW5-ROX-112111	11/21/2011	33.97 - 43.97	23.46	NE	<0.00011	<0.00011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	0.00079 J	<0.0053	<0.011	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0015 U	<0.00049 U	<0.011	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.0051	<0.01	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.00064 U	<0.0052	<0.01	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.0051	<0.01	<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	0.000028 J	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0055	<0.011	<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	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<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	<0.0001	0.0001 J	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005
	MW5-ROX-100813	10/8/2013	33.97 - 43.97	26.97	NE	<0.00011	<0.00011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055
MW-06A	MW6A-ROX-011911	1/19/2011	31.98 - 46.98	26.36	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0044 J J		<0.002	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01	<0.0019 U	<0.01	<0.005
	MW6A-ROX-051611	5/16/2011		26.10	NE	<0.0001 UJ	<0.0001 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	0.0026	<0.005	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005	<0.01	<0.00083 U	<0.01	<0.005
	MW6A-ROX-072611	7/26/2011		23.76	NE	0.00024	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002 U	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005
	MW6A-ROX-112111	11/21/2011	34.83 - 44.83	25.49	NE	<0.0001	<0.0001	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	0.0023	0.00077 J	<0.01	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	0.0011 J	0.00054 J	<0.01	<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	<0.00011	<0.000064 U	<0.00008 U	<0.00009 U	<0.00015 U	0.000094 J	<0.011 UJ	<0.011	<0.0022	<0.0054	<0.011	<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	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.0029 UJ	<0.01	<0.002	<0.005	<0.01	<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	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<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	<0.0001	<0.000051	<0.0001	<0.000051	0.000073 J	<0.0001	<0.01 UJ	<0.01	0.00054 J	<0.0051	<0.01	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011 UJ	0.00052 J	<0.0053	<0.011	<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	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0055	<0.011	<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	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055
	MW6A-ROX-100713	10/7/2013	34.83 - 44.83	28.87	NE	0.0001 J	<0.00011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	0.00082 J U	<0.011	<0.0056 UJ
	MW6A-ROX-100713-DUP	10/7/2013		28.87	NE	0.000093 J	<0.00011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	0.00078 J	<0.011	<0.0054 UJ

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																	
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
				Screening Values (mg/L)		0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.006 [2]	1.4 [2]		0.0015 [2]	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-011911	1/19/2011	64.05 - 69.05	26.21	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01 UJ		<0.002	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00087 U	<0.01	<0.005
	MW6B-ROX-011911-DUP	1/19/2011		26.21	NE	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.01 UJ		<0.002	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.001 U	<0.01	<0.0051
	MW6B-ROX-051611	5/16/2011		25.95	NE	<0.000095 UJ	0.000098 J	UJ	<0.000048 UJ	UJ	UJ	UJ	UJ	<0.0095	<0.0095	0.0023	<0.0048	<0.0095	UJ	<0.000095 UJ	<0.0048	<0.0095	<0.00078 U	<0.0095	<0.0048
	MW6B-ROX-051611-DUP	5/16/2011		25.95	NE	<0.0001 UJ	<0.0001 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	0.0024	<0.005	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005	<0.01	<0.00096 U	<0.01	<0.005
	MW6B-ROX-072311	7/23/2011		23.60	NE	<0.00011	<0.00011	<0.00011	<0.00075 U	<0.0002 U	<0.00019 U	<0.00007 U	<0.00023 U	<0.011 UJ	<0.011	0.00077 J	<0.0053	<0.011	<0.0008 U	<0.000031 U	<0.0053	<0.011	<0.0053	<0.011	<0.0053 UJ
	MW6B-ROX-110311	11/3/2011		24.67	NE	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.00011	<0.000055	<0.00015 U	<0.00011 U	<0.00028 U	0.0001 J	<0.011 UJ	<0.011	<0.0011 U	<0.0055	<0.011	<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	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.002	<0.005	<0.01	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	0.00049 J	<0.0051	<0.01	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.002	0.00057 J	<0.01	<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	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0022	<0.0054	<0.011	<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	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
	MW6B-ROX-100713	10/7/2013	64.05 - 69.05	28.93	NE	<0.00011	<0.00011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	0.00057 J U	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	0.00084 J U	<0.011	<0.0054 UJ
MW-06C	MW6C-ROX-012111	1/21/2011	84.95 - 89.95	25.97	NE	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.011 UJ		<0.0021	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.00084 U	<0.011	<0.0053
	MW6C-ROX-051611	5/16/2011		25.76	NE	<0.0001 UJ	0.000046 J J	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	0.0025	0.0064	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005	<0.01	<0.00063 U	<0.01	<0.005
	MW6C-ROX-072411	7/24/2011		23.43	NE	<0.00011	<0.00011	<0.00011	0.00016 B	0.00013 B	0.00014 B	0.000041 J	0.00016 B	<0.011 UJ	<0.011	<0.0021	<0.0053	<0.011	0.00015 B	<0.00011	<0.0053	<0.011	<0.0053	<0.011	<0.0053 UJ
	MW6C-ROX-110311	11/3/2011		24.47	NE	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0022	<0.00046 U	<0.011	<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	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.002	<0.005	<0.01	<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	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.0051	<0.01	<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	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01 UJ	<0.0021	<0.0052	<0.01	<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	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
	MW6C-ROX-100713	10/7/2013	84.95 - 89.95	28.72	NE	<0.00011	<0.00011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	0.00056 J U	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	0.0013 J U	<0.011	<0.0055 UJ
MW-06D	MW6D-ROX-012111	1/21/2011	104.72 - 109.72	25.87	NE	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.011 UJ		<0.0021	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.001 U	<0.011	<0.0053
	MW6D-ROX-051611	5/16/2011		25.60	NE	<0.00011 UJ	<0.00011 UJ	<0.00011 UJ	<0.000055 UJ	<0.00011 UJ	UJ	<0.00011 UJ	<0.00011 UJ	<0.011	<0.011	0.0027	0.0069	<0.011	<0.00011 UJ	<0.00011 UJ	<0.0055	<0.011	<0.00085 U	<0.011	<0.0055
	MW6D-ROX-072311	7/23/2011		23.29	NE	<0.00011	<0.00011	<0.00011	<0.00038 U	<0.00015 U	<0.00017 U	<0.000049 U	<0.00019 U	<0.011 UJ	<0.011	<0.0021	<0.0053	<0.011	<0.00039 U	<0.00011	<0.0053	<0.011	<0.0053	<0.011	<0.0053 UJ
	MW6D-ROX-110311	11/3/2011		24.31	NE	<0.0001	<0.0001	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0021	<0.0052	<0.01	<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	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0022	<0.0055	<0.011	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.0044 UJ	<0.01	<0.002	<0.005	<0.01	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.0051	<0.01	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0021	<0.0052	<0.01	<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	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0021	<0.0053	<0.011	<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	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055
	MW6D-ROX-100713	10/7/2013	104.72 - 109.72	28.58	NE	<0.00011	<0.00011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	0.001 J U	<0.011	<0.0054 UJ

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																		
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
						0.42 [1]	**0.21** [3]	**2.1** [1]	**0.00013** [1]	**0.0002** [1]	**0.00018** [1]	**0.21** [3]	**0.00017** [1]	**28** [1]	**0.7** [3]	**0.006** [2]	**1.4** [2]		**0.0015** [2]	**0.0003** [1]	**0.007** [3]	**0.021** [2]	**5.6** [1]	**0.14** [2]	
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																		
MW-07	MW7-ROX-012511	1/25/2011	42.92 - 52.92	37.52	NE	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.011		<0.0021	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.003 U	<0.011	<0.0053
	MW07-ROX-051311	5/13/2011		37.50	NE	0.00011 J	<0.00011 UJ	0.000031 J J	<0.000054 UJ	<0.00011 UJ	UJ	<0.00011 UJ	<0.00011 UJ	<0.011	<0.011	<0.0032 U	<0.0071 U	<0.011	<0.00011 UJ	<0.00011 UJ	<0.0054	<0.011	<0.00097 U	<0.011	<0.0054
	MW07-ROX-051311D	5/13/2011		37.50	NE	0.00011 J	<0.00011 UJ	0.000034 J J	<0.000055 UJ	0.000018 J J	UJ	<0.00011 UJ	<0.00011 UJ	<0.011	<0.011	<0.0035 U	<0.007 U	<0.011	<0.00011 UJ	<0.00011 UJ	<0.0055	<0.011	<0.0055	<0.011	<0.0055
	MW7-ROX-072411	7/24/2011		35.65	NE	0.0001 J	<0.00011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0022	<0.0054	<0.011	0.000018 J	<0.00011	<0.0054	<0.011	<0.0054	<0.011	<0.0054 UJ
	MW-7-ROX-110211	11/2/2011		35.95	NE	<0.00026 U	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.0001	<0.00005	<0.000024 U	<0.00005	<0.0001	<0.0001		<0.01 UJ	<0.002	0.00049 J	<0.01	<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	<0.00011	<0.000056	<0.00003 U	<0.000056	<0.00011	<0.00011		<0.011 UJ	0.00044 J	0.00048 J	<0.011	<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	<0.0001	0.00011	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	0.00071 J	<0.005	<0.01	<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	0.000022 J	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	0.0006 J	<0.0051	<0.01	<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	<0.00012	<0.000058	<0.00012	<0.000058	<0.00012	<0.00012	<0.012	<0.012	0.0015 J	<0.0058	<0.012	<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	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	0.0007 J	<0.0056	<0.011	<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	0.000059 J	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	0.00061 J	<0.0053	<0.011	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	0.00055 J	<0.0052	<0.01	<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	0.000089 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<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	0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<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	0.000028 J	0.00004 J	0.000044 J	0.000045 J	0.00008 J	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<0.00011	0.000077 J	<0.0022	<0.011	<0.0054	<0.011	<0.0054
	MW7-ROX-101613	10/16/2013	42.92 - 52.92	40.64	NE	0.00035	<0.00011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055
MW-08	MW8-ROX-012511	1/25/2011	33.60 - 43.60	28.59	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01		0.00086 J	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01	<0.0025 U	0.0233	<0.005
	MW8-ROX-012511-DUP	1/25/2011		28.59	NE	<0.0057	<0.0057	<0.0057	<0.0057	<0.0057	<0.0057	<0.0057	<0.0057	<0.011		0.0012 J	<0.0057	<0.011	<0.0057	<0.0057	<0.0057	<0.011	0.0125	0.0299	<0.0057
	MW08-ROX-051311	5/13/2011		28.35	NE	0.00035 J	<0.00011 UJ	0.000063 J J	<0.000055 UJ	<0.00011 UJ	UJ	<0.00011 UJ	<0.00011 UJ	<0.011	<0.011	<0.0031 U	<0.0055	<0.011	<0.00011 UJ	<0.00011 UJ	<0.0055	<0.011	<0.0018 U	0.0225	<0.0055
	MW08-ROX-051311D	5/13/2011		28.35	NE	0.00029 J	<0.00011 UJ	0.000054 J J	<0.000056 UJ	<0.00011 UJ	UJ	<0.00011 UJ	<0.00011 UJ	<0.011	<0.011	<0.0034 U	<0.0056	<0.011	<0.00011 UJ	<0.00011 UJ	<0.0056	<0.011	<0.0011 U	0.0232	<0.0056
	MW8-ROX-072411	7/24/2011		26.02	NE	0.00029	<0.00011	0.000067 J	0.00013 B	0.00016 B	0.00016 B	0.000048 J	0.00017 B	<0.011 UJ	<0.011	0.0019 J	<0.0054	<0.011	0.000099 JB	<0.00011	<0.0054	<0.011	<0.0054	0.0228	<0.0054 UJ
	MW8-ROX-072411-DUP	7/24/2011		26.02	NE	0.00027	<0.00011	0.000062 J	0.00012 B	0.00019 B	0.00018 B	0.000058 J	0.00021 B	<0.011 UJ	<0.011	0.0013 J	<0.0055	<0.011	0.000099 JB	<0.00011	<0.0055	<0.011	<0.0055	0.0213	<0.0055 UJ
	MW-8-ROX-110211	11/2/2011		27.02	NE	<0.00023 U	<0.000095	<0.000095	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.0095	<0.0095	<0.0019	<0.0048	<0.0095	<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	<0.00053	<0.00026	<0.00053	<0.00026	<0.00053	<0.00053		<0.011 UJ	0.00052 J	0.00042 J	<0.011	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	0.0204	<0.011	0.00053 J	<0.0053	<0.011	<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	<0.0001	0.00012	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	0.00047 J	<0.005	<0.01	<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	0.000055 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	0.00051 J	<0.0054	<0.011	<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	0.000071 J	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	0.00043 J	<0.0056	<0.011	<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	0.00044	<0.00087 U	0.00053 B	0.00057 B	0.00058 B	0.00064 B	<0.011	<0.011	0.0012 J	0.00086 J	<0.011	0.00066 B	0.00059 B	<0.0021	<0.011	<0.0053	0.0085 J	<0.0053
	MW8-ROX-011513	1/15/2013		33.30	NE	0.00017	0.000085 J	0.000029 J	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	0.00089 J	<0.0056	<0.011	<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	0.000072 J	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	0.0023	<0.0053	<0.011	<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	0.000049 J	<0.000052	0.000021 J	<0.000052	0.00004 J	<0.0001	<0.01	<0.01	<0.0021	<0.0052	<0.01	<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	0.000061 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	0.0004 J	<0.011	<0.0054	0.0089 J	<0.0054
	MW8-ROX-101613	10/16/2013	33.60 - 43.60	31.59	NE	0.00021	0.000089 J	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<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	<0.00012	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.012	<0.012	<0.0024	<0.0059	<0.012	<0.00012	<0.00012	0.0004 J	<0.012	<0.0059	0.0062 J	<0.0059
MW-09	MW9-ROX-012111	1/21/2011	46.45 - 56.45	39.62	NE	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.011 UJ		<0.0021	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.001 U	<0.011	<0.0053
	MW09-ROX-050611	5/6/2011		40.12	NE	<0.000097 UJ	<0.000097 UJ	UJ	<0.000049 UJ	UJ	UJ	UJ	UJ	<0.0097	<0.0097	<0.0019	<0.0049	<0.0097	UJ	<0.000097 UJ	<0.0049	<0.0097	<0.0018 U	<0.0097	<0.0049
	MW9-ROX-072311	7/23/2011		38.06	NE	<0.00011	<0.00011	<0.00011	<0.00021 U	<0.00013 U	<0.00015 U	<0.000046 U	<0.00018 U	<0.01 UJ	<0.011	<0.0022	<0.0054	<0.01 UJ	<0.0002 U	<0.00011	<0.0054	<0.01 UJ	<0.0054	<0.01 UJ	<0.0054 UJ
	MW9-ROX-110111	11/1/2011		37.78	NE	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.00011	<0.000057	0.000058 J	0.000051 J	<0.000096 U	<0.00011	<0.011 UJ	<0.011	<0.00085 U	<0.00037 U	<0.011	<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	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001 UJ	<0.0001	<0.01	<0.01	<0.00043 U	<0.005	<0.01	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0021	<0.0052	<0.01	<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	0.00006 J	<0.000054	<0.00011	0.000026 J	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<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	<0.0001 UJ	<0.000052 UJ	<0.0001 UJ	UJ	<0.0001 UJ	<0.0001 UJ	<0.01 UJ	<0.01 UJ	<0.0021 UJ	<0.0052 UJ	<0.01 UJ	<0.0001 UJ	<0.0001 UJ	<0.0021 UJ	<0.01 UJ	<0.0016 UJ	<0.01 UJ	<0.0052 UJ
	MW9-ROX-070813	7/8/2013		42.35	NE						0.000035 J														
	MW9-ROX-100313	10/3/2013	46.45 - 56.45	42.27	NE	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																	
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
				Screening Values (mg/L)		0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.006 [2]	1.4 [2]		0.0015 [2]	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-10	MW10-ROX-012411	1/24/2011	44.43 - 54.43	39.40	NE	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.01		0.00068 J	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.001 U	<0.01	<0.0051
	MW10-ROX-012411-DUP	1/24/2011		39.40	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01		0.00071 J	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01	<0.0012 U	<0.01	<0.005
	MW10-ROX-042811	4/28/2011		40.20	NE	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0095 UJ	<0.0095	<0.00051 U	<0.0048	<0.0095	<0.0048	<0.0048	<0.0048	<0.0095	<0.0048	<0.0095	<0.0048
	MW10-ROX-072311	7/23/2011		38.01	NE	<0.0001	<0.0001	<0.0001	<0.00025 U	<0.00013 U	<0.00014 U	<0.000039 U	<0.00017 U	<0.01 UJ	<0.01	<0.002	<0.005	<0.01	<0.00027 U	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005 UJ
	MW10-ROX-110111	11/1/2011		37.72	NE	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	0.000027 J	0.000037 J	0.000031 J	0.000043 J	<0.000042 U	<0.00011	<0.011 UJ	<0.011	0.0255	<0.0013 U	<0.011	<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	0.000018 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0021	<0.0052	<0.01	<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	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001 UJ	<0.0001	<0.01	<0.01	<0.00067 U	<0.005	<0.01	<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	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0022	<0.0056	<0.011	<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	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.05	<0.02	<0.006	<0.01	<0.02	<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	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<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	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0027 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
	MW10-ROX-100313	10/3/2013	44.43 - 54.43	42.38	NE	<0.00011	<0.00011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
MW-11	MW11-ROX-012411	1/24/2011	41.66 - 51.66	37.15	NE	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.01		0.00073 J	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.001 U	<0.01	<0.0052
	MW11-ROX-050611	5/6/2011		37.60	NE	<0.000095 UJ	<0.000095 UJ	UJ	<0.000042 UJ	UJ	0.000025 J J	0.000022 J J	0.000014 J J	<0.0095	<0.0095	<0.0028 U	<0.0048	<0.0095	0.000037 J J	<0.000095 UJ	<0.0048	<0.0095	<0.0009 U	<0.0095	<0.0048
	MW11-ROX-072411	7/24/2011		34.3	NE	<0.00011	<0.00011	<0.00011	0.00013 B	0.00012 B	0.00013 B	0.000035 J	0.00014 B	<0.011 UJ	<0.011	<0.0022	<0.0056	<0.011	0.00013 B	<0.00011	<0.0056	<0.011	<0.0056	<0.011	<0.0056 UJ
	MW-11-ROX-110211	11/2/2011		35.44	NE	<0.00011	<0.00011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.002	<0.0051	<0.01	<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	<0.00012	<0.000058	<0.00012	<0.000058	<0.00012 UJ	<0.00012	<0.012	<0.012	<0.00056 U	<0.0058	<0.012	<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	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<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	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01 UJ	<0.01 UJ	<0.002 UJ	<0.005 UJ	<0.01 UJ	<0.0001 UJ	<0.0001 UJ	<0.002 UJ	<0.01 UJ	<0.005 UJ	<0.01 UJ	<0.005 UJ
	MW11-ROX-040813	4/8/2013		42.02	NE	<0.00011	<0.00011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<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	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0052 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
	MW11-ROX-100713	10/7/2013	41.66 - 51.66	39.95	NE	<0.00011	<0.00011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	0.0011 J U	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	0.0011 J U	<0.011	<0.0055 UJ
MW-12	MW12-ROX-012411	1/24/2011	41.92 - 51.92	37.42	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01		<0.002	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00077 U	<0.01	<0.005
	MW12-ROX-051211	5/12/2011		37.58	NE	<0.0001 UJ	<0.0001 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.002	<0.005	<0.01	0.000019 J J	<0.0001 UJ	<0.005	<0.01	<0.005	<0.01	<0.005
	MW12-ROX-072411	7/24/2011		35.55	NE	<0.0001	<0.0001	<0.0001	0.000072 B	0.00014 B	0.00014 B	0.000053 J	0.00019 B	<0.01 UJ	<0.01	<0.002	<0.005	<0.01 UJ	0.000072 JB	0.000031 JB	<0.005	<0.01 UJ	<0.005	<0.01 UJ	<0.005 UJ
	MW-12-ROX-110211	11/2/2011		35.70	NE	<0.000095	<0.000095	<0.000095	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.0095	<0.0095	<0.0019	<0.0048	<0.0095	<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	<0.000095	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.0095	<0.0095	<0.0019	<0.0048	<0.0095	<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	<0.00011	<0.000054	<0.00016 U	<0.00013 U	<0.00021 U	0.00013	<0.011 UJ	<0.011	<0.0022	<0.00029 U	<0.011	<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	<0.00011	<0.000056	<0.000039 U	<0.00004 U	<0.000067 U	<0.00011	<0.011 UJ	<0.011	<0.0022	<0.00033 U	<0.011	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.002	<0.0051	<0.01	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011 UJ	<0.00011	<0.011	<0.011	<0.0019 U	0.00029 J	<0.011	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<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	<0.0001	<0.000051	<0.0001	0.000026 J	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.0051	<0.01	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0021	<0.0052	<0.01	<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	<0.00011	0.00012 J	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055
	MW12-ROX-100713	10/7/2013	41.92 - 51.92	40.22	NE	<0.00011	<0.00011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0022	<0.0055	<0.011 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	0.00062 J U	<0.011 UJ	<0.0055 UJ

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						SVOCs																		
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
					Screening Values (mg/L)	0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.006 [2]	1.4 [2]		0.0015 [2]	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-13	MW13-ROX-012511	1/25/2011	25.57 - 35.57	24.28	NE	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.01		<0.0021	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.0027 U	<0.01	<0.0052
	MW13-ROX-051311	5/13/2011		23.65	NE	<0.000099 UJ	0.000067 J J	0.000059 J J	0.000042 J J	0.000016 J J	<0.00005 UJ	UJ	UJ	<0.0099	<0.0099	<0.0027 U	<0.005	<0.0099	0.000059 J J	<0.000099 UJ	<0.005	<0.0099	<0.00086 U	<0.0099	<0.005
	MW13-ROX-080311	8/3/2011		21.67	NE	<0.0001	<0.0001	0.00011	0.000037 J	0.000039 J	0.000037 J	0.000053 J	0.000036 J	<0.01 UJ	<0.01	<0.002	<0.005	<0.01	0.000036 J	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005
	MW13-ROX-110311	11/3/2011		22.85	NE	<0.00011	<0.00011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0056	<0.011	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	0.0087 J J	<0.011	<0.0007 U	<0.0007 U	<0.011	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0021	<0.0052	<0.01	<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	0.000063 J	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<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	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0055	<0.011	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.0051	<0.01	<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	<0.000058 U	<0.00014 U	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	0.00079 J	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054 UJ
	MW13-ROX-100913	10/9/2013	25.57 - 35.57	26.94	NE	0.000098 J	0.000071 J	<0.0001	0.000022 J	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	0.00068 J	<0.0052	<0.01	0.000034 J	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052
MW-14	MW14-ROX-110911	11/9/2011	Unknown			<0.00011	<0.00011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.00042 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052	0.00084 J	<0.0052	<0.01	<0.0052
	MW14-ROX-080312	8/3/2012		29.87	NE	0.00095	0.00015	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	0.00049 J	<0.0053	<0.011	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.002	<0.005	<0.01	<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	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.00011	0.00013	<0.00011	0.000054	0.000053 J	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	0.00066 J	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053 UJ
	MW14-ROX-101013	10/10/2013	33.42 - 43.42	30.80	NE	0.00065	0.00011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0023	<0.0057	<0.011	<0.00011	<0.00011	0.00019 J	<0.011	<0.0057	<0.011	<0.0057
MW-16	MW16-ROX-012313	1/23/2013	37.06 - 47.06	43.05	NE	<0.00011	<0.00011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0021	<0.0052	<0.01	<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	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
	MW16-ROX-100813	10/8/2013	37.06 - 47.06	41.62	NE	<0.0001 UJ	<0.0001 UJ	<0.0001 UJ	<0.000052 UJ	<0.0001 UJ	UJ	<0.0001 UJ	<0.0001 UJ	<0.01 UJ	<0.01 UJ	<0.0021 UJ	<0.0052 UJ	<0.01 UJ	<0.0001 UJ	<0.0001 UJ	<0.0021 UJ	<0.01 UJ	<0.0052 UJ	<0.01 UJ	<0.0052 UJ
MW-22	MW22-ROX-012313	1/23/2013	37.88 - 47.88	41.80	NE	0.00018	<0.0001	0.00002 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	0.0031 J	<0.0021	<0.0052	<0.01	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	0.0033 J	<0.0021	<0.0053	<0.011	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<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	0.000035 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	0.0017 J	<0.0054	<0.011	<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	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	0.0021 J	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	0.0978	<0.0056
	MW22-ROX-100913	10/9/2013	37.88 - 47.88	40.39	NE	0.00019	<0.00011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<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	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.0826	<0.0054
MW-24	MW24-ROX-040513	4/5/2013	38.89 - 48.89	43.39	NE	<0.0001	<0.0001 UJ	<0.0001	<0.000052	<0.0001	0.000057	<0.0001	<0.0001	<0.01	<0.01	<0.0021	<0.0052	<0.01	<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	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011		<0.011	<0.0022	<0.0054		<0.00011	<0.00011	<0.0022		<0.0054		<0.0054
	MW24-ROX-100913	10/9/2013	38.89 - 48.89	41.27	NE	<0.00011	<0.00011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
			Screening Values (mg/L)			0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.006 [2]	1.4 [2]		0.0015 [2]	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-54	P54-ROX-012411	1/24/2011	38.00 - 63.00	37.24	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01		<0.002	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01	<0.002 U	<0.01	<0.005
	P54-ROX-051111	5/11/2011		37.37	NE	<0.00011 UJ	<0.00011 UJ	<0.00011 UJ	<0.000054 UJ	0.0001 J J	UJ	<0.00011 UJ	<0.00011 UJ	<0.01	<0.01	<0.0024 U	<0.005 UJ	<0.01	0.000019 J J	<0.00011 UJ	<0.005	<0.01	<0.005 UJ	<0.01	<0.005 UJ
	P54-ROX-072411	7/24/2011		35.38	NE	<0.0001	<0.0001	<0.0001	0.000079 B	0.00014 B	0.00015 B	0.000053 J	0.00017 B	<0.01 UJ	<0.01	<0.002	<0.005	<0.01	0.000081 JB	0.00002 JB	<0.005	<0.01	<0.005	<0.01	<0.005 UJ
	P54-ROX-110311	11/3/2011		35.49	NE	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.002	<0.005	<0.01	<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	<0.0001	<0.000052	<0.000024 U	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0021	<0.0052	<0.01	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	0.0045 J	<0.01	0.0133	<0.0051	<0.01	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.0051	<0.01	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<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	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0023	<0.0057	<0.011	<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	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0056	<0.011	<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	0.000018 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	0.00052 J	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052
	P54-ROX-100813	10/8/2013	38.00 - 63.00	39.94	NE	<0.00011	<0.00011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0023	<0.0057	<0.011	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011	<0.0057
P-55	P55-ROX-103111	10/31/2011	39.82 - 64.82	39.15	NE	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	0.0022	<0.005	<0.01	<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	<0.0001	<0.000052	0.000022 J	<0.000052	<0.0001	<0.0001		<0.01 UJ	<0.0021	<0.00048 U	<0.01	<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	<0.00011	<0.000054	0.000067 J	0.000061	0.00011	0.000071 J		<0.011 UJ	<0.0022	<0.00035 U	<0.011	<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	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.0051	<0.01	<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	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.05	<0.02	<0.006	<0.01	<0.02	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.0051	<0.01	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.0021	<0.0052	<0.01	<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	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.00066 U	<0.0056	<0.011	<0.00011	<0.00011	0.0016 J	<0.011	<0.0056	0.0024 J	<0.0056
	P55-ROX-101013	10/10/2013	40.43 - 50.43	41.67	NE	0.00071	0.00019	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	0.0006 J	<0.0055	<0.011	<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	0.00013	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	0.0026	<0.0052	<0.01	<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	0.00011	<0.000051	0.000021 J	<0.000051	<0.0001	<0.0001		<0.01 UJ	<0.00066 U	<0.00053 U	<0.01	<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	<0.0001	<0.00011 U	<0.00012 U	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0021	<0.0052	<0.01	<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	<0.002	<0.0051	<0.01	<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	0.00012	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.002	<0.0051	<0.01	<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	0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	0.0044	<0.005	<0.01	<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	0.0001 J	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0055	<0.011	<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	0.00014	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	0.00075 J	<0.011	<0.0055	0.0086 J	<0.0055
	P56-ROX-101013	10/10/2013	40.82 - 65.82	44.48	NE	0.0006	0.000092 J	0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	0.00059 J	<0.011	<0.0055	0.0042 J	<0.0055
P-57	P57-ROX-110811	11/8/2011	40.46 - 65.46	39.20	NE	0.00055	<0.00054	<0.00054	<0.00027	<0.00054	<0.00027	<0.00054	<0.00054	<0.011	<0.011	<0.0022	<0.0054	<0.011	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	0.00043 J	<0.00043 U	<0.01	<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	<0.0001	0.00011	0.00012	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0021	<0.0052	<0.01	<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	<0.002	<0.005	<0.01	<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	<0.002	<0.005	<0.01	<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	0.000061 J	<0.00005	<0.0001	<0.00005	0.00005 J	<0.0001	<0.01 UJ	<0.01	0.00052 J	<0.005	<0.01	<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	0.000076 J	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.012	<0.012	<0.0024	<0.0059	<0.012	<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	0.000073 J	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.0051	<0.01	<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	0.000077 J	0.00012	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	0.00088 J	<0.011	<0.0056	0.002 J	<0.0056
	P57-ROX-101413	10/14/2013	40.46 - 65.46	44.38	NE	0.00045	0.000071 J	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	0.0012 J	<0.0054	<0.011	<0.00011	<0.00011	0.00082 J	<0.011	<0.0054	0.0029 J	<0.0054

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
			Screening Values (mg/L)			0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.006 [2]	1.4 [2]		0.0015 [2]	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	<0.000097	<0.000049	<0.000097	<0.000049	<0.000097	<0.000097	<0.0097	<0.0097	0.003	<0.0049	<0.0097	<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	<0.00011	0.000039 J	0.000051 J	0.000032 J	0.000047 J	<0.00011		<0.011 UJ	0.0361 J	<0.00059 U	<0.011	<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	<0.00011	0.000036 J	0.000036 J	<0.000053	<0.00011	<0.00011		<0.011 UJ	0.024 J	<0.0053	<0.011	<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	0.00057 J	0.00017	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.0051	<0.01	<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	<0.0001 UJ	0.00015	0.000032 J	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0021	<0.0052	<0.01	<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	0.00043 J	<0.005	<0.01	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	0.00042 J	<0.005	<0.01	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	0.00083	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	0.0103	<0.0054	<0.011	<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	<0.00011	0.00038	0.00022	0.00012	0.00012	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	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	<0.00011	0.0003	0.00019	0.000095	0.000074 J	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	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	0.000096 J	0.00018	0.000073 J	0.000045 J	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0055	<0.011	0.00012	<0.00011	0.0025	<0.011	<0.0055	<0.011	<0.0055
	P58-ROX-101413	10/14/2013	40.21 - 65.21	42.19	NE	0.00084	<0.00011	<0.00011	<0.000054	0.000067 J	<0.000054	<0.00011	<0.00011	<0.011	<0.011	0.0099	<0.0054	<0.011	0.000099 J	<0.00011	0.0024	<0.011	<0.0054	0.0016 J	<0.0054
P-59	P59-ROX-102711	10/27/2011	47.91 - 72.91	41.06	NE	0.00077	0.00012	0.00046	0.00019	<0.00011	0.000073	<0.00011	<0.00011	<0.011	<0.011	0.0028	<0.0053	<0.011	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	0.00025	0.000055 J	0.000038 J	0.000037 J	0.000052 J	<0.00011		0.0011 J	<0.00079 U	<0.0011 U	<0.011	0.000085 J	<0.00011	<0.0057	<0.011	<0.0057	0.0133	<0.0057
	P59-ROX-011912-DUP	1/19/2012		42.88	NE	0.00037	<0.0001	0.00015	0.00005 J	0.000029 J	0.000027 J	<0.0001	<0.0001		0.00091 J	<0.002	<0.00061 U	<0.01	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	0.000095 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	0.0161	<0.01	<0.002	<0.005	<0.01	<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	0.00014	0.00021	0.000036 J	0.000047 J	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<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	0.000086 J	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0021	<0.0053	<0.011	<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	0.000084 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0021	<0.0052	<0.01	<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	0.00012	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	0.0041	<0.0052	<0.01	<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	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	0.0831 J	<0.011	<0.0022	<0.0054	<0.011	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	0.0518 J	<0.011	<0.0021	<0.0053	<0.011	<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	0.000092 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	0.00041 J	<0.011	<0.0054	0.0583	<0.0054
	P59-ROX-101013	10/10/2013	47.91 - 72.91	45.50	NE	0.00055	0.000084 J	0.00021	0.000068	<0.00011	0.000039 J	<0.00011	<0.00011	<0.011 UJ	0.0009 J	0.00069 J	<0.0054	<0.011	0.000088 J	<0.00011	<0.0022	<0.011	<0.0054	0.078	<0.0054
P-66	P66-ROX-110111	11/1/2011	34.72 - 59.72	28.92	NE	0.0018	<0.0001	<0.0001	<0.000095 U	<0.0001	<0.000088 U	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.0001	<0.00005	<0.0001	0.000024 J	<0.0001	<0.0001	<0.01	<0.01	<0.00053 U	<0.005	<0.01	<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	<0.00011	0.00018	0.000066 J	0.00008	0.000066 J	<0.00011	<0.011	<0.011	0.00075 J	<0.0053	<0.011	<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	0.0006	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.002	<0.005	<0.01	<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	<0.000055 U	<0.000053	<0.00011	<0.000028 U	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<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	<0.0002 U	0.00018 B	<0.00015 U	0.00017 B	<0.00019 U	0.00015	<0.011 UJ	<0.011	0.0124	<0.0056	<0.011	0.00017	0.00017	0.0016 J	<0.011	<0.0056	<0.011	<0.0056 UJ
	P66-ROX-101013	10/10/2013	34.72 - 59.72	33.66	NE	0.00066	0.0002	<0.00011	0.000028 J	<0.00011	<0.000056	0.000036 J	<0.00011	<0.011 UJ	<0.011	0.0022	<0.0056	<0.011	<0.00011	<0.00011	0.0016 J	<0.011	<0.0056	<0.011	<0.0056
	P66-ROX-110713	11/7/2013		33.66	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-74	P74-ROX-103111	10/31/2011	44.43 - 69.43	36.26	NE	0.00033	0.00012	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.000095	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095		<0.0095 UJ	<0.0019	<0.00043 U	<0.0095	<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	<0.0001	0.00012	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0021	<0.0052	<0.01	<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	<0.002	<0.005	<0.01	<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	0.000044 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	0.00044 J	<0.0052	<0.01	<0.0001	<0.0001	0.00031 J	0.001 J	<0.0052	0.008 J J	<0.0052
	P74-ROX-011713	1/17/2013		42.65	NE	0.00019	0.0001	0.000063 J	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	0.0028 J	<0.002	<0.0051	<0.01	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0021	<0.0052	<0.01	<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	0.000032 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	0.0013 J	<0.0054	<0.011	<0.0054
	P74-ROX-101413	10/14/2013	44.43 - 69.43	41.72	NE	0.0002	<0.00011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	0.00097 J	<0.0054	<0.011	<0.00011	<0.00011	0.00033 J	0.0012 J	<0.0054	0.0019 J	<0.0054

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
Screening Values (mg/L)						0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.006 [2]	1.4 [2]		0.0015 [2]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]	
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																			
P-93A	P93A-ROX_012611	1/26/2011	48.17 - 63.17	40.97	NE	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0098 UJ		<0.002	<0.0049	<0.0098	<0.0049	<0.0049	<0.0049	<0.0098	<0.0014 U	<0.0098	<0.0049
	P93A-ROX-050511	5/5/2011		41.88	NE	0.00026 J	<0.0001 UJ	0.000035 J J	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.002	<0.005	<0.01	<0.0001 UJ	<0.0001 UJ	0.00035 J	<0.01	<0.00073 U	<0.01	<0.005
	P93A-ROX-081811	8/18/2011		39.40	NE	0.00036	<0.0001	0.000058 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	0.003	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.0029 U	<0.01	<0.005
	P93A-ROX-102611	10/26/2011		39.43	NE	0.00024	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	0.0075	<0.005	<0.01	<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	0.000032 J	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.0095 UJ	<0.0095	<0.006 U	<0.00053 U	<0.0095	<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	<0.0001	<0.0001 U	<0.00012 U	<0.000051	<0.0001	<0.0001	<0.01	<0.01	0.0029	<0.0051	<0.01	<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	0.000048 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	0.0032 J	<0.011	0.0153	<0.0054	<0.011	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	0.0026	<0.0052	<0.01	<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	0.000061 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	0.0023	<0.0052	<0.01	<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	0.000028 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	0.0099	<0.0052	<0.01	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	0.011	<0.0052	<0.01	<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	0.000074 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	0.00003 J	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	0.00024 J	<0.011	<0.0056	<0.011	<0.0056
	P93A-ROX-101113	10/11/2013	48.17 - 63.17	44.18	NE	0.00017	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005
P-93B	P93B-ROX_012611	1/26/2011	74.60 - 76.60	41.03	NE	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.011 UJ		<0.0021	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.00086 U	<0.011	<0.0053
	P93B-ROX-050511	5/5/2011		41.96	NE	<0.0001 UJ	<0.0001 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.002	<0.005	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005	<0.01	<0.005	<0.01	<0.005
	P93B-ROX-081811	8/18/2011		39.44	NE	<0.0001	<0.0001	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	0.001 J	<0.0052	<0.01	<0.0001	<0.0001	<0.0052	<0.01	<0.0021 U	<0.01	<0.0052
	P93B-ROX-102611	10/26/2011		39.48	NE	<0.0001	<0.0001	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	0.0103	<0.0052	<0.01	<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	<0.000095	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.0095 UJ	<0.0095	<0.0033 U	<0.00033 U	<0.0095	<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	<0.0001	<0.000051	<0.00012 U	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.0051	<0.01	<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	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	0.0036	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.00051 U	<0.011	<0.0054
	P93B-ROX-110712	11/7/2012		44.98	NE	<0.0001	0.000073 JB	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	0.0017 J	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051
	P93B-ROX-110712-DUP	11/7/2012		44.98	NE	<0.000047 U	0.000058 J	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	0.00057 J	<0.005	<0.01	<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	0.00013	0.00022	0.00011	0.00013	0.00012	0.00012	<0.011	<0.011	0.0055	0.0032 J	0.0013 J	0.00012	0.00012	<0.0021	<0.011	<0.0053 UJ	0.0021 J	0.00024 J J
	P93B-ROX-041113	4/11/2013		46.32	NE	<0.0001	<0.0001	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.0051	<0.01	<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	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056
	P93B-ROX-101613	10/16/2013	74.60 - 76.60	44.43	NE	<0.0001	0.000065 J	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051
P-93C	P93C-ROX_012611	1/26/2011	94.26 - 96.26	40.91	NE	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.01 UJ		<0.002	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.00097 U	<0.01	<0.0051
	P93C-ROX-050611	5/6/2011		41.84	NE	<0.0001 UJ	0.000041 J J	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.0022 U	<0.005	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005	<0.01	<0.005	<0.01	<0.005
	P93C-ROX-081811	8/18/2011		39.32	NE	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	0.0092	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.0015 U	<0.01	<0.005
	P93C-ROX-102611	10/26/2011		39.36	NE	<0.0001	<0.0001	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0021	<0.0052	<0.01	<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	<0.0001	<0.000051	0.000019 J	0.000027 J	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0096 U	<0.00037 U	<0.01	<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	<0.00011	<0.00012 U	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	0.008	<0.0053	<0.011	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	0.0043	<0.0052	<0.01	<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	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	0.00081 J	<0.005	<0.01	<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	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	0.0049	<0.0055	<0.011	<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	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	0.000021 J	<0.000056	0.00015	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0022	<0.0056	<0.011	<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	94.26 - 96.26	44.31	NE	<0.0001	<0.0001	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																	
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
						Screening Values (mg/L)	0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.006 [2]	1.4 [2]		0.0015 [2]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]	
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			
P-93D	P93D-ROX-050511	5/5/2011	125.75 - 127.75	41.96	NE	<0.0001 UJ	<0.0001 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.0027 U	<0.005	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005	<0.01	<0.005	<0.01	<0.005
	P93D-ROX-081811	8/18/2011		39.46	NE	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<0.000015 U	<0.0001	<0.005	<0.01	<0.0018 U	<0.01	<0.005
	P93D-ROX-102711	10/27/2011		39.59	NE	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0022	<0.0054	<0.011	<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	<0.0001	<0.0001 U	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.0051	<0.01	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.0021 U	<0.0021	<0.0052	<0.01	<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	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0055	<0.011	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0021	<0.0052	<0.01	<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	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	0.00057 J	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056 UJ
	P93D-ROX-101113	10/11/2013	125.75 - 127.75	44.24	NE	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.002	<0.005	<0.01 UJ	<0.0001	<0.0001	<0.002	<0.01 UJ	<0.005	<0.01 UJ	<0.005
P-114	P114-ROX-102811	10/28/2011	32.67 - 52.67	24.73	NE	<0.000095	<0.000095	<0.000095	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.0095	<0.0095	0.0053	<0.0048	<0.0095	<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	<0.0001	<0.000051	0.000055 J	0.00005 J	0.000058 J	<0.0001	<0.01 UJ	<0.01	<0.0013 U	<0.00044 U	<0.01	<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	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	0.0015 J	<0.0052	<0.01	<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	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	0.0039	<0.005	<0.01	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0021	<0.0052	<0.01	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	0.0059	<0.0053	<0.011	<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	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	0.0023	<0.0052	<0.01	<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	0.00011	0.000045 J	0.000034 J	0.000064	0.000067 J	<0.00011	<0.011 UJ	<0.011	<0.0022	<0.0055	<0.011	<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	0.00013	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053
	P114-ROX-101713	10/17/2013	32.67 - 52.67	29.43	NE	<0.00011	<0.00011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
ROST-3-PZ	ROST3PZ-ROX-051412	5/14/2012	40.00 - 50.00	38.82	NE	0.000023 J	<0.0001	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	0.00065 J	<0.0052	<0.01	<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	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	0.0016 J	<0.011	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0021	<0.0053	<0.011	<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	0.000074 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<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		0.000091 J								0.00061 J					0.00025 J			0.0016 J J	
	ROST3-MW-ROX-100913	10/9/2013	37.81 - 47.81	40.16	NE	0.0001 J	<0.00011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0022	<0.0054	<0.011 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.0054	<0.011 UJ	<0.0054
ROST-4-PZ(C)	ROST4PZ-C-051412	5/14/2012	34.95 - 44.95	39.04	NE	0.00027	0.000072 J	0.00011	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	<0.00018 U	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	0.00042 J	<0.00051 U	<0.0053	<0.011	<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	0.00005 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	0.0045	<0.0052	<0.01	<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	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<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	0.000033 J	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0055	<0.011	<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	0.00012	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	0.0032	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054
	ROST4PZC-ROX-100913	10/9/2013	34.95 - 44.95	39.91	NE	0.00012	<0.00011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																	
						Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate
					Screening Values (mg/L)	0.42 [1]	0.21 [3]	2.1 [1]	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.006 [2]	1.4 [2]		0.0015 [2]	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	0.00017	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	0.0025	<0.0051	<0.01	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	0.0109	<0.0051
	T12-ROX-011912	1/19/2012		41.0	NE	0.00047	<0.00011	0.00014	<0.000056	0.000032 J	0.000035 J	0.000069 J	<0.00011		<0.011 UJ	<0.0017 U	<0.00062 U	<0.011	<0.00011	0.00005 J	0.00029 J	<0.011	<0.0056	0.0095 J	<0.0056
	T12-ROX-050912	5/9/2012		42.62	NE	0.00032	<0.0001	0.000081 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.002	<0.005	<0.01	<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	0.0001 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	<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	0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	0.00054 J	<0.005	<0.01	<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	<0.00013 U	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0021	<0.0053	<0.011	<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	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.002	<0.0051	<0.01	<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	0.00015	0.00013	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	0.001 J	<0.0044 U	<0.0054	<0.011	<0.00011	<0.00011	0.00042 J	<0.011	<0.0054	0.0096 J	<0.0054
	T12-ROX-101513	10/15/2013	46.46 - 72.46	43.73	NE	0.00036	<0.00011	0.00012	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0022	<0.0054	<0.011	0.000028 J	<0.00011	0.00029 J	<0.011	<0.0054	0.0047 J	<0.0054

TABLE 3
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[6]	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
			Screening Values (mg/L)			0.7 [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]		0.0035 [2]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-01	MW1-ROX-011711	1/17/2011	43.41 - 58.41	37.58	NE	<0.0063	<0.0063	<0.013	<0.0063	<0.0063	<0.0063		<0.0063	<0.0063		<0.0063	<0.013	<0.013	<0.013	<0.0063		<0.0063	<0.013	<0.0063	<0.0063	<0.0063
	MW1-ROX-042911	4/29/2011		38.37	NE	<0.00085 U	<0.0063	<0.013	<0.0063	<0.0063	<0.0063		<0.0063	<0.0063		<0.0063	<0.013	<0.013	<0.013	<0.0063	<0.0063 UJ	<0.0063	<0.013	<0.0063	<0.0063 UJ	<0.0063
	MW1-ROX-072711	7/27/2011		35.77	NE	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW1-ROX-120511	12/5/2011		37.10	NE	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	MW1-ROX-011612	1/16/2012	48.80 - 58.80	37.75	NE	<0.0051	<0.0051	<0.01	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		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	48.80 - 58.80	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
MW-02	MW2-ROX-011711	1/17/2011	47.19 - 62.19	38.67	NE	<0.0048	<0.0048	<0.0095	<0.0048	<0.0048	<0.0048		<0.0048	<0.0048		0.0065	0.0028 J	0.0035 J	<0.0095	<0.0048		<0.0048	<0.0095	<0.0048	<0.0048	<0.0048
	MW02-ROX-051011	5/10/2011		39.14	NE	<0.001 U	<0.0052	<0.01	<0.0001 UJ	<0.0001 UJ	<0.0052		<0.0001 UJ	<0.0052	0.0049 J J	0.0118 J	0.0062 J	0.0119	<0.01	<0.0052 UJ	<0.0052	<0.0052	<0.01	<0.000052 UJ	0.0057	<0.0001
	MW2-ROX-072711	7/27/2011		37.04	NE	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	0.0098	0.0167	<0.01	0.0193 J	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	0.0086	<0.0001
	MW2-ROX-072711-DUP	7/27/2011		37.04	NE	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	0.0096	0.0169	<0.01	0.0144 J	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	0.0075	<0.0001
	MW2-ROX-112811	11/28/2011	49.87 - 59.87	38.03	NE	<0.005	<0.005	<0.01	<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	49.87 - 59.87	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
MW-03	MW3-ROX-011811	1/18/2011	30.98 - 45.98	24.92	NE	<0.0053	<0.0053	<0.011	<0.0053	<0.0053	<0.0053		<0.0053	<0.0053		<0.0053	<0.011	<0.011	<0.011	<0.0053		<0.0053	<0.011	<0.0053	<0.0053	<0.0053
	MW03-ROX-051011	5/10/2011		24.79	NE	<0.0014 U	<0.005	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005		<0.0001 UJ	<0.005	<0.005 UJ	0.00019 J J	<0.01	<0.01	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	<0.00005 UJ	<0.005	<0.0001
	MW3-ROX-080311	8/3/2011		22.72	NE	<0.00061 U	<0.0048	<0.0095	<0.000095	<0.000095	<0.0048		<0.000095	<0.0048	0.00029	0.00017 J	<0.0095	<0.0095	<0.0095	<0.0048	<0.0048	<0.0048	<0.0095	<0.000048	<0.0048 UJ	<0.000095
	MW3-ROX-112911	11/29/2011	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	34.67 - 44.67	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

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
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[6]	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
			Screening Values (mg/L)			0.7 [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]		0.0035 [2]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																				
MW-04	MW4-ROX-011811	1/18/2011	42.63 - 57.63	36.04	NE	<0.0052	<0.0052	<0.01	<0.0052	<0.0052	<0.0052		<0.0052	<0.0052		<0.0052	<0.01	<0.01	<0.01	<0.0052		<0.0052	<0.01	<0.0052	<0.0052	<0.0052
	MW04-ROX-051111	5/11/2011		36.19	NE	<0.0012 U	<0.005	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005		<0.0001 UJ	<0.005	<0.005 UJ	0.00033 J	<0.01	<0.01	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	<0.00005 UJ	<0.005	<0.0001
	MW4-ROX-072611	7/26/2011		34.15	NE	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	0.00044	0.00029	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW4-ROX-072611-DUP	7/26/2011		34.15	NE	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	0.00031	0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW4-ROX-121511	12/15/2011		33.99	NE	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.00043 U	<0.0052	0.00028	0.00026	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	MW4-ROX-011612	1/16/2012	46.06 - 56.06	36.00	NE	0.00077 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		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	46.06 - 56.06	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
MW-05	MW5-ROX-011811	1/18/2011	31.13 - 46.13	24.15	NE	<0.0053	<0.0053	<0.011	<0.0053	<0.0053	<0.0053		<0.0053	<0.0053		<0.0053	<0.011	<0.011	<0.011	<0.0053		<0.0053	<0.011	<0.0053	<0.0053	<0.0053
	MW05-ROX-051211	5/12/2011		23.98	NE	<0.0009 U	<0.0053	<0.011	<0.00011 UJ	<0.00011 UJ	<0.0053		<0.00011 UJ	<0.0053	<0.0053 UJ	0.00004 J J	<0.011	<0.011	<0.011	<0.0053 UJ	<0.0053	<0.0053	<0.011	<0.000053 UJ	<0.0053 UJ	<0.00011
	MW5-ROX-072611	7/26/2011		22.00	NE	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	0.00056	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW5-ROX-072611-DUP	7/26/2011		22.00	NE	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	0.00075	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW5-ROX-112111	11/21/2011	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	33.97 - 43.97	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
MW-06A	MW6A-ROX-011911	1/19/2011	31.98 - 46.98	26.36	NE	0.00081 J	<0.005	<0.01	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.01	<0.01	<0.01	<0.005		<0.005	<0.01	<0.005	<0.005	<0.005
	MW6A-ROX-051611	5/16/2011		26.10	NE	<0.0016 U	<0.005	<0.01	<0.0001 UJ	0.00025 J	<0.005		<0.0001 UJ	<0.005	<0.005 UJ	<0.0002 UJ	<0.01	<0.01	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	<0.00005 UJ	<0.005	<0.0001
	MW6A-ROX-072611	7/26/2011		23.76	NE	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW6A-ROX-112111	11/21/2011	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	34.83 - 44.83	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

TABLE 3
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[6]	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
					Screening Values (mg/L)	0.7 [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]		0.0035 [2]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-06B	MW6B-ROX-011911	1/19/2011	64.05 - 69.05	26.21	NE	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.01	<0.01	<0.01	<0.005		<0.005	<0.01	<0.005	<0.005	<0.005
	MW6B-ROX-011911-DUP	1/19/2011		26.21	NE	<0.0051	<0.0051	<0.01	<0.0051	<0.0051	<0.0051		<0.0051	<0.0051		<0.0051	<0.01	<0.01	<0.01	<0.0051		<0.0051	<0.01	<0.0051	<0.0051	<0.0051
	MW6B-ROX-051611	5/16/2011		25.95	NE	<0.0012 U	<0.0048	<0.0095	UJ	UJ	<0.0048		<0.000095 UJ	<0.0048	<0.0048 UJ	<0.00019 UJ	<0.0095	<0.0095	<0.0095	<0.0048 UJ	<0.0048	<0.0048	<0.0095	<0.000048 UJ	<0.0048	<0.000095
	MW6B-ROX-051611-DUP	5/16/2011		25.95	NE	<0.0014 U	<0.005	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005		<0.0001 UJ	<0.005	<0.005 UJ	<0.0002 UJ	<0.01	<0.01	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	<0.00005 UJ	<0.005	<0.0001
	MW6B-ROX-072311	7/23/2011		23.60	NE	<0.00047 U	<0.0053	<0.011	<0.00021 U	<0.00011	<0.0053		<0.000057 U	<0.0053	<0.00021	<0.000022 U	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000044 U	<0.0053 UJ	<0.00023 U
	MW6B-ROX-110311	11/3/2011		24.67	NE	<0.005	<0.005	<0.01	<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	64.05 - 69.05	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
MW-06C	MW6C-ROX-012111	1/21/2011	84.95 - 89.95	25.97	NE	<0.0053	<0.0053	<0.011	<0.0053	<0.0053	<0.0053		<0.0053	<0.0053		<0.0053	<0.011	<0.011	<0.011	<0.0053		<0.0053	<0.011	<0.0053	<0.0053	<0.0053
	MW6C-ROX-051611	5/16/2011		25.76	NE	<0.0013 U	<0.005	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005		<0.0001 UJ	<0.005	<0.005 UJ	<0.0002 UJ	<0.01	<0.01	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	<0.00005 UJ	<0.005	<0.0001
	MW6C-ROX-072411	7/24/2011		23.43	NE	<0.0004 U	<0.0053	<0.011	0.000024 JB	<0.00011	<0.0053		0.000025 J	<0.0053	<0.00021	0.000017 JB	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00002 JB	<0.0053 UJ	0.000023 JB
	MW6C-ROX-110311	11/3/2011		24.47	NE	<0.005	<0.005	<0.01	<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	84.95 - 89.95	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
MW-06D	MW6D-ROX-012111	1/21/2011	104.72 - 109.72	25.87	NE	0.00071 J	<0.0053	<0.011	<0.0053	<0.0053	<0.0053		<0.0053	<0.0053		<0.0053	<0.011	<0.011	<0.011	<0.0053		<0.0053	<0.011	<0.0053	<0.0053	<0.0053
	MW6D-ROX-051611	5/16/2011		25.60	NE	<0.0015 U	<0.0055	<0.011	<0.00011 UJ	<0.00011 UJ	<0.0055		<0.00011 UJ	<0.0055	<0.0055 UJ	<0.00022 UJ	<0.011	<0.011	<0.011	<0.0055 UJ	<0.0055	<0.0055	<0.011	<0.000055 UJ	<0.0055	<0.00011
	MW6D-ROX-072311	7/23/2011		23.29	NE	<0.00046 U	<0.0053	<0.011	<0.000067 U	<0.00011	<0.0053		<0.000033 U	<0.0053	<0.00021	<0.000018 U	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.00004 U	<0.0053 UJ	<0.000063 U
	MW6D-ROX-110311	11/3/2011		24.31	NE	<0.0052	<0.0052	<0.01	<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	104.72 - 109.72	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

TABLE 3
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[6]	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
			Screening Values (mg/L)			**0.7** [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]		**0.0035** [2]	**0.0006** [3]	**0.0032** [2]	**0.001** [1]	**0.21** [3]	**0.1** [1]	**0.21** [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																				
MW-07	MW7-ROX-012511	1/25/2011	42.92 - 52.92	37.52	NE	<0.0053	<0.0053	<0.011	<0.0053	<0.0053	<0.0053		<0.0053	<0.0053		0.0023 J	<0.011	0.00099 J	<0.011	<0.0053		<0.0053	<0.011	<0.0053	0.0737	<0.0053
	MW07-ROX-051311	5/13/2011		37.50	NE	<0.0017 U	<0.0054	<0.011	<0.00011 UJ	0.0001 J J	<0.0054		<0.00011 UJ	<0.0054	0.0026 J J	0.0049 J	<0.011	0.00082 J	<0.011	<0.0054 UJ	<0.0054	<0.0054	<0.011	0.00017 J	0.0774	0.000044 J
	MW07-ROX-051311D	5/13/2011		37.50	NE	<0.0018 U	<0.0055	<0.011	<0.00011 UJ	0.000097 J J	<0.0055		<0.00011 UJ	<0.0055	0.0026 J J	0.0047 J	<0.011	0.00078 J	<0.011	<0.0055 UJ	<0.0055	<0.0055	<0.011	0.00017 J	0.0793	0.000051 J
	MW7-ROX-072411	7/24/2011		35.65	NE	<0.00044 U	<0.0054	<0.011	0.00003 J	0.000066 J	<0.0054		<0.00011	<0.0054	0.0024	0.003	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.000082 B	<0.0513 UJ	0.00003 J
	MW-7-ROX-110211	11/2/2011		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	42.92 - 52.92	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
MW-08	MW8-ROX-012511	1/25/2011	33.60 - 43.60	28.59	NE	<0.005	0.0004 J	<0.01	<0.005	<0.005	<0.005		<0.005	<0.005		0.0069	0.0195	0.0502	<0.01	<0.005		<0.005	<0.01	<0.005	0.119 J	<0.005
	MW8-ROX-012511-DUP	1/25/2011		28.59	NE	<0.0057	<0.0057	<0.011	<0.0057	<0.0057	<0.0057		<0.0057	<0.0057		0.0075	0.0228	0.0587	<0.011	<0.0057		<0.0057	<0.011	<0.0057	0.171 J	<0.0057
	MW08-ROX-051311	5/13/2011		28.35	NE	<0.0014 U	<0.0055	<0.011	0.00003 J J	0.00023 J	<0.0055		<0.00011 UJ	<0.0055	0.0053 J J	0.0075 J	0.0108 J	0.0243	<0.011	0.0041 J J	<0.0055	<0.0055	<0.011	0.000086 J	0.209	0.000028 J
	MW08-ROX-051311D	5/13/2011		28.35	NE	<0.0021 U	<0.0056	<0.011	<0.00011 UJ	0.00021 J	<0.0056		<0.00011 UJ	<0.0056	0.0055 J J	0.0089 J	0.0105 J	0.0249	<0.011	<0.0056 UJ	<0.0056	<0.0056	<0.011	0.00012 J	0.208	<0.00011
	MW8-ROX-072411	7/24/2011		26.02	NE	<0.0054	0.00077 J	<0.011	0.000031 JB	0.00034	<0.0054		0.000032 J	<0.0054	0.0055	0.0068	0.0205	0.0486	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00014 B	0.0972 J	0.000031 JB
	MW8-ROX-072411-DUP	7/24/2011		26.02	NE	<0.00038 U	0.00054 J	<0.011	0.000022 JB	0.0003	<0.0055		0.000042 J	<0.0055	0.0052	0.0064	0.0177	0.0423	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.00011 B	0.0906 J	0.000023 JB
	MW-8-ROX-110211	11/2/2011		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	33.60 - 43.60	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
MW-09	MW9-ROX-012111	1/21/2011	46.45 - 56.45	39.62	NE	0.00064 J	<0.0053	<0.011	<0.0053	<0.0053	<0.0053		<0.0053	<0.0053		<0.0053	<0.011	<0.011	<0.011	<0.0053		<0.0053	<0.011	<0.0053	<0.0053	<0.0053
	MW09-ROX-050611	5/6/2011		40.12	NE	<0.00046 U	<0.0049	<0.0097	0.00002 J J	UJ	<0.0049		<0.000097 UJ	<0.0049	<0.0049 UJ	<0.00019 UJ	<0.0097	<0.0097	<0.0097	<0.0049 UJ	<0.0049	<0.0049	<0.0097	<0.000049 UJ	<0.0049	<0.000097
	MW9-ROX-072311	7/23/2011		38.06	NE	<0.0054	<0.0054	<0.011	<0.000044 U	<0.00011	<0.0054		<0.000031 U	<0.0054	<0.00022	<0.00022	<0.01 UJ	<0.01 UJ	<0.011	<0.0054	<0.0054	<0.0054	<0.01 UJ	<0.00003 U	<0.005 UJ	<0.000046 U
	MW9-ROX-110111	11/1/2011		37.78	NE	<0.005	<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	46.45 - 56.45	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

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
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[6]	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
			Screening Values (mg/L)			0.7 [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]		0.0035 [2]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																				
MW-10	MW10-ROX-012411	1/24/2011	44.43 - 54.43	39.40	NE	<0.0051	<0.0051	<0.01	<0.0051	<0.0051	<0.0051		<0.0051	<0.0051		<0.0051	<0.01	<0.01	<0.01	<0.0051		<0.0051	<0.01	<0.0051	<0.0051	<0.0051
	MW10-ROX-012411-DUP	1/24/2011		39.40	NE	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.01	<0.01	<0.01	<0.005		<0.005	<0.01	<0.005	<0.005	<0.005
	MW10-ROX-042811	4/28/2011		40.20	NE	<0.00061 U	<0.0048	<0.0095	<0.0048	<0.0048	<0.0048		<0.0048	<0.0048		<0.0048	<0.0095	<0.0095	<0.0095	<0.0048	<0.0048 UJ	<0.0048	<0.0095	<0.0048	<0.0048 UJ	<0.0048
	MW10-ROX-072311	7/23/2011		38.01	NE	<0.005	<0.005	<0.01	<0.000047 U	<0.0001	<0.005		<0.000031 U	<0.005	<0.0002	<0.00002 U	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.000027 U	<0.005 UJ	<0.000044 U
	MW10-ROX-110111	11/1/2011		37.72	NE	<0.005	<0.005	<0.01	<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	44.43 - 54.43	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
MW-11	MW11-ROX-012411	1/24/2011	41.66 - 51.66	37.15	NE	<0.0052	<0.0052	<0.01	<0.0052	<0.0052	<0.0052		<0.0052	<0.0052		<0.0052	<0.01	<0.01	<0.01	<0.0052		<0.0052	<0.01	<0.0052	<0.0052	<0.0052
	MW11-ROX-050611	5/6/2011		37.60	NE	<0.001 U	<0.0048	<0.0095	0.000026 J J	UJ	<0.0048		0.000015 J J	<0.0048	<0.0048 UJ	<0.00019 UJ	<0.0095	<0.0095	<0.0095	<0.0048 UJ	<0.0048	<0.0048	<0.0095	0.000025 J J	<0.0048	0.000026 J
	MW11-ROX-072411	7/24/2011		34.3	NE	<0.0056	<0.0056	<0.011	0.000025 JB	<0.00011	<0.0056		0.000026 J	<0.0056	<0.00022	0.000023 JB	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.000021 JB	<0.0056 UJ	0.000024 JB
	MW-11-ROX-110211	11/2/2011		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	41.66 - 51.66	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
MW-12	MW12-ROX-012411	1/24/2011	41.92 - 51.92	37.42	NE	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.01	<0.01	<0.01	<0.005		<0.005	<0.01	<0.005	<0.005	<0.005
	MW12-ROX-051211	5/12/2011		37.58	NE	<0.0011 U	<0.005	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005		<0.0001 UJ	<0.005	<0.005 UJ	<0.0002 UJ	<0.01	<0.01	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	<0.00005 UJ	<0.005 UJ	<0.0001
	MW12-ROX-072411	7/24/2011		35.55	NE	<0.00039 U	<0.005	<0.01	0.000035 JB	<0.0001	<0.005		0.000047 J	<0.005	<0.0002	<0.0002	<0.01 UJ	<0.01 UJ	<0.01	<0.005	<0.005	<0.005	<0.01 UJ	0.000024 JB	<0.005 UJ	0.00004 JB
	MW-12-ROX-110211	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
	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	<0.011 UJ	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW12-ROX-100713	10/7/2013	41.92 - 51.92	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

TABLE 3
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[6]	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
			Screening Values (mg/L)			0.7 [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]		0.0035 [2]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-13	MW13-ROX-012511	1/25/2011	25.57 - 35.57	24.28	NE	<0.0052	<0.0052	<0.01	<0.0052	0.00044 J	<0.0052		<0.0052	<0.0052		0.0021 J	<0.01	<0.01	<0.01	<0.0052		<0.0052	<0.01	0.0012 J	<0.0052	0.00032 J
	MW13-ROX-051311	5/13/2011		23.65	NE	<0.0013 U	<0.005	<0.0099	0.000032 J J	0.00023 J	<0.005		<0.000099 UJ	<0.005	<0.005 UJ	0.00015 J J	<0.0099	<0.0099	<0.0099	<0.005 UJ	<0.005	<0.005	<0.0099	0.000095 J	<0.005 UJ	0.000089 J
	MW13-ROX-080311	8/3/2011		21.67	NE	<0.00074 U	<0.005	<0.01	<0.0001	<0.0001	<0.005		0.00004 J	<0.005	<0.0002	0.00011 J	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.000054 U	<0.005 UJ	0.000041 J
	MW13-ROX-110311	11/3/2011		22.85	NE	<0.0056	<0.0056	<0.011	<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	25.57 - 35.57	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
MW-14	MW14-ROX-110911	11/9/2011	Unknown			<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		29.87	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	33.42 - 43.42	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
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	37.06 - 47.06	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
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	37.88 - 47.88	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
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	38.89 - 48.89	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

TABLE 3
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[6]	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
			Screening Values (mg/L)			0.7 [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]		0.0035 [2]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
P-54	P54-ROX-012411	1/24/2011	38.00 - 63.00	37.24	NE	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.01	<0.01	<0.01	<0.005		<0.005	<0.01	<0.005	<0.005	<0.005
	P54-ROX-051111	5/11/2011		37.37	NE	<0.0011 U	<0.005	<0.01	0.000031 J J	<0.00011 UJ	<0.005		<0.00011 UJ	<0.005	<0.005 UJ	<0.00022 UJ	<0.01	<0.01	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	<0.000054 UJ	<0.005	0.000028 J
	P54-ROX-072411	7/24/2011		35.38	NE	<0.00049 U	<0.005	<0.01	0.000035 JB	<0.0001	<0.005		0.00004 J	<0.005	<0.0002	0.000026 JB	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.000025 JB	<0.005 UJ	0.000031 JB
	P54-ROX-110311	11/3/2011		35.49	NE	<0.005	<0.005	<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	38.00 - 63.00	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
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	40.43 - 50.43	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	40.82 - 65.82	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
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	40.46 - 65.46	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

TABLE 3
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[6]	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
			Screening Values (mg/L)			**0.7** [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]		**0.0035** [2]	**0.0006** [3]	**0.0032** [2]	**0.001** [1]	**0.21** [3]	**0.1** [1]	**0.21** [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																			
P-58	P58-ROX-102811	10/28/2011	40.21 - 65.21	37.31	NE	<0.0049	<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	40.21 - 65.21	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
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	47.91 - 72.91	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
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	34.72 - 59.72	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	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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	44.43 - 69.43	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

TABLE 3
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[6]	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
			Screening Values (mg/L)			0.7 [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]		0.0035 [2]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
P-93A	P93A-ROX_012611	1/26/2011	48.17 - 63.17	40.97	NE	<0.0049	<0.0049	<0.0098	<0.0049	0.00032 J	<0.0049		<0.0049	<0.0049		0.0254	<0.0098	0.064	<0.0098 UJ	<0.0049		<0.0049	<0.0098	0.0004 J	0.172	<0.0049
	P93A-ROX-050511	5/5/2011		41.88	NE	<0.001 U	<0.005	<0.01	0.000019 J J	0.00044 J	<0.005		<0.0001 UJ	<0.005	0.0172 J	0.0309 J	<0.01	0.0075 J	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	0.0004 J	0.21	0.000026 J
	P93A-ROX-081811	8/18/2011		39.40	NE	<0.001 U	<0.005	<0.01	<0.000033 U	0.00047	<0.005		<0.0001	<0.005	0.0224	0.0302	<0.01	0.0093 J	<0.01	<0.005	<0.005	<0.005	<0.01	0.00043	0.183	0.000037 J
	P93A-ROX-102611	10/26/2011		39.43	NE	<0.005	<0.005	<0.01	<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	48.17 - 63.17	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
P-93B	P93B-ROX_012611	1/26/2011	74.60 - 76.60	41.03	NE	<0.0053	<0.0053	<0.011	<0.0053	<0.0053	<0.0053		<0.0053	<0.0053		<0.0053	<0.011	<0.011	0.00069 J J	<0.0053		<0.0053	<0.011	<0.0053	0.106	<0.0053
	P93B-ROX-050511	5/5/2011		41.96	NE	<0.001 U	<0.005	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005		<0.0001 UJ	<0.005	<0.005 UJ	<0.0002 UJ	<0.01	<0.01	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	0.000017 J J	0.0933	<0.0001
	P93B-ROX-081811	8/18/2011		39.44	NE	<0.00077 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	0.116	<0.0001
	P93B-ROX-102611	10/26/2011		39.48	NE	<0.0052	<0.0052	<0.01	<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		44.98	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		44.98	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	74.60 - 76.60	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
P-93C	P93C-ROX_012611	1/26/2011	94.26 - 96.26	40.91	NE	<0.0051	<0.0051	<0.01	<0.0051	<0.0051	<0.0051		<0.0051	<0.0051		<0.0051	<0.01	<0.01	<0.01 UJ	<0.0051		<0.0051	<0.01	<0.0051	0.0166	<0.0051
	P93C-ROX-050611	5/6/2011		41.84	NE	<0.0011 U	<0.005	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005		<0.0001 UJ	<0.005	<0.005 UJ	0.00009 J J	<0.01	<0.01	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	<0.00005 UJ	0.0144	<0.0001
	P93C-ROX-081811	8/18/2011		39.32	NE	<0.00064 U	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.000033 U	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	0.0046 J	<0.0001
	P93C-ROX-102611	10/26/2011		39.36	NE	<0.0052	<0.0052	<0.01	<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	94.26 - 96.26	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

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
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[6]	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
			Screening Values (mg/L)			0.7 [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]		0.0035 [2]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
P-93D	P93D-ROX-050511	5/5/2011	125.75 - 127.75	41.96	NE	<0.0011 U	<0.005	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005		<0.0001 UJ	<0.005	<0.005 UJ	0.000045 J J	<0.01	<0.01	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	<0.00005 UJ	<0.005	<0.0001
	P93D-ROX-081811	8/18/2011		39.46	NE	<0.0011 U	<0.005	<0.01	<0.000023 U	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.000042 U	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	0.000021 J
	P93D-ROX-102711	10/27/2011		39.59	NE	<0.005	<0.005	<0.01	<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	125.75 - 127.75	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
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	32.67 - 52.67	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
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					0.00043					0.0105 J	0.0142								0.00073		<0.000044 U
	ROST3-MW-ROX-100913	10/9/2013	37.81 - 47.81	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
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	<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	34.95 - 44.95	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

TABLE 3
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[6]	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
					Screening Values (mg/L)	0.7 [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]		0.0035 [2]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
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		41.0	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	46.46 - 72.46	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

Notes:

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

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

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

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

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

[6] The laboratory was has been requested to perform a library search in all samples for indene, which is reported as a Tentatively Identified Compound (TIC), when identified.

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

LABORATORY QUALIFIERS

B = Target analyte or common lab contaminant was identified in the method blank indicating possible field or lab contamination.

D = The result is from a diluted sample.

J = The analyte was detected below the reporting limit. Result is estimated.

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.

U = Result is non-detect.

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

EVS Descriptions and Assumptions:

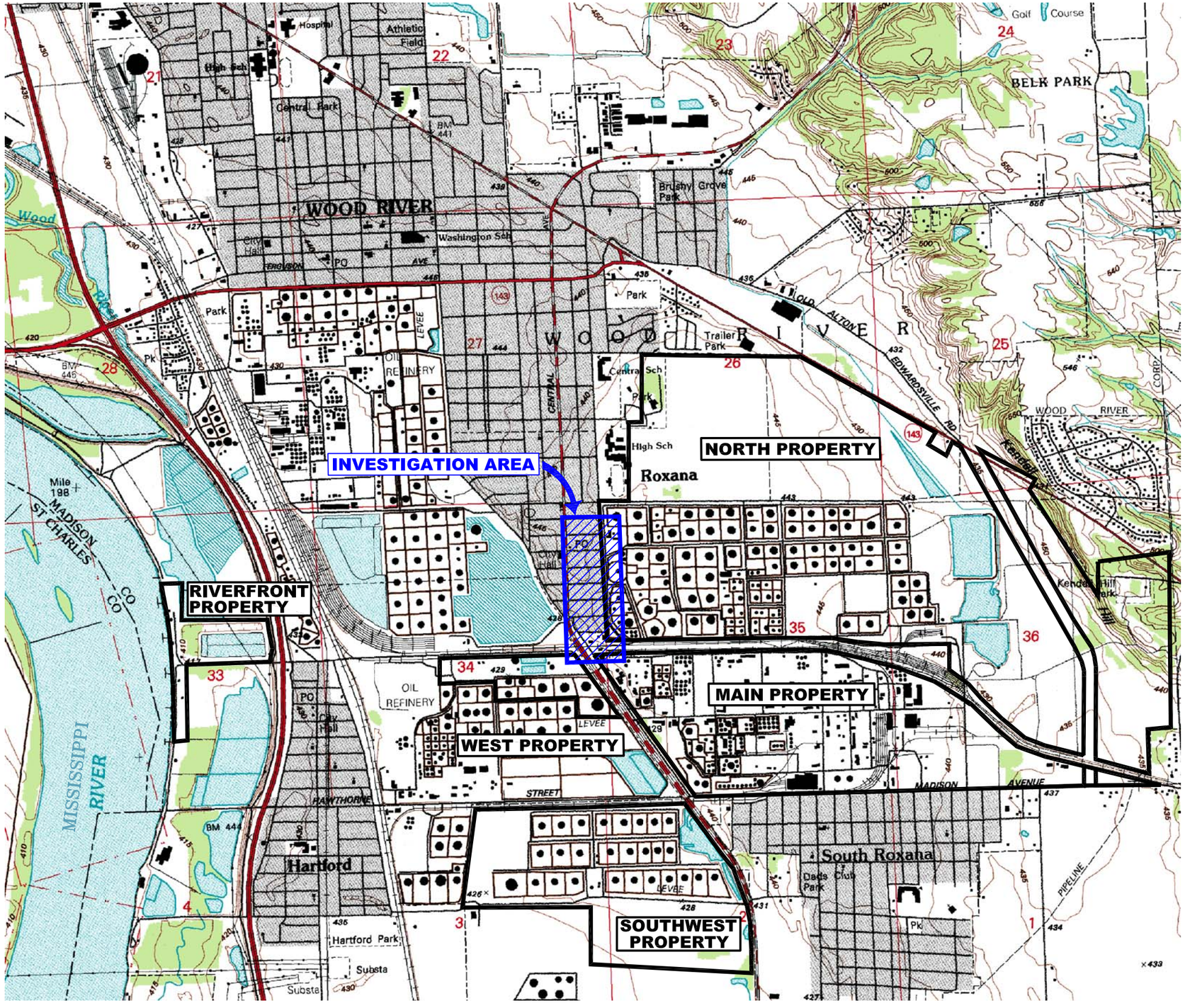
Plan View Model Output – The data input for the plan view model was not limited by depth and was modeled in two dimensions (2D). Regardless of sample depth, benzene concentrations were modeled on a flat horizontal plane.

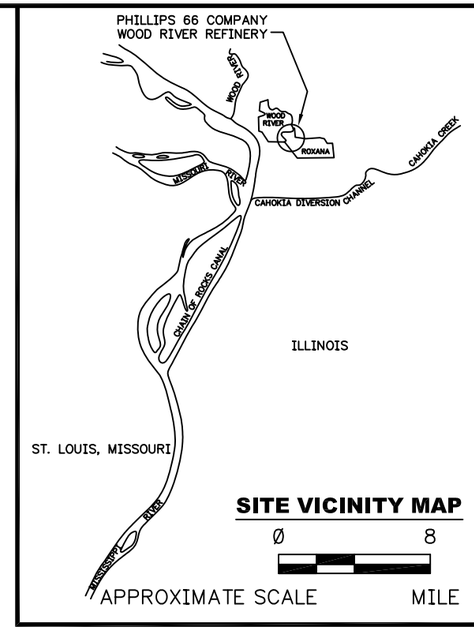
Inward Kriging / Boundary Cut-off – This method of Kriging limits the horizontal extent of data modeling to the extent of the data on the x/y plane in a convex hull.

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

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

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





LEGEND

WOOD RIVER REFINERY PROPERTY BOUNDARY

INVESTIGATION AREA

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

CONTOUR INTERVAL = 5 FT

Ø 2000

APPROXIMATE SCALE MILE

N

SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562850
URS		
DRN. BY: djd DSGN. BY: djd CHKD. BY: b3	4Q13 Investigation Area Location Map	FIG. NO. 1

File: \\SG868K03\PROJECTS\ENVIRONMENTAL\SHELL OIL PRODUCT US\SHELL OIL PRODUCTS US 2013\21562850 – ROXANA\21562850–4_GROUNDWATER\QUARTERLY MONITORING\4Q13\FIGURES\FIG 1 INVESTIGATION AREA LOCATION MAP.DWG Last edited: 12/19/13 ● 3:29 p.m. ● WIC–ST.LOUIS

File: P:\ENVIRONMENTAL\SHELL OIL PRODUCT US\SHELL OIL PRODUCTS US 2013\21562850 – ROXANA\21562850-4_GROUNDWATER\QUARTERLY MONITORING\4Q13\FIGURES\FIGURE 2 GROUNDWATER MONITORING WELL SAMPLING LOCATIONS.DWG Last edited: DEC. 04, 13 @ 10:07 a.m. by: david_deguire

LEGEND

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

NOTE:
* INDICATES PERCHED GROUNDWATER MONITORING WELLS.

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

T-1
PZ-1(101)
PZ-1(85)
MW-9
MW-10
P-55
ROST-4-PZ(A)
ROST-4-PZ(B)
ROST-4-PZ(C)
ROST-4-PZ(D)
ROST-4-PZ(E)
ROST-4-PZ(F)
ROST-4-PZ(G)
ROST-4-PZ
ROST-3-MW
P-60-S
P-60-12
*P-60-12S
P-68
P-60-13
*P-60-13S
A-28
T-24
A-33
MW-11
*ROST-5-PZ
P-54
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
MW-13
MW-6A
MW-6B
MW-6C
MW-6D
P-66
P-75
MW-14
P-114

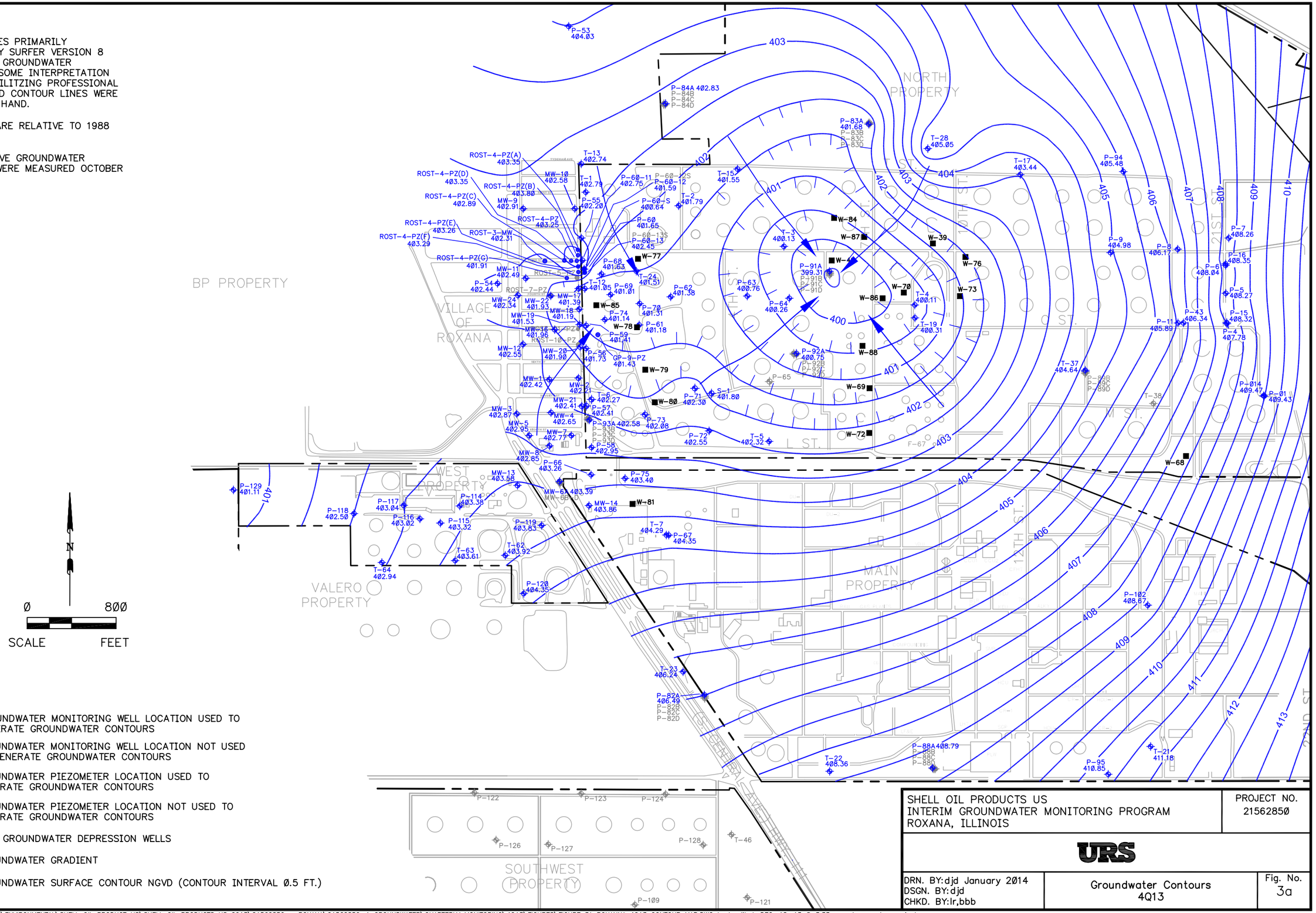
Ø 200
SCALE FEET
N

SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562850
URS		
DRN. BY:djd January 2014 DSGN. BY:lr CHKD. BY:b3	4Q13 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 UTILITZING PROFESSIONAL JUDGMENT AND CONTOUR LINES WERE MODIFIED BY HAND.

2) ELEVATIONS ARE RELATIVE TO 1988 USGS DATUM.

3) COMPREHENSIVE GROUNDWATER ELEVATIONS WERE MEASURED OCTOBER 1–4, 2013.



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 Ø.5 FT.)

SHELL OIL PRODUCTS US
INTERIM GROUNDWATER MONITORING PROGRAM
ROXANA, ILLINOIS

PROJECT NO. 21562850

URS

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

Groundwater Contours 4Q13

Fig. No. 3a

File: \\S0868K03\PROJECTS\ENVIRONMENTAL\SHELL OIL PRODUCT US\SHELL OIL PRODUCTS US 2013\21562850 – ROXANA\21562850-4_GROUNDWATER\QUARTERLY MONITORING\4Q13\FIGURES\FIGURE 3A ROXANNA 4Q13 CONTOUR MAP.DWG Last edited: DEC. 18, 13 @ 3:33 p.m. by: wendy_pennington

File: \\S0868K03\PROJECTS\ENVIRONMENTAL\SHELL OIL PRODUCT US\SHELL OIL PRODUCTS US 2013\21562850 – ROXANA\21562850-4_GROUNDWATER\QUARTERLY MONITORING\4Q13\FIGURES\FIGURE 3B ROXANNA 4Q13 CONTOUR MAP.DWG Last edited: DEC. 18, 13 @ 3:37 p.m. by: wendy_pe

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 OCTOBER 1–4, 2Ø13.

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

T-1 402.74
PZ-1(101) PZ-1(85)
MW-10 402.58
MW-9 402.91
403
ROST-4-PZ(A) 403.35
P-55 402.20
ROST-4-PZ 403.25
ROST-4-PZ(B) 403.80
P-60-11 402.75
ROST-4-PZ(C) 402.89
ROST-4-PZ(D)
ROST-3-MW 402.46
ROST-4-PZ(E) 403.26
P-60 401.65
P-60-S
P-60-12 401.59
P-60-12S
W–77
A–28
MW-11 402.49
ROST-4-PZ(F) 403.29
P-60-13
P-60-13S
T-24 401.51
ROST-4-PZ(G) 401.91
P-68 401.63
P-54 402.44
ROST-5-PZ
MW-17 401.39
MW-22 401.93
T-12
P-69 401.01
FOURTH ST
ROST-7-PZ
MW-24 402.34
P-70 401.31
MW-18 401.19
W–85
A–27
P-74 401.14
P-59 401.41
MW-19 401.53
P-61 401.18
W–78
ROST-21-PZ
MW-16 401.96
GP-9-PZ 401.43
PZ-2(84) PZ-2(70.5)
ROST-10-PZ
MW-12 402.55
MW-20 401.90
P-56 401.73
MW-1 402.42
MW-2 402.21
W–79
402
T-6 402.27
MW-21 402.41
P-57 402.41
MW-4 402.65
MW-3 402.87
P-93A 402.58
P-93B
P-93C
P-93D
P-73 402.08
MW-5 402.95
MW-8 402.85
MW-7 402.77
403
P-58 402.95
P-66 403.26
P-75 403.40
403.39 MW-6A
MW-6B
MW-6C
MW-6D
MW-13 403.58
P-114
MW-14 403.86
W–81

Ø 200 SCALE FEET

N

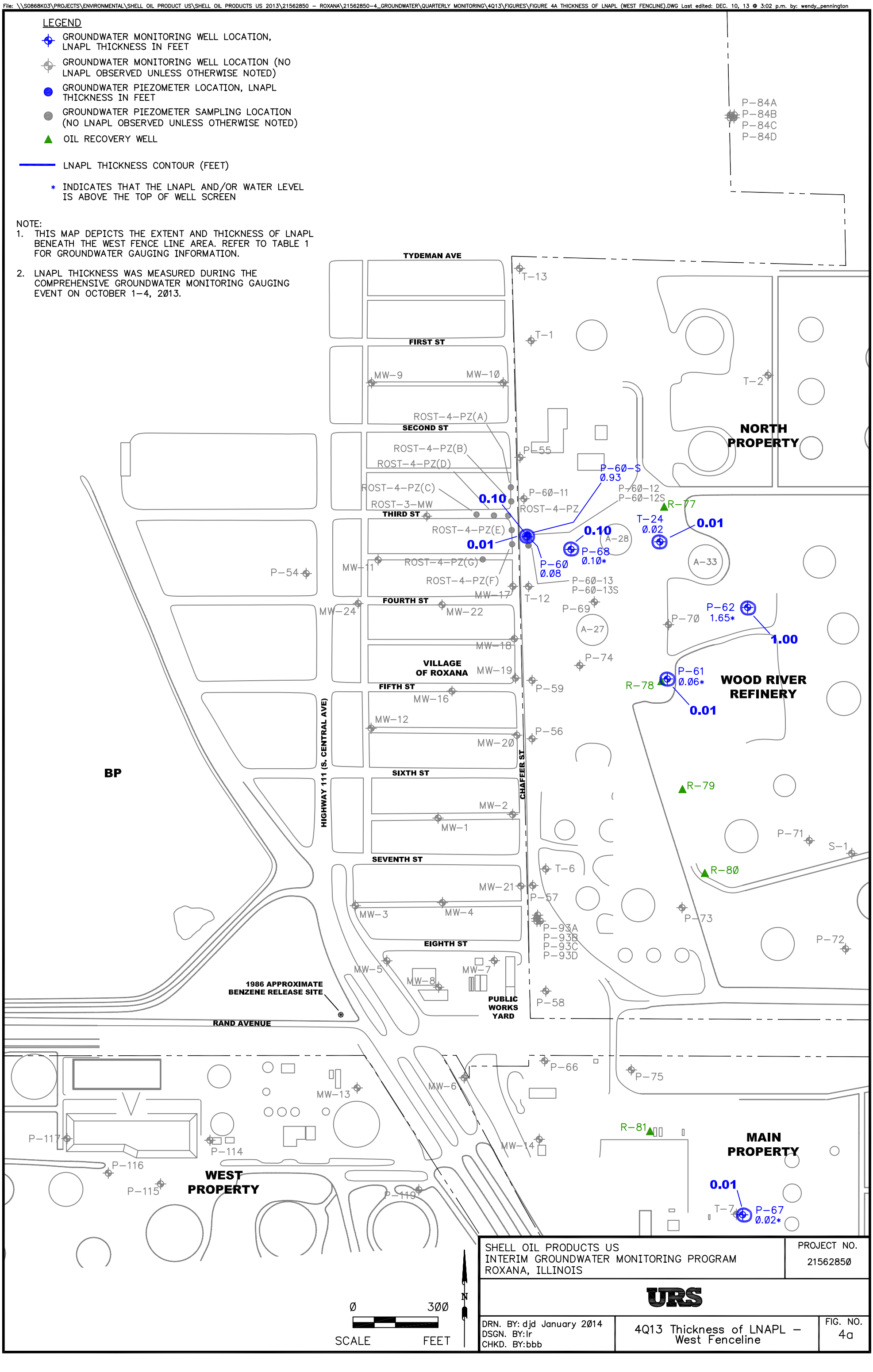
SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS	PROJECT NO. 21562850
URS	
DRN. BY:djd January 2014 DSGN. BY:lr CHKD. BY:bbb	Groundwater Contours 4Q13– West Fenceline
	FIG. NO. 3b

File: \\S0868K03\PROJECTS\ENVIRONMENTAL\SHELL OIL PRODUCT US\SHELL OIL PRODUCTS US 2013\21562850 – ROXANA\21562850-4_GROUNDWATER\QUARTERLY MONITORING\4Q13\FIGURES\FIGURE 4A THICKNESS OF LNAPL (WEST FENCLINE).DWG Last edited: DEC. 10, 13 @ 3:02 p.m. by: wendy_pennington

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 OCTOBER 1–4, 2013.



SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS	PROJECT NO. 21562850
URS	
DRN. BY: djd January 2014 DSGN. BY:lr CHKD. BY:bbb	4Q13 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 OCTOBER 1–4, 2013.

NORTH PROPERTY

BP PROPERTY

SHELL OIL COMPANY PROPERTY

WEST PROPERTY

MAIN PROPERTY

VILLAGE OF HARTFORD

VALERO PROPERTY

ILLINOIS TERMINAL RAILROAD

RAND AVE.

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

10TH ST. 12TH ST. 17TH ST. 21ST ST. 22ND ST.

ROUTE 1

REFERENCE: SHELL DRAWING E–36137–12

SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562850
URS		
DRN. BY: djd January 2014 DSGN. BY: lr CHKD. BY: bbb	4Q13 Thickness of LNAPL	FIG. NO. 4b

File: P:\ENVIRONMENTAL\SHELL OIL PRODUCT US\SHELL OIL PRODUCTS US 2013\21562850 – ROXANA\21562850–4 GROUNDWATER QUARTERLY MONITORING\4Q13\FIGURES\FIGURE 4B THICKNESS OF LNAPL (REFINERY).DWG Last edited: DEC. 10, 13 @ 10:09 a.m. by: david.deguire

File: P:\ENVIRONMENTAL\SHELL OIL PRODUCT US\SHELL OIL PRODUCTS US 2013\21562850 - ROXANA\21562850-4 GROUNDWATER\QUARTERLY MONITORING\4Q13\FIGURES\FIGURE 5 4Q13 GROUNDWATER ANALYTICAL RESULTS SUMMARY.DWG Last edited: DEC. 12, 13 @ 1:33 p.m. by: dqvid dequire

LEGEND

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

NOTES:

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

Analyte	Screening Criteria (mg/L)
Benzene	0.005
Ethylbenzene	0.7
MTBE	0.07
Naphthalene	0.14
Toluene	1
1,3,5-Trimethylbenzene	0.07
Xylenes (total)	10
bis(2-Ethylhexyl)phthalate	0.006
2,6-Dinitrotoluene	0.0
2-Methylnaphthalene	0.028
Phenol	0.1

3. J = THE TARGET ANALYTE WAS DETECTED BELOW THE REPORTING LIMIT AND THE RESULT IS ESTIMATED.
4. MULTIPLE RESULTS (e.g., 475/499) INDICATE DUPLICATE SAMPLES.
5. WELLS IDENTIFIED IN BLUE WITH NO DATA BOX INDICATE THE RESULTS DID NOT EXCEED SCREENING CRITERIA.

MW-9 MW-10 SECOND ST HIGHWAY 111 (S. CENTRAL AVE) THIRD ST FOURTH ST FIFTH ST SIXTH ST SEVENTH ST EIGHTH ST CHAFFEE ST RAND AVENUE

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)

MW-11 MW-17 MW-24 MW-22 MW-18 MW-19 MW-16 MW-12 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-54 P-55 P-60 P-68 P-69 P-70 P-74 P-59 P-61 P-56 P-57 P-93A P-93B P-93C P-93D P-58 P-66 P-75 P-114 T-12 T-24 T-6 A-28 A-33 A-27 P-73

NORTH PROPERTY

WOOD RIVER REFINERY

VILLAGE OF ROXANA

BP

WEST PROPERTY

MAIN PROPERTY

1986 APPROXIMATE BENZENE RELEASE SITE

Sample Location	P-55
Sampled 10/10/13	Result (mg/L)
Benzene	0.757
2-Methynaphthalene	0.0415

Sample Location	T-12
Sampled 10/15/13	Result (mg/L)
Benzene	2.02
Ethylbenzene	1.82
Naphthalene	0.215 J
2-Methylnaphthalene	0.0319

Sample Location	MW-22
Sampled 10/9/13	Result (mg/L)
Benzene	1.33/1.39
Ethylbenzene	3.79/3.97
Naphthalene	0.47/0.445
Toluene	6.02/6.32
1,3,5-Trimethylbenzene	0.357/0.343
Xylenes (total)	10.9/11.4
2-Methylnaphthalene	0.0468/0.0451

Sample Location	P-74
Sampled 10/14/13	Result (mg/L)
Benzene	1.55
1,3,5-Trimethylbenzene	0.0739

Sample Location	P-59
Sampled 10/10/13	Result (mg/L)
Benzene	14.7
Ethylbenzene	3.19
Naphthalene	0.285
Toluene	2.89
1,3,5-Trimethylbenzene	0.273
2-Methylnaphthalene	0.0305

Sample Location	P-56
Sampled 10/10/13	Result (mg/L)
Benzene	0.14
Ethylbenzene	1.58
Naphthalene	0.156
1,3,5-Trimethylbenzene	0.0714
2-Methylnaphthalene	0.03

Sample Location	MW-12
Sampled 10/7/13	Result (mg/L)
Pentachlorophenol	0.0018 J J

Sample Location	MW-2
Sampled 10/8/13	Result (mg/L)
Benzene	0.0139
Ethylbenzene	0.942
1,3,5-Trimethylbenzene	0.174

Sample Location	P-57
Sampled 10/14/13	Result (mg/L)
Benzene	288
Ethylbenzene	1.1
MTBE	0.107
Naphthalene	0.206
1,3,5-Trimethylbenzene	0.12
2-Methylnaphthalene	0.0324
Phenol	0.202

Sample Location	MW-4
Sampled 10/16/13	Result (mg/L)
Benzene	1.7

Sample Location	P93A	P93B	P93C
Sampled 10/11/13, 10/16/13	Result (mg/L)	Result (mg/L)	Result (mg/L)
Benzene	197	180/187	1.4

Sample Location	MW-7
Sampled 10/16/13	Result (mg/L)
Benzene	553

Sample Location	P-58
Sampled 10/14/13	Result (mg/L)
Benzene	647
Ethylbenzene	1.53
Naphthalene	0.234
1,3,5-Trimethylbenzene	0.131
bis(2-Ethylhexyl)phthalate	0.0099
2-Methylnaphthalene	0.0628
Phenol	0.213

Sample Location	MW-8
Sampled 10/16/13	Result (mg/L)
Benzene	360/351
Phenol	0.0996/0.108

Sample Location	P-66
Sampled 10/10/13, 11/7/13	Result (mg/L)
Benzene	0.0646 / 0.03
MTBE	0.085 / 0.0528

Sample Location	MW-6B
Sampled 10/7/13	Result (mg/L)
2,6-Dinitrotoluene	0.0224

SCALE Ø 200 FEET

N

SHELL OIL PRODUCTS US
INTERIM GROUNDWATER MONITORING PROGRAM
ROXANA, ILLINOIS

PROJECT NO. 21562850

URS

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

4Q13 Groundwater Monitoring Well Analytical Exceedances

FIG. NO. 5

File: \\S0868K03\PROJECTS\ENVIRONMENTAL\SHELL OIL PRODUCT US\SHELL OIL PRODUCTS US 2013\21562850 – ROXANA\21562850-4_GROUNDWATER\QUARTERLY MONITORING\4Q13\FIGURES\FIGURE 6 DISSOLVED PHASE BENZENE CONCENTRATIONS IN GROUNDWATER.DWG Last edited: DEC. 10, 13 @ 3:01 p.m. by: wendy_penr

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)

LNAPL THICKNESS WAS MEASURED DURING THE COMPREHENSIVE GROUNDWATER MONITORING GAUGING EVENT ON OCTOBER 1–4, 2013. REFER TO TABLE 1 FOR GROUNDWATER GAUGING INFORMATION.

NOTES:

1. IMAGES GENERATED UTILIZING CTECH ENVIRONMENTAL VISUALIZATION SYSTEM MODELING SOFTWARE. CONCENTRATIONS BETWEEN KNOWN DATA POINTS (E.G. GROUNDWATER MONITORING WELLS) ARE INTERPOLATIONS AND EXTRAPOLATIONS OF THE MEASURED DATA. SOME INTERPRETATION WAS COMPLETED UTILIZING PROFESSIONAL JUDGEMENT AND CONTOUR LINES WERE MODIFIED BY HAND.
2. ALL RESULTS SHOWN IN mg/L.
3. ANALYTICAL REPORTING LIMITS ARE SHOWN FOR SAMPLES WITH NON-DETECT RESULTS (e.g., <0.0005 mg/L).
4. J = THE TARGET ANALYTE WAS DETECTED BELOW THE REPORTING LIMIT AND THE RESULT IS ESTIMATED.
   U = RESULTS IS NON-DETECT.
5. NON-DETECT VALUES ARE MODELED AT HALF THE REPORTING LIMIT.
6. MULTIPLE RESULTS (e.g. 360/351) INDICATE DUPLICATE SAMPLES.

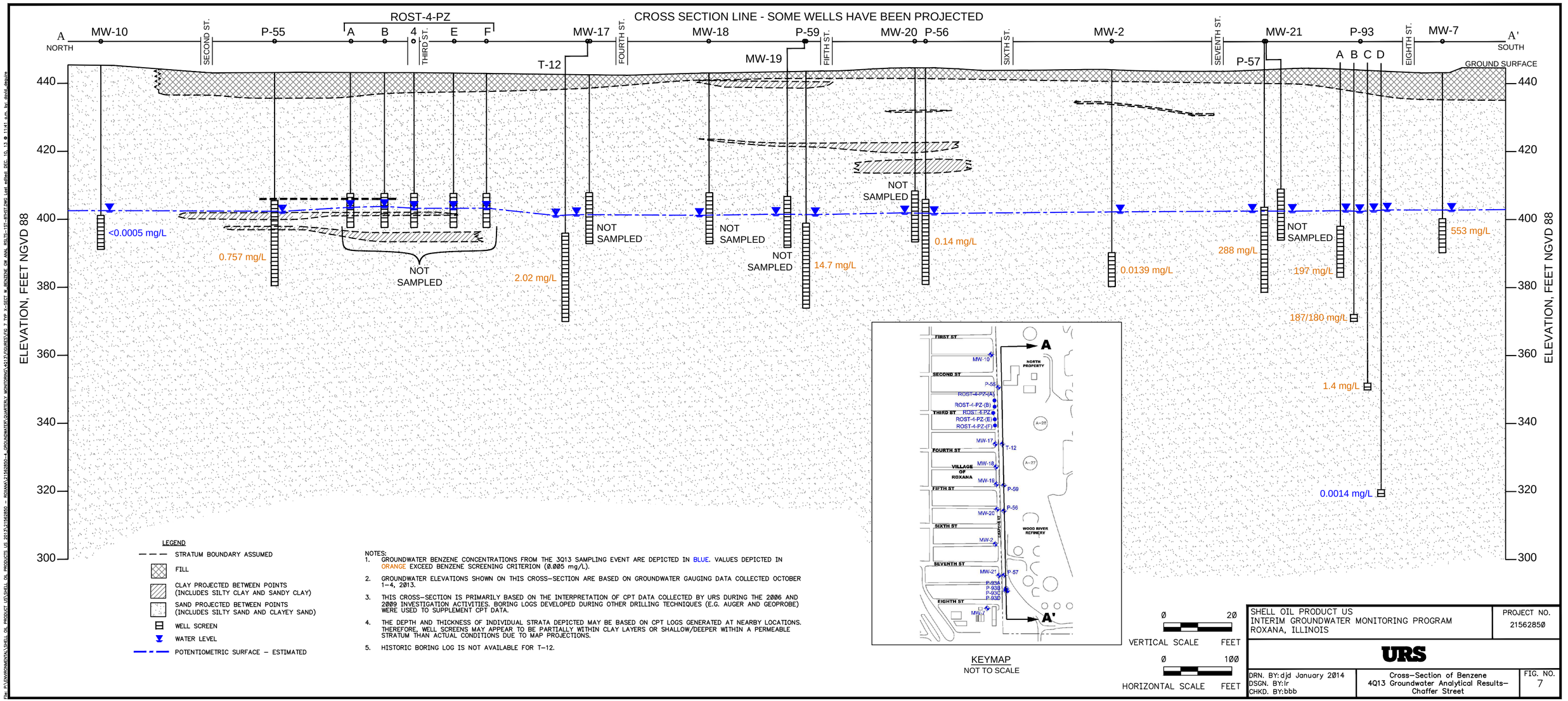
SECOND ST
THIRD ST
FOURTH ST
FIFTH ST
SIXTH ST
SEVENTH ST
EIGHTH ST
CHAFFER ST
HIGHWAY 111 (S. CENTRAL AVE)
VILLAGE OF ROXANA
BP
NORTH PROPERTY
WOOD RIVER REFINERY
MAIN PROPERTY
WEST PROPERTY
PUBLIC WORKS YARD
1986 APPROXIMATE BENZENE RELEASE SITE
RAND AVENUE

MW-9 <0.0005
MW-10 <0.0005
P-55 0.757
P-60-11 0.10
ROST-4-PZ(A)
ROST-4-PZ(C) 0.00066
ROST-3-MW 0.0033
ROST-4-PZ
ROST-4-PZ(F)
ROST-4-PZ(G)
P-60 0.08
P-60-S 0.93
0.01
0.10
A-28
T-24 0.02
P-68 0.10*
MW-11 <0.0005
P-54 <0.0005
MW-17
T-12 2.02
P-69
P-70
A-27
MW-24 <0.0005
MW-22 1.33/1.39
MW-18
MW-19
P-59 14.7
P-74 1.55
0.01
P-61 0.06*
MW-16 <0.0005
MW-12 <0.0005
MW-20
P-56 0.14
MW-1 <0.0005
MW-2 0.0139
T-6
MW-21
P-57 288
MW-3 0.00057
MW-4 1.7
P-93A 197
P-93B 187/180
P-93C 1.4
P-93D 0.0014
MW-5 0.0016
MW-7 553
MW-8 360/351
P-58 647
MW-13 <0.0005
P-66 0.03
P-75
MW-6A <0.0005/<0.0005
MW-6B <0.0005
MW-6C <0.0005
MW-6D <0.0005
P-114 0.00074
MW-14 <0.0005
P-116
P-115
P-73

0.005 0.05 0.5 5.0 50.0 500.0

0 200
SCALE FEET
N

SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562850
URS		
DRN. BY: djd January 2014 DSGN. BY:nm/lr CHKD. BY:bbb	4Q13 Dissolved Phase Benzene Concentrations in Groundwater	FIG. NO. 6



File: P:\ENVIRO\ROXANA\SHELL OIL PRODUCT US\SHELL OIL PRODUCTS US 2013\21562850 - ROXANA\21562850-4_GROUNDWATER\QUARTERLY MONITORING\4Q13\FIGURES\FIG 7 TYP X-SECT W_BENZENE GW ANAL RESLTS-1ST-8THSTS.DWG Last edited: DEC. 10, 13 @ 11:41 a.m. by: david.dejuire

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

440 420 400 380 360 340 320 300

<0.0005/<0.0005 mg/L

<0.0005 mg/L

<0.0005 mg/L

<0.0005 mg/L

553 mg/L

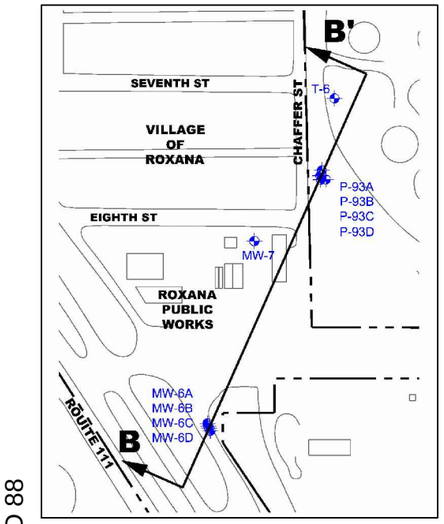
197 mg/L

187/180 mg/L

1.4 mg/L

0.0014 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

Ø 20
VERTICAL SCALE FEET

Ø 100
HORIZONTAL SCALE FEET

NOTES:
1. GROUNDWATER BENZENE CONCENTRATIONS FROM THE 3Q13 SAMPLING EVENT ARE DEPICTED IN BLUE. VALUES DEPICTED IN ORANGE EXCEED BENZENE SCREENING CRITERION (0.005 mg/L).
2. GROUNDWATER ELEVATIONS SHOWN ON THIS CROSS-SECTION ARE BASED ON GROUNDWATER GAUGING DATA COLLECTED OCTOBER 1-4, 2013.
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. 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. 21562850
URS	
DRN. BY: djd January 2014 DSGN. BY: lr CHKD. BY: wmp	Cross-Section of Benzene 4Q13 Groundwater Analytical Results- Roxana Public Works Yard
	FIG. NO. 8

File: P:\ENVIRONMENTAL\SHELL OIL PRODUCT US\SHELL OIL PRODUCTS US 2013\21562850 - ROXANA\21562850-4_GROUNDWATER\QUARTERLY MONITORING\4Q13\FIGURES\FIG 8 TYP X-SECT W_BENZENE GW ANAL RSLTS-HWY111-CHAFFER.DWG Last edited: DEC. 10, 13 @ 11:56 a.m. by: david_deguire

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW | PROJECT NUMBER: 21562850.03004 | FIELD PERSONNEL: B. Lehan / L. Rathnow

DATE: 10/3/13 | WEATHER: 80°F, partly cloudy

MONITORING WELL ID: MW-1 | SAMPLE ID: MW1-ROX-100313

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): ~~60.31~~ 59.13 ft
Depth to Water (btoc): 40.28 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): ~~49.98~~ 48.80 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 18.85 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 53.80 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
STABLE: (over 3 readings)					+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C
0 ~~40.30~~ 80	1008	40.30	clear	none	6.69	1,348	36	0.03	2092	19.56
800	1010	40.30	"	"	6.70	1,347	20	0.04	2915	19.15
2000	1013	40.30	"	"	6.71	1,346	9	0.03	2915	19.38
2800	1015	40.30	"	"	6.70	1,346	3	0.02	2915	19.31
4000	1019	40.30	"	"	6.71	1,343	-2	0.01	145.1	19.26
4800	1020	40.30	"	"	6.71	1,342	-6	0.00	105.2	19.23
5200	1022	40.30	"	"	6.71	1,341	-11	-0.01	511.9	19.21
6400	1025	40.30	"	"	6.71	1,338	-14	-0.01	45.36	19.22
7200	1029	40.30	"	"	6.71	1,337	-18	-0.02	270.4	19.19
8400	1030	40.31	"	"	6.71	1,336	-20	-0.02	69.09	19.19
9200	1032	40.31	"	"	6.71	1,335	-23	-0.02	67.91	19.17
10400	1035	40.30	"	"	6.71	1,334	-24	-0.02	120.9	19.16
11200	1037	40.30	"	"	6.71	1,332	-26	-0.03	120.1	19.10
12400	1040	40.30	"	"	6.71	1,332	-27	-0.02	9.263	19.07

Start Time: 1008 | Elapsed Time (min): 32 | Water Quality Meter ID & SN: TROLL 9500 - R24097

Stop Time: 1040 | Average Purge Rate (mL/min): 400 | Date Calibrated: 10/3/2013

SAMPLING DATA

Sample Date: 10/03/13 | Sample Time: 1045 | Lab Analysis: VOC, SVOC

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

VOA Vials. No Headspace ☒ Initials: [initials]

COMMENTS:

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

Total Purge Volume: 12400 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** B. Lehan / L. Rathnow

DATE: 10/8/13 **WEATHER:** 65°F Sunny

MONITORING WELL ID: MW-2 **SAMPLE ID:** MW2 - ROX - 100813

INITIAL DATA

Well Diameter): 2 in ~~60.20~~ YAR

Total Well Depth (btoc): ~~51.65~~ ft

Depth to Water (btoc): 41.73 ft

Depth to LNAPL/DNAPL (btoc): — ft

Depth to Top of Screen (btoc): ~~51.32~~ ft

Screen Length): 10 ft ~~49.87~~ YAR

Water Column Height (do not include LNAPL or DNAPL): 18.47 ft btoc

If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 54.87 ft btoc

If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
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

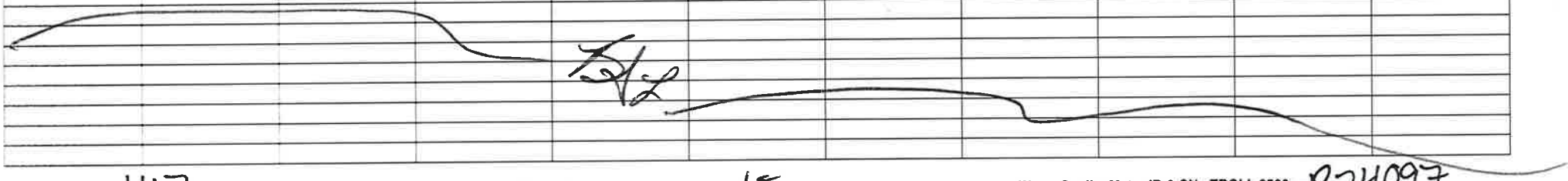
Wellbore PID/FID Reading: 127.8 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1117	41.74	clear	none	6.72	1.265	-94	0.05	26.25	20.26
1200	1120	41.74	clear	none	6.72	1.266	-96	-0.00	18.00	20.31
2400	1123	41.74	"	"	6.73	1.268	-97	-0.02	15.14	20.38
3200	1125	41.74	"	"	6.73	1.271	-98	-0.02	12.27	20.51
4400	1128	41.74	"	"	6.72	1.275	-98	-0.02	15.31	20.64
5200	1130	41.74	"	"	6.73	1.278	-99	-0.03	7.816	20.74
6000	1132	41.74	"	"	6.72	1.279	-99	-0.03	5.907	20.79



Start Time: 1117

Stop Time: 1132

Elapsed Time (min): 15

Average Purge Rate (mL/min): 400

Water Quality Meter ID & SN: TROLL 9500 - RZ4097

Date Calibrated: 10/8/13

SAMPLING DATA

Sample Date: 10/8/13

Sample Time: 1135

Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow

Sample Flow Rate (mL/min): 400

QA/QCSamples: none

VOA Vials. No Headspace ☒ Initials: BL

COMMENTS:

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

Total Purge Volume: 6000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** L. Rathnow, B. Lehan

DATE: 10/8/13 **WEATHER:** 80°F Sunny

MONITORING WELL ID: MW-3 **SAMPLE ID:** MW3-ROX-100813

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 45.00 ft
Depth to Water (btoc): 27.38 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 34.67 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 17.62 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 39.67 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

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

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	~~1308~~ 1308	27.40	Clear	None	6.93	1.341	-109	0.23	24.44	20.60
800	1310	27.40	Clear	none	6.92	1.367	-116	0.06	23.91	20.24
1600	1312	27.40	"	"	6.92	1.384	-120	-0.00	17.53	20.10
2400	1314	27.40	"	"	6.93	1.395	-122	-0.03	18.07	19.99
3600	1317	27.40	"	"	6.93	1.402	-123	-0.04	9.936	19.93

Start Time: 1308 Elapsed Time (min): 9 Water Quality Meter ID & SN: TROLL 9500 -- 24097

Stop Time: 1317 Average Purge Rate (mL/min): 400 Date Calibrated: 10/8/13

SAMPLING DATA

Sample Date: 10/8/13 Sample Time: 1320 Lab Analysis: VOC, SVOC

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

VOA Vials. No Headspace ☑ Initials: BL

COMMENTS:

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

Total Purge Volume: 3600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW PROJECT NUMBER: 21562850.03004 FIELD PERSONNEL: B. Lehan / L. Rathbone

DATE: 10/16/13 WEATHER: 55°F partly cloudy

MONITORING WELL ID: MW-4 SAMPLE ID: MW4-ROX-101613

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 56.39 ft
Depth to Water (btoc): 38.80 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 46.06 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 17.59 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 51.06 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
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: 6.0 ppm
Wellbore PID/FID Reading: 58.4 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	0901	38.80	cloudy	strong	6.69	1.536	-91	0.15	139.9	18.00
800	0903	38.80	"	"	6.72	1.531	-96	0.08	112.9	18.30
2000	0906	38.80	"	"	6.73	1.526	-98	0.05	71.49	18.48
2800	0908	38.80	"	"	6.75	1.521	-100	0.03	68.51	18.59
4000	0911	38.80	"	"	6.76	1.518	-101	0.02	47.28	18.61
4800	0913	38.80	"	"	6.77	1.516	-102	0.01	33.95	18.61
5600	0915	38.80	clear	"	6.77	1.512	-103	0.00	28.21	18.60
6800	0918	38.80	"	"	6.78	1.509	-103	0.01	21.38	18.56
7606	0920	38.80	"	"	6.79	1.508	-103	-0.00	16.53	18.61
8400	0922	38.80	"	"	6.78	1.507	-104	-0.01	15.30	18.64
9600	0925	38.80	"	"	6.79	1.505	-104	-0.01	16.40	18.60
10406	0927	38.80	"	"	6.79	1.506	-103	-0.01	12.17	18.63
11206	0929	38.80	"	"	6.79	1.505	-103	-0.02	8.668	18.67

Start Time: 0901 Elapsed Time (min): ~~29~~ 28 Water Quality Meter ID & SN: TROLL 9500 -- 24697

Stop Time: 0929 Average Purge Rate (mL/min): 400 Date Calibrated: 10/16/13

SAMPLING DATA

Sample Date: 10/16/13 Sample Time: 0935 Lab Analysis: VOC, SVOC

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

VOA Vials. No Headspace: ☒ Initials: BL

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 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** BLehan, LRathnow

DATE: 10/8/13 **WEATHER:** 80°F clear

MONITORING WELL ID: MW-5 **SAMPLE ID:** MW5-ROX-100813

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 44.30 ft
Depth to Water (btoc): 26.97 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 33.97 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 17.33 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 38.97 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

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

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1407	26.98	cloudy	none	6.85	1.108	-103	0.31	90.15	20.23
800	1409	26.98	"	"	6.97	1.112	-108	0.09	106.4	20.02
1600	1411	26.98	"	"	6.95	1.113	-109	0.06	79.16	19.84
2400	1413	26.98	"	"	6.84	1.111	-110	0.06	79.54	19.83
3200	1416	26.97	"	"	6.85	1.112	-110	0.07	56.36	19.82
4000	1418	26.97	"	"	6.95	1.114	-111	0.07	48.81	19.82
5200	1420	26.97	"	"	6.85	1.115	-111	0.06	30.27	19.80
6000	1422	26.97	clear	"	6.85	1.118	-112	0.03	23.82	19.75
6800	1424	26.97	"	"	6.85	1.120	-113	0.01	15.32	19.87
7600	1426	26.97	"	"	6.85	1.119	-113	0.01	12.83	19.83
8800	1429	26.97	"	"	6.85	1.116	-114	-0.00	11.24	19.95
9600	1431	26.97	"	"	6.86	1.115	-114	-0.01	9.551	19.97

Start Time: 1407 Elapsed Time (min): 24 Water Quality Meter ID & SN: TROLL 9500 - 24097

Stop Time: 1431 Average Purge Rate (mL/min): 400 Date Calibrated: 10/8/13

SAMPLING DATA

Sample Date: 10/8/13 Sample Time: 1435 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☑ Initials: —

COMMENTS:

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

Total Purge Volume: 9600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** B. Lehan / L. Rathnow

DATE: 10/7/13 **WEATHER:** 55°F cloudy

MONITORING WELL ID: MW-6A **SAMPLE ID:** MW6A-ROX-100713

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 45.16 ft
Depth to Water (btoc): 28.87 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 34.83 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 16.29 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 39.83 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

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

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1145	28.89	Cloudy	none	6.70	1.120	-110	0.51	58.16	18.77
800	1147	28.88	"	"	6.68	1.153	-112	0.16	67.44	18.84
2000	1150	28.89	"	"	6.67	1.175	-113	0.06	102.5	14.86
2800	1152	28.88	"	"	6.67	1.191	-115	0.00	104.2	18.92
4000	1155	28.88	"	"	6.68	1.211	-115	-0.03	93.00	18.95
4800	1157	28.88	"	"	6.67	1.239	-116	-0.04	92.94	19.02
6000	1200	28.88	"	"	6.67	1.260	-117	-0.05	77.09	19.06
~~7000~~	~~1203~~ 1203	28.88	"	"	6.67	1.296	-117	-0.06	53.09	19.19
8000	1205	28.88	"	"	6.67	1.307	-118	-0.07	44.65	19.21
8800	1207	28.88	"	"	6.67	1.313	-117	-0.07	37.55	19.31
9600	1209	28.88	"	"	6.67	1.316	-117	-0.08	30.71	19.36
10400	1211	28.88	"	"	6.67	1.320	-116	-0.08	24.55	19.42
11600	1214	28.89	Clear	"	6.67	1.323	-117	-0.08	19.41	19.49
12400	1216	28.89	"	"	6.67	1.325	-117	-0.09	17.70	19.50
13200	1218	28.86	"	"	6.67	1.327	-116	-0.09	15.30	19.50
14800	1220	28.88	"	"	6.67	1.329	-117	-0.09	12.27	19.50

Start Time: 1145 Elapsed Time (min): 42 Water Quality Meter ID & SN: TROLL 9500 -- 24097

Stop Time: Average Purge Rate (mL/min): 400 Date Calibrated: 10/7/13

SAMPLING DATA

Sample Date: 10/7/13 Sample Time: 1230 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: BP

COMMENTS:

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

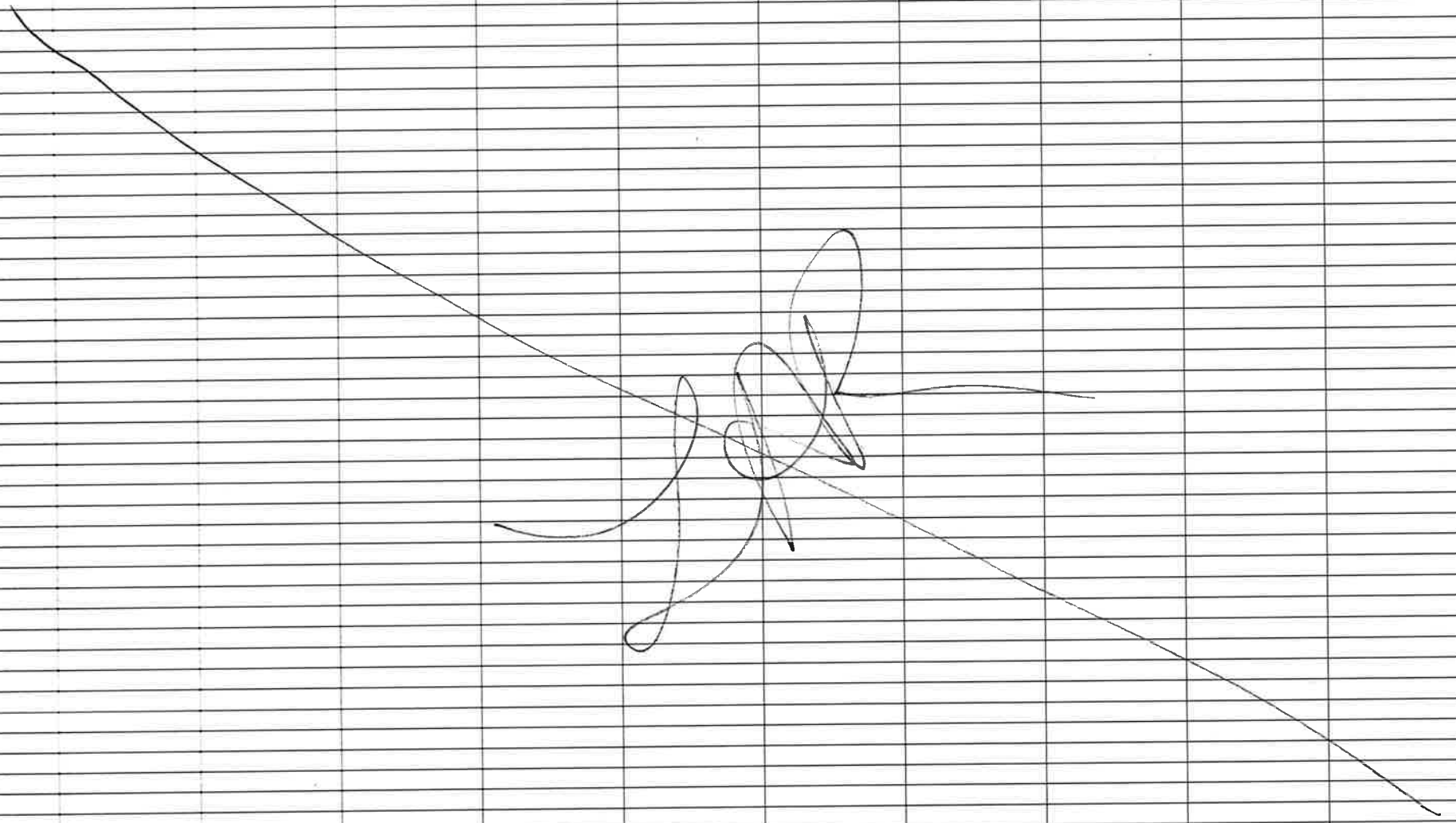
Total Purge Volume: 16800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4813 GW **PROJECT NUMBER:** 215628S0.03004 **FIELD PERSONNEL:** B. Lehan / L. Rathnow

DATE: 10/7/13 **MONITORING WELL ID:** MW-6A

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp. (°C)
15200	1223	28.88	Clear	none	6.67	1.330	-116	-0.09	11.20	19.51
16000	1225	28.88	"	"	6.67	1.335	-117	-0.09	10.14	19.48
16800	1227	28.88	"	"	6.67	1.339	-116	-0.10	9.079	19.52



LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** B. Lehan / L. Rathnow

DATE: 10/7/13 **WEATHER:** 55°F Cloudy

MONITORING WELL ID: MW-6B **SAMPLE ID:** MW6B-ROX-100713

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 69.38 ft
Depth to Water (btoc): 28.93 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): 40.45 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 66.55 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
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: 148.5 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
1047 0	1047	28.93	clear	none	6.99	1.377	-75	1.33	52.36	18.33
800	1049	28.93	"	"	6.92	1.403	-80	0.38	77.67	18.33
2000	1053	28.93	"	"	6.91	1.404	-84	0.12	74.30	18.31
2800	1054	28.93	"	"	6.90	1.410	-86	0.03	58.40	18.35
4000	1057	28.93	"	"	6.90	1.417	-87	-0.00	39.56	18.45
4800	1059	28.93	"	"	6.90	1.420	-88	-0.02	29.87	18.54
6000	1102	28.93	"	"	6.90	1.422	-88	-0.03	21.30	18.48
7200	1105	28.93	"	"	6.89	1.422	-88	-0.04	15.24	18.55
9000	1108	28.93	"	"	6.89	1.423	-88	-0.05	10.31	18.62
9800	1110	28.93	"	"	6.89	1.424	-88	-0.06	7.078	18.56

Start Time: 1047 Elapsed Time (min): 23 Water Quality Meter ID & SN: TROLL 9500 – 24097

Stop Time: 1110 Average Purge Rate (mL/min): 400 Date Calibrated: 10/7/13

SAMPLING DATA

Sample Date: 10/7/13 Sample Time: 1115 Lab Analysis: VOC, SVOC

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

VOA Vials. No Headspace ☒ Initials:

COMMENTS:

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

Total Purge Volume: 9800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** B. Lehan / L. Rathnow

DATE: 10/7/13 **WEATHER:** 55°F Cloudy

MONITORING WELL ID: MW-6C **SAMPLE ID:** MW6C-ROX-100713

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 90.28 ft
Depth to Water (btoc): 28.72 ft
Depth to LNAPL/DNAPL (btoc): N.A ft
Depth to Top of Screen (btoc): 84.95 ft
Screen Length): 5 ft

Water Column Height (do not include LNAPL or DNAPL): ~~87.45~~ 61.56 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 87.45 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
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

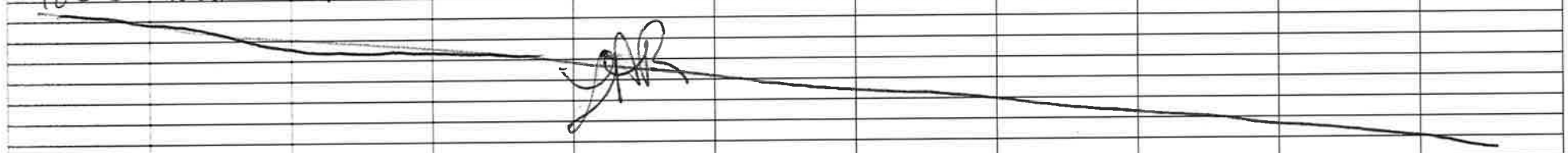
Volume of Flow Through Cell : 1119* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 3356 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 197.7 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1001	28.73	Cloudy	None	7.02	1.103	-104	1.45	64.27	17.29
1200	1004	28.73	"	None	7.00	1.143	-112	0.38	75.51	17.49
2400	1007	28.73	"	None	6.99	1.148	-116	0.11	60.02	17.58
3600	1010	28.72	"	"	6.99	1.155	-118	0.03	44.06	17.64
4400	1013	28.72	"	"	6.99	1.161	-120	0.00	33.24	17.71
6600	1015	28.72	Clear	"	6.99	1.165	-121	-0.01	15.35	17.76
7800	1018	28.72	"	"	6.99	1.166	-121	-0.03	11.78	17.83
9000	1021	28.72	"	"	6.99	1.168	-122	-0.03	8.603	17.83



Start Time: 1001 Elapsed Time (min): 20 Water Quality Meter ID & SN: TROLL 9500 -- 24097

Stop Time: 1021 Average Purge Rate (mL/min): 400 Date Calibrated: 10/7/13

SAMPLING DATA

Sample Date: 10/07/13 Sample Time: 1025 Lab Analysis: VOC, SVOC

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

VOA Vials. No Headspace ☒ Initials: [signature]

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 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** L. Rathnow, B. Lehan

DATE: 10/7/13 **WEATHER:** 55°F / cloudy

MONITORING WELL ID: MW-6D **SAMPLE ID:** MW6D-ROX-100713

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 110.05 ft
Depth to Water (btoc): 28.58 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): 81.47 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 107.22 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
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: 234.4 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	0907	28.60	~~Clear~~ cloudy	none	6.82	1.512	-80	0.13	350.7	17.35
1200 ~~800~~	0910	28.66	~~Clear~~ "	none	6.80	1.561	-108	0.05	324.3	17.40
2400 ~~1200~~	0912	28.60	"	"	6.93	1.579	-115	0.02	193.0	17.43
3600 ~~2000~~	0916	28.60	"	"	6.95	1.592	-119	-0.00	97.51	17.43
4800 ~~2800~~	0919	28.59	"	"	6.96	1.600	-120	-0.01	57.34	17.46
6000 ~~3600~~	0923	28.59	"	"	6.96	1.605	-122	-0.03	33.85	17.47
7200 ~~4400~~	0925	28.59	Clear	None	6.97	1.609	-123	-0.04	18.59	17.47
8400	0928	28.58	"	"	6.98	1.610	-123	-0.04	10.20	17.47
10000	0932	28.58	"	"	6.98	1.611	-124	-0.05	8.400	17.47

Start Time: 0907 Elapsed Time (min): 25 Water Quality Meter ID & SN: TROLL 9500 -- 24097

Stop Time: 0932 Average Purge Rate (mL/min): 400 Date Calibrated: 10/07/13

SAMPLING DATA

Sample Date: 10/7/13 Sample Time: 0935 Lab Analysis: VOC, SVOC

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

VOA Vials. No Headspace ☒ Initials:

COMMENTS:

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

Total Purge Volume: 10000 mL

53'

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW PROJECT NUMBER: 21562850.03004 FIELD PERSONNEL: B. Lehan & L. Rathnow

DATE: 10/16/13 WEATHER: 60°F partly cloudy

MONITORING WELL ID: MW-7 SAMPLE ID: MW7-ROX-1016-13

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 52.92 ft
Depth to Water (btoc): 40.64 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 42.92 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 12 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
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 AND Water Column Height and Screen Length are ⟨ 4ft,
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: 737.5 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1017	40.65	Cloudy	Strong	6.76	~~6.76~~ 1.467	~~1.467~~ -62	0.13 ~~6.35~~	~~6.15~~ 496	18.33
800	1019	40.65	"	"	6.76	1.465	-65	0.10	46.27	18.40
2000	1022	40.65	"	"	6.76	1.235	-67	0.13	40.20	18.47
2800	1024	40.65	"	"	6.77	1.355	-69	0.11	33.16	18.51
3600	1026	40.65	"	"	6.77	1.407	-71	0.10	24.07	18.58
4400	1028	40.65	"	"	6.78	1.419	-73	0.08	18.21	18.62
5600	1031	40.65	"	"	6.78	1.436	-74	0.06	13.92	18.79
6400	1033	40.65	"	"	6.78	1.442	-75	0.06	11.98	18.88
7600	1036	40.65	"	"	6.78	1.442	-76	0.05	9.416	18.89

Start Time: 1017
Stop Time: 1036

Elapsed Time (min): 19 ~~400 BL~~
Average Purge Rate (mL/min): 400 BL

Water Quality Meter ID & SN: TROLL 9500 -- 24097
Date Calibrated: 10/16/13

SAMPLING DATA

Sample Date: 10/16/13
Sample Time: 1040
Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow
Sample Flow Rate (mL/min): 400
QA/QCSamples: None
VOA Vials, No Headspace ☒: Initials: BL

COMMENTS:

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

Total Purge Volume: 7600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW PROJECT NUMBER: 21562850.03004 FIELD PERSONNEL: B. Lehan + L. Rathmow

DATE: 10/16/13 WEATHER: 60°F mostly cloudy

MONITORING WELL ID: MW-8 SAMPLE ID: MW8-ROX-101613

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 43.60 ft
Depth to Water (btoc): 31.59 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 33.60 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 12.01 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
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 AND Water Column Height and Screen Length are ⟨ 4ft,
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: 3729 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1117	31.59	Cloudy	Strong	6.58	2.176	-35	0.48	108.1	17.97
800	1119	31.59	"	"	6.55	2.194	-32	0.18	116.2	18.19
1600	1121	31.59	"	"	6.54	2.200	-33	0.08	95.14	18.30
2400	1124	31.59	"	"	6.54	2.205	-35	0.05	67.72	18.30
3200	1126	31.59	"	"	6.54	2.215	-37	0.03	46.70	18.34
4000	1128	31.59	"	"	6.53	2.218	-38	0.02	34.34	18.43
5200	1130	31.59	Clear	"	6.53	2.218	-40	0.01	25.07	18.44
6000	1132	31.59	"	"	6.53	2.220	-42	0.00	19.13	18.42
6800	1134	31.59	"	"	6.53	2.220	-43	-0.00	15.73	18.39
8000	1137	31.59	"	"	6.52	2.224	-44	-0.01	13.00	18.35
8800	1139	31.59	"	"	6.52	2.224	-45	-0.01	12.18	18.39
9600	1141	31.59	"	"	6.52	2.225	-46	-0.02	10.15	18.40
10400	1143	31.59	"	"	6.52	2.225	-46	-0.02	8.904	18.42

Start Time: 1117 Elapsed Time (min): 26 Water Quality Meter ID & SN: TROLL 9500 – 24097

Stop Time: 1143 Average Purge Rate (mL/min): 400 Date Calibrated: 10/15/13

SAMPLING DATA

Sample Date: 10/15/13 Sample Time: 1145 Lab Analysis: VOC, SVOC

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

VOA Vials. No Headspace ☒ Initials:

COMMENTS:

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

Total Purge Volume: 10,400 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** B. Lehan / L. Rathnow

DATE: 10/3/13 **WEATHER:** 80°F, Partly cloudy

MONITORING WELL ID: MW-9 **SAMPLE ID:** MW9-ROX-100313

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 56.78 ft
Depth to Water (btoc): 42.27 ft
Depth to LNAPL/DNAPL (btoc): NA ft
Depth to Top of Screen (btoc): 46.45 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 14.51 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 51.45 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

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

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1306	42.27	cloudy	none	6.77	1.427	-58	0.21	62.04	19.90
800	1308	42.27	cloudy	none	6.74	1.431	-64	0.14	58.86	19.97
2000	1311	42.27	cloudy	none	6.73	1.431	-69	0.09	526.3	19.96
2800	1313	42.27	"	"	6.73	1.431	-73	0.09	84.18	19.47
4000	1316	42.28	"	"	6.73	1.428	-76	0.06	135.1	19.31
4800	1318	42.27	"	"	6.72	1.426	-79	0.04	105.6	19.16
6000	1321	42.27	"	"	6.72	1.426	-81	0.03	82.64	19.07
6800	1323	42.27	"	"	6.72	1.427	-82	0.01	52.99	19.02
8000	1326	42.27	"	"	6.72	1.427	-83	-0.01	38.32	18.96
8800	1328	42.27	"	"	6.72	1.427	-84	-0.02	60.28	18.93
10000	1331	42.27	"	"	6.72	1.428	-85	-0.02	32.19	18.98
10800	1333	42.27	"	"	6.72	1.429	-85	-0.02	25.81	19.01
12000	1336	42.27	"	"	6.72	1.431	-86	-0.03	22.97	19.00
12800	1338	42.27	"	"	6.72	1.431	-87	-0.03	19.96	19.01
~~13000~~	~~1341~~	~~42.27~~	~~"~~	~~"~~	~~6.72~~	~~1.432~~	~~-86~~	~~-0.03~~	~~19.02~~	~~19.02~~
14000	1346	42.27	"	"	6.72	1.432	-86	-0.03	42.25	19.02

Start Time: 1306 Elapsed Time (min): 60 Water Quality Meter ID & SN: TROLL 9500 – R24097

Stop Time: 1406 Average Purge Rate (mL/min): 400 Date Calibrated: 10/3/13

SAMPLING DATA

Sample Date: 10/3/13 Sample Time: 1410 Lab Analysis: VOC, SVOC

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

VOA Vials. No Headspace ☒ Initials: [illegible]

COMMENTS:

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

Total Purge Volume: 24000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: ~~Project~~ Roxana 4Q13 GW **PROJECT NUMBER:** 215628S0.03004 **FIELD PERSONNEL:** B. Lehan / L. Rathnow

DATE: 10/3/13 **MONITORING WELL ID:** MW-9 MW9-ROX-100313

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp. (°C)
14800	1343	42.27	cloudy	None	6.71	1,433	-87	-0.03	31.66	18.98
16000	1346	42.27	"	"	6.71	1,434	-88	-0.04	36.54	18.87
18000	1348	42.27	"	"	6.72	1,435	-88	-0.04	90.67	18.80
19000	1351	42.27	"	"	6.72	1,436	-89	-0.04	41.73	18.67
19800	1353	42.27	"	"	6.72	1,438	-90	-0.04	21.55	18.61
20000	1356	42.27	"	"	6.72	1,439	-90	-0.04	15.51	18.59
20800	1358	42.27	"	"	6.72	1,437	-91	-0.05	12.52	18.56
21000	1401	42.27	"	"	6.72	1,438	-91	-0.05	18.34	18.54
23800	1403	42.27	"	"	6.72	1,439	-90	-0.05	11.52	18.52
23600	1405	42.27	"	"	6.71	1,439	-91	-0.05	12.20	18.47
24000	1406	42.27	"	"	6.71	1,440	-91	-0.05	7.908	18.47

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** B. Lehan / L. Rathbun

DATE: 10/3/13 **WEATHER:** 80°F, mostly cloudy

MONITORING WELL ID: MW-10 **SAMPLE ID:** MW10-ROX-100313

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 54.76 ft
Depth to Water (btoc): 42.38 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): 12.38 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 49.43 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ——— ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ——— ft btoc

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

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1505	42.41	Clear	none	6.93	1.397	-103	0.33	35.99	20.15
800	1507	42.40	"	"	6.92	1.398	-113	0.15	33.15	20.00
2000	1510	42.40	"	"	6.91	1.394	-118	0.09	33.85	19.81
2800	1513	42.40	"	"	6.91	1.390	-122	0.05	51.35	19.73
4000	1515	42.46	"	"	6.91	1.384	-125	0.04	50.30	19.72
4800	1517	42.40	"	"	6.92	1.380	-126	0.03	36.12	19.61
6000	1520	42.40	"	"	6.93	1.377	-127	0.01	20.70	19.60
6800	1523	42.39	"	"	6.92	1.376	-128	0.01	14.56	19.60
7600	1524	42.39	"	"	6.92	1.373	-129	0.00	11.73	19.59
8400	1526	42.39	"	"	6.92	1.373	-129	-0.00	8.912	19.56

Start Time: 1505 Elapsed Time (min): 21 Water Quality Meter ID & SN: TROLL 9500 - R24097

Stop Time: 1526 Average Purge Rate (mL/min): 400 Date Calibrated: 10/3/13

SAMPLING DATA

Sample Date: 10/3/13 Sample Time: 1530 Lab Analysis: VOC, SVOC

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

VOA Vials. No Headspace ☒ Initials:

COMMENTS:

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

Total Purge Volume: 8400 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** B. Lehan / L Rathbone

DATE: 10/7/13 **WEATHER:** 69°F Sunny

MONITORING WELL ID: MW-11 **SAMPLE ID:** MW11-ROX-100713

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 51.99 ft
Depth to Water (btoc): 39.95 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): 12.04 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 46.66 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ____ ft btoc

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

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1455	39.96	cloudy	none	6.73	1.662	-83	0.98	35.59	17.96
800	1457	39.96	"	"	6.72	1.672	-88	0.14	45.54	17.81
2000	1500	39.96	"	"	6.72	1.680	-91	0.03	60.40	17.79
2800	1502	39.96	"	"	6.72	1.680	-93	0.00	80.38	17.83
3600	1504	39.96	"	"	6.72	1.679	-94	-0.03	69.13	17.85
4400	1506	39.96	"	"	6.72	1.679	-95	-0.04	53.92	17.84
5200	1508	39.96	"	"	6.73	1.679	-96	-0.05	49.47	17.84
6400	1511	39.96	"	"	6.73	1.679	-96	-0.06	34.52	17.82
7200	1513	39.96	"	"	6.73	1.679	-97	-0.06	24.78	17.79
8000	1515	39.96	"	"	6.73	1.677	-97	-0.07	16.72	17.79
9200	1518	39.96	"	"	6.73	1.677	-98	-0.07	12.13	17.76
10000	1520	39.96	"	"	6.73	1.676	-98	-0.08	9.659	17.76

Start Time: 1455 Elapsed Time (min): 25 Water Quality Meter ID & SN: TROLL 9500 -- 24097

Stop Time: 1520 Average Purge Rate (mL/min): 400 Date Calibrated: 10/7/13

SAMPLING DATA

Sample Date: 10/7/13 Sample Time: 1525 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: BL

COMMENTS:

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

Total Purge Volume: 10000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW PROJECT NUMBER: 21562850.03004 FIELD PERSONNEL: B Lehan / L Rathnow

DATE: 10/7/13 WEATHER: 67°F Sunny

MONITORING WELL ID: MW-12 SAMPLE ID: MW12-ROX-100713

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 52.25 ft
Depth to Water (btoc): 40.22 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 41.92 ft
Screen Length): 10 ft

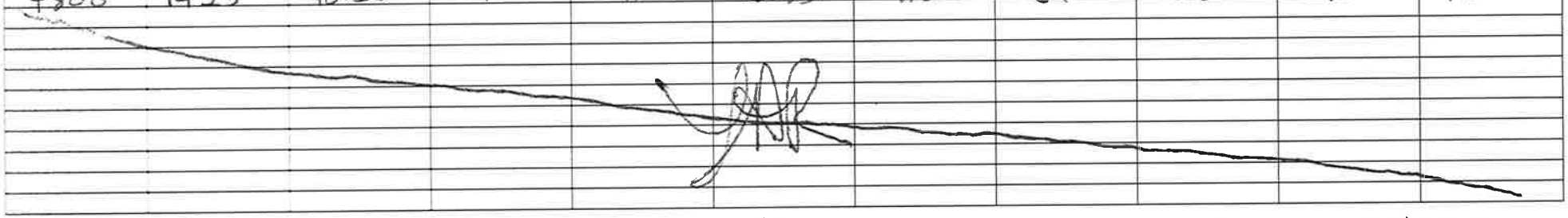
Water Column Height (do not include LNAPL or DNAPL): 12.03 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 46.92 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 890* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2670 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 10.4 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
			STABLE: (over 3 readings)		+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C
0	1413	40.22	clear	none	6.88	1004	55	0.26	16.92	18.99
800	1415	40.22	"	"	6.85	1.008	59	0.10	21.13	18.81
1600	1417	40.22	"	"	6.84	1.011	63	0.04	20.49	18.73
3200	1420	40.22	"	"	6.84	1.016	65	0.01	15.41	18.67
3600	1422	40.22	"	"	6.83	1.022	67	0.01	12.62	18.76
4800	1425	40.22	"	"	6.83	1.030	69	0.01	7.855	18.87



Start Time: 1413 Elapsed Time (min): 12 Water Quality Meter ID & SN: TROLL 9500 -- 24097

Stop Time: 1425 Average Purge Rate (mL/min): 400 Date Calibrated: 10/7/13

SAMPLING DATA

Sample Date: 10/7/13 Sample Time: 1430 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials:

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 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** B Lehan, L Rathnow

DATE: 10/9/13 **WEATHER:** 60F Sunny

MONITORING WELL ID: MW-13 **SAMPLE ID:** MW13-ROX-100913

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 35.82 ft
Depth to Water (btoc): 26.94 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 25.57 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 8.88 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is (4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 30.57 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are (4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 801* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2402 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 17.7 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
~~0 SL~~	0905	26.94	Cloudy	none	6.43	1.421	-71	0.09	75.88	19.00
800	0907	26.94	"	"	6.44	1.440	-76	0.04	58.25	19.27
1600	0909	26.94	"	"	6.46	1.458	-80	0.01	48.32	19.43
2400	0911	26.94	clear	"	6.47	1.479	-83	-0.01	35.00	19.50
3200	0913	26.94	"	"	6.49	1.501	-85	-0.02	33.74	19.56
4000	0915	26.94	"	"	6.50	1.501	-87	-0.02	25.36	19.57
4800	0917	26.94	"	"	6.51	1.508	-88	-0.03	21.15	19.57
5600	0919	26.94	"	"	6.52	1.513	-90	-0.04	19.48	19.58
6400	0921	26.94	"	"	6.52	1.513	-91	-0.02	15.23	19.57
7200	0924	26.94	"	"	6.53	1.521	-92	-0.03	13.18	19.59
8000	0926	26.94	"	"	6.53	1.525	-92	-0.03	10.34	19.61
8800	0928	26.94	"	"	6.54	1.527	-93	-0.04	7.874	19.63

Start Time: 0905 Elapsed Time (min): 23 Water Quality Meter ID & SN: TROLL 9500 - 24097

Stop Time: 0928 Average Purge Rate (mL/min): 400 Date Calibrated: 10/9/13

SAMPLING DATA

Sample Date: 10/9/13 Sample Time: 0930 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials:

COMMENTS:

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

9200 mL

Total Purge Volume: ~~8800~~ mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** B. Lehan, L. Rathnow

DATE: 10/10/13 **WEATHER:** 65°F partly cloudy

MONITORING WELL ID: MW-14 **SAMPLE ID:** MW14 - ROX - 101013

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 44.00 ft
Depth to Water (btoc): 30.80 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 33.42 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 13.20 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
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 AND Water Column Height and Screen Length are ⟨ 4ft,
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: 45.4 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
				STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C
0			clear	Moderate	6.67	1.255	-109	0.16	2.411	19.15
0	0920	30.81	clear	moderate	6.67	1.255	-109	0.16	2.411	19.15
800	0923	30.81	clear	moderate	6.68	1.255	-109	0.10	2.918	19.23
1600	0924	30.81	"	"	6.69	1.255	-109	0.07	3.797	19.26
2400	0926	30.81	"	"	6.69	1.257	-109	0.07	3.771	19.34
3200	0929	30.81	"	"	6.70	1.260	-109	0.05	2.223	19.35
4400	0931	30.81	"	"	6.78	1.262	-109	0.05	1.888	19.37

Start Time: 0920 Elapsed Time (min): 11 Water Quality Meter ID & SN: TROLL 9500 -- 24097

Stop Time: 0931 Average Purge Rate (mL/min): 400 Date Calibrated: 10/10/13

SAMPLING DATA

Sample Date: 0920 Sample Time: 0935 Lab Analysis: VOC, SVOC

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

VOA Vials. No Headspace ☒ Initials:

COMMENTS:

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

Total Purge Volume: 4400 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** B. Lehan / L. Rathnow

DATE: 10/8/13 **WEATHER:** 60°F Clear

MONITORING WELL ID: MW-16 **SAMPLE ID:** MW16 - ROX - 100813

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 47.31 ft
Depth to Water (btoc): 41.63 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 37.43 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 42.88 5.69 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 42.43 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

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

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	0859	41.64	brown	none	6.23	1.319	60	-0.07	282.9	18.18
800	0859	41.64	"	"	6.35	1.296	11	0.02	200.8	18.33
2000	0902	41.64	"	"	6.40	1.287	-7	0.08	169.0	18.45
2800	0904	41.64	"	"	6.43	1.287	-18	0.09	116.4	18.56
3600	0906	41.64	"	"	6.44	1.287	-24	0.06	76.8	18.64
4400	0908	41.64	"	"	6.46	1.286	-30	0.03	49.71	18.70
5600	0911	41.64	clear	"	6.47	1.285	-33	0.02	30.40	18.71
6400	0913	41.63	"	"	6.48	1.284	-36	0.01	21.25	18.73
7200	0915	41.63	"	"	6.48	1.283	-38	0.01	13.95	18.76
8400	0918	41.63	"	"	6.49	1.283	-40	0.00	11.49	18.70
9200	0920	41.63	"	"	6.49	1.283	-42	-0.00	8.130	18.69

Start Time: 0857 Elapsed Time (min): 23 Water Quality Meter ID & SN: TROLL 9500 - 24097

Stop Time: 0920 Average Purge Rate (mL/min): 400 Date Calibrated: 10/8/13

SAMPLING DATA

Sample Date: 10/8/13 Sample Time: 0925 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace? Initials:

COMMENTS:

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

Total Purge Volume: 9200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW PROJECT NUMBER: 21562850.03004 FIELD PERSONNEL: B. Lehan, L. Rathbone

DATE: 10/9/13 WEATHER: 72°F clear

MONITORING WELL ID: MW-22 SAMPLE ID: MW22 - ROX - 100913

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 48.13 ft
Depth to Water (btoc): 40.39 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 38.21 ft
Screen Length): 10 ft

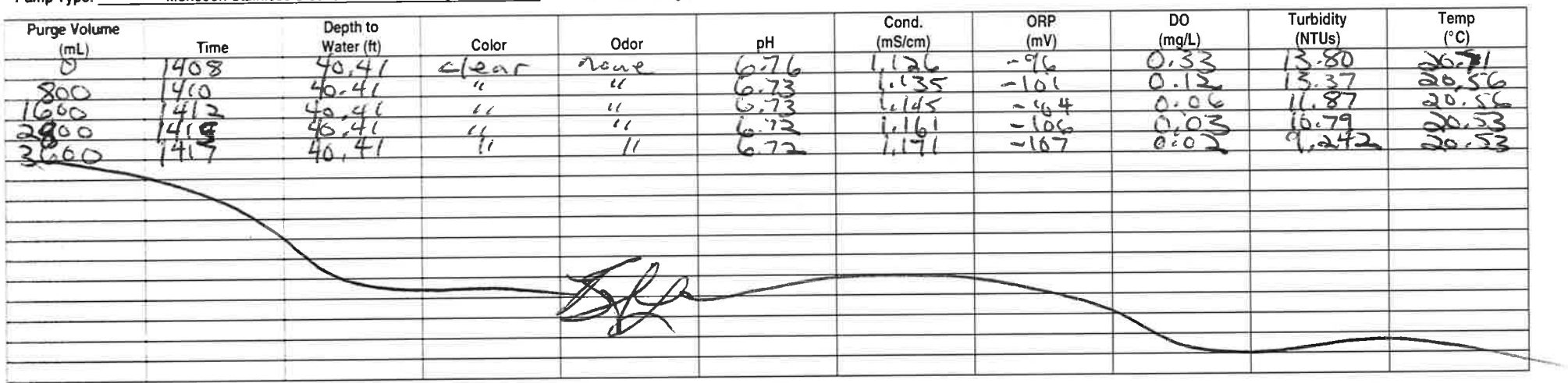
Water Column Height (do not include LNAPL or DNAPL): 7.74 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 43.21 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ____ ft btoc

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

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
STABLE: (over 3 readings)					+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C
0	1408	40.41	clear	none	6.76	1.126	-96	0.33	13.80	20.71
800	1410	40.41	"	"	6.73	1.135	-101	0.13	13.37	20.56
1600	1413	40.41	"	"	6.73	1.145	-104	0.06	11.87	20.56
2800	1415	40.41	"	"	6.72	1.161	-106	0.03	10.79	20.53
3600	1417	40.41	"	"	6.72	1.171	-107	0.02	9.242	20.53



Start Time: 1408 Elapsed Time (min): 9 Water Quality Meter ID & SN: TROLL 9500 -- 24097
Stop Time: 1417 Average Purge Rate (mL/min): 400 Date Calibrated: 10/9/13

SAMPLING DATA

Sample Date: 10/9/13 Sample Time: 1420 Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: Dup
VOA Vials. No Headspace ☒ Initials:

COMMENTS:

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

Total Purge Volume: 3600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW PROJECT NUMBER: 21562850.03004 FIELD PERSONNEL: B. Lehan, L. Rathmow

DATE: 10/9/13 WEATHER: 65°F Clear

MONITORING WELL ID: MW-24 SAMPLE ID: MW24-ROX-100913

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 49.14 ft
Depth to Water (btoc): 41.27 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 38.89 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 7.87 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 43.89 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
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 : 879* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2636 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 52.5 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1323	41.27	Cloudy	none	6.90	1.331	53	2.29	309.9	19.62
800	1325	41.27	"	"	6.83	1.351	60	1.89	197.8	18.97
1600	1327	41.27	"	"	6.79	1.362	64	1.73	93.30	18.71
2800	~~1334~~ 1330	41.27	"	"	6.78	1.368	67	1.69	61.55	18.62
3600	1332	41.27	"	"	6.77	1.369	69	1.67	33.58	18.66
4400	1334	41.27	"	"	6.76	1.371	71	1.69	20.90	18.63
5600	1337	41.27	"	"	6.76	1.370	73	1.65	12.52	18.64
6400	1339	41.27	"	"	6.75	1.371	74	1.62	9.316	18.59

Start Time: 1323 Elapsed Time (min): 16 Water Quality Meter ID & SN: TROLL 9500 – 24097

Stop Time: 1339 Average Purge Rate (mL/min): 400 Date Calibrated: 10/9/13

SAMPLING DATA

Sample Date: 10/9/13 Sample Time: 1345 Lab Analysis: VOC, SVOC

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

VOA Vials. No Headspace ☒ Initials:

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 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** B. Lehan / L. Ratnow

DATE: 10/8/13 **WEATHER:** 60°F Clear

MONITORING WELL ID: P-54 **SAMPLE ID:** P54-ROX-100813

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 63.00 ft
Depth to Water (btoc): 39.94 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 38.00 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 23.06 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 43.00 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
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 : 912* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2737 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	0957	39.95	Clear	None	6.83	1.426	51	3.29	24.13	17.85
800	0959	39.95	"	"	6.82	1.430	54	3.16	19.37	17.93
2000	1003	39.95	"	"	6.81	1.432	57	3.12	17.62	17.98
2800	1004	39.95	"	"	6.81	1.432	57	3.12	17.62	17.98
3600	1006	39.95	"	"	6.81	1.438	61	3.04	14.71	18.03
4800	1009	39.95	"	"	6.81	1.444	63	2.94	13.63	18.12
5600	1011	39.95	"	"	6.81	1.450	64	2.84	11.55	18.11
6800	1014	39.95	"	"	6.81	1.466	66	2.70	10.05	18.09
7600	1016	39.95	"	"	6.80	1.468	67	2.56	8.306	18.07
8800	1019	39.95	"	"	6.80	1.475	68	2.46	6.738	18.09

Start Time: 0957
Stop Time: 1019
Elapsed Time (min): ~~22~~ 22
Average Purge Rate (mL/min): 400
Water Quality Meter ID & SN: TROLL 9500 – 2k097
Date Calibrated: 10/8/13

SAMPLING DATA

Sample Date: 10/8/13
Sample Time: 1020
Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow
Sample Flow Rate (mL/min): 400
QA/QCSamples: none
VOA Vials. No Headspace ☒ Initials:

COMMENTS:

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

Total Purge Volume: 8800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** B. Lehaug, L. Rathnow

DATE: 10/10/13 **WEATHER:** 78°F cloudy

MONITORING WELL ID: P-55 **SAMPLE ID:** PSS-ROX-101013

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 50.68 ft
Depth to Water (btoc): 41.67 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): ~~40.85~~ ft
Screen Length): 10 ft 40.43 JAR

Water Column Height (do not include LNAPL or DNAPL): 9.01 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 45.43 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
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

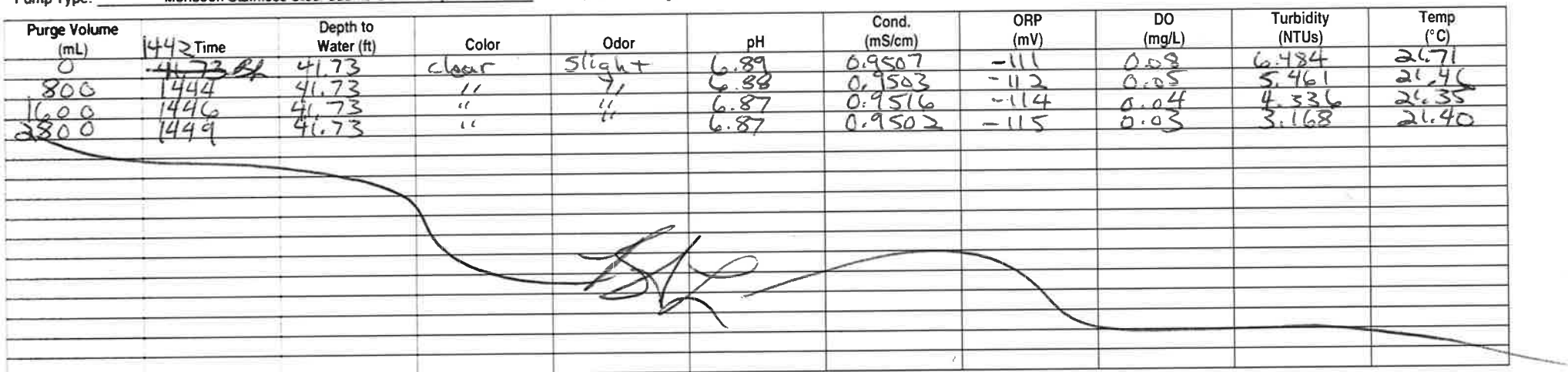
Volume of Flow Through Cell : 884* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2653 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 78.4 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	~~1432~~ 1442	41.73	clear	slight	6.89	0.9507	-111	0.08	6.484	21.71
800	1444	41.73	"	"	6.88	0.9503	-112	0.05	5.461	21.45
1600	1446	41.73	"	"	6.87	0.9516	-114	0.04	4.336	21.35
2800	1449	41.73	"	"	6.87	0.9502	-115	0.03	3.168	21.40



Start Time: 1442
Stop Time: 1449

Elapsed Time (min): 7
Average Purge Rate (mL/min): 400

Water Quality Meter ID & SN: TROLL 9500 -- 24097
Date Calibrated: 10/10/13

SAMPLING DATA

Sample Date: 10/10/13
Sample Method: Monsoon Pump / Low Flow
VOA Vials. No Headspace ☒ Initials:

Sample Time: 1455
Sample Flow Rate (mL/min): 400

Lab Analysis: VOC, SVOC
QA/QCSamples: Equipment Blank

COMMENTS:

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

Total Purge Volume: 2800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** B. Lehan, L. Rathnow

DATE: 10/10/13 **WEATHER:** 78°F Cloudy

MONITORING WELL ID: P-56 **SAMPLE ID:** P56 - ROX - 101013

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 65.82 ft
Depth to Water (btoc): 44.48 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 40.82 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 21.34 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is < 4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 53.32 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

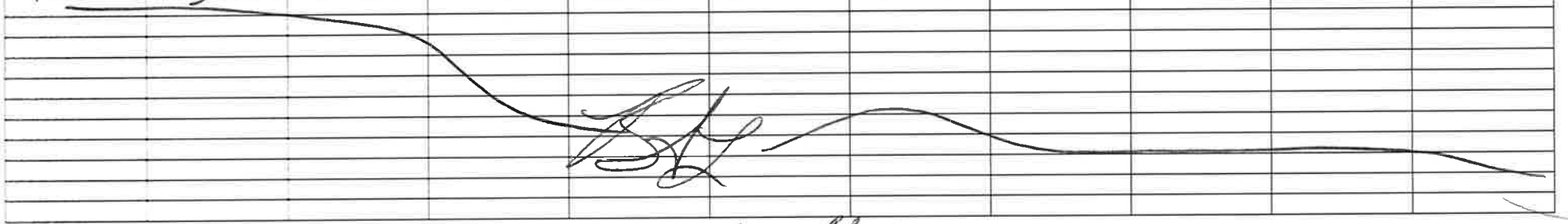
Volume of Flow Through Cell : 968* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2904 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1256	44.50	clear	moderate	6.65	1.312	-84	0.06	1.744	24.90
800	1258	44.50	"	"	6.64	1.318	-87	0.03	2.463	24.87
2000	1301	44.50	"	"	6.63	1.319	-89	0.01	5.376	24.92
2800	1303	44.50	"	"	6.63	1.327	-90	0.00	10.91	24.90
4000	1306	44.50	"	"	6.63	1.319	-91	0.01	1.794	24.88



Start Time: 1256
Stop Time: 1306

Elapsed Time (min): ~~13~~ 10
Average Purge Rate (mL/min): 400

Water Quality Meter ID & SN: TROLL 9500 - 24097
Date Calibrated: 10/10/13

SAMPLING DATA

Sample Date: 10/10/13
Sample Method: Monsoon Pump / Low Flow
VOA Vials. No Headspace ☒ Initials: [signature]

Sample Time: 1310
Sample Flow Rate (mL/min): 400

Lab Analysis: VOC, SVOC
QA/QCSamples: None

COMMENTS:

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

Total Purge Volume: 4000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** B. Lehan + L. Rathnow

DATE: 10/14/13 **WEATHER:** 65°F mostly cloudy

MONITORING WELL ID: P-57 **SAMPLE ID:** P57-ROX-101413

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 65.46 ft
Depth to Water (btoc): 44.38 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 40.46 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 21.08 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 52.96 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

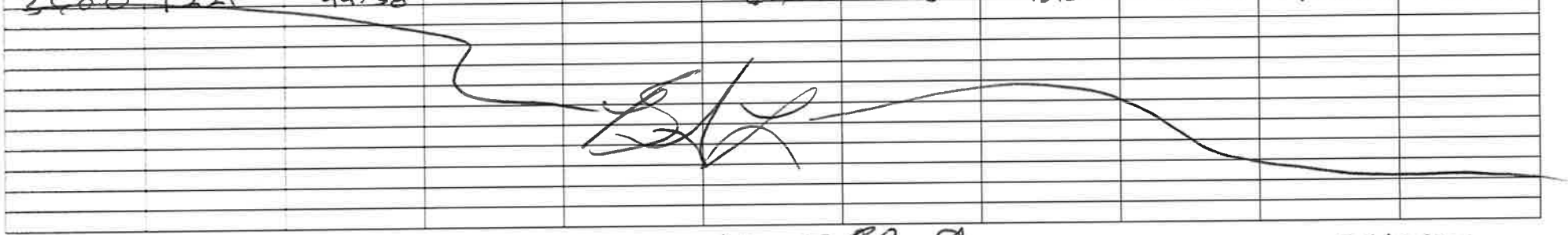
Volume of Flow Through Cell : 935* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2804 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1213	44.38	clear	Slight	6.59	1.272	-109	0.27	12.82	21.16
800	1214	44.38	"	"	6.59	1.281	-115	0.64	8.792	21.29
2000	1217	44.39	"	"	6.60	1.284	-117	-0.00	6.750	21.44
2800	1219	44.38	"	"	6.60	1.286	-119	-0.02	6.322	21.57
3600	1221	44.38	"	"	6.60	1.284	-120	-0.03	4.523	21.55



Start Time: 1212
Stop Time: 1221

Elapsed Time (min): ~~1225~~ 9
Average Purge Rate (mL/min): 400

Water Quality Meter ID & SN: TROLL 9500 - 24097
Date Calibrated: 10/14/13

SAMPLING DATA

Sample Date: 10/14/13
Sample Time: 1225
Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow
Sample Flow Rate (mL/min): 400
QA/QCSamples: none
VOA Vials. No Headspace ☒ Initials:

COMMENTS:

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

Total Purge Volume: 3600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** B. Lehan & L. Rathmow

DATE: 10/14/13 **WEATHER:** 71°F mostly cloudy

MONITORING WELL ID: P-58 **SAMPLE ID:** P58-ROX-101413

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 65.21 ft
Depth to Water (btoc): 42.19 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): 23.02 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 52.71 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
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

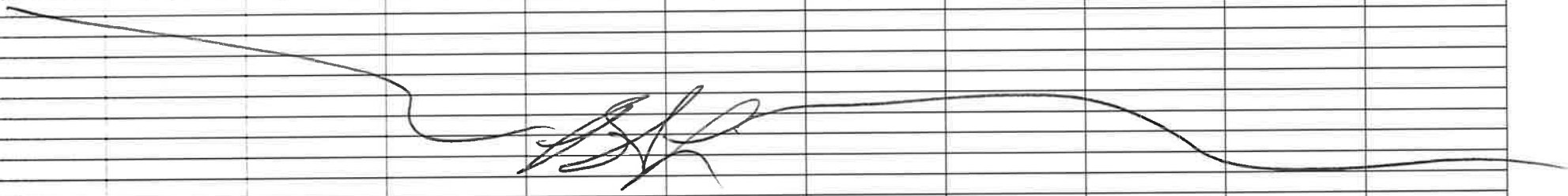
Volume of Flow Through Cell : 935* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2804 mL
Ambient PID/FID Reading: ~~13.5~~ 0.0 ppm
Wellbore PID/FID Reading: ~~0.0~~ 13.5 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0 ~~1407~~	1407	42.34	clear	strong	6.54	1.427	-75	0.24	6.860	19.59
800	1409	42.34	"	"	6.53	1.433	-79	0.10	6.404	19.59
2000	1412	42.34	"	"	6.53	1.435	-81	0.05	6.750	19.65
3800	1414	42.34	"	"	6.53	1.434	-83	0.03	7.033	19.66
4000	1417	42.34	"	"	6.52	1.430	-84	0.02	6.701	19.70



Start Time: 1407
Stop Time: 1417
Elapsed Time (min): 10
Average Purge Rate (mL/min): 400
Water Quality Meter ID & SN: TROLL 9500 – 24097
Date Calibrated: 10/14/13

SAMPLING DATA

Sample Date: 10/14/13
Sample Time: 1420
Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow
Sample Flow Rate (mL/min): 400
QA/QCSamples: none
VOA Vials, No Headspace ☒ Initials: [signature]

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 4Q13 GW PROJECT NUMBER: 21562850.03004 FIELD PERSONNEL: B. Lehay / L. Rathnow

DATE: 10/10/13 WEATHER: 78°F partly cloudy

MONITORING WELL ID: P-59 SAMPLE ID: P59-ROX-101013

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 72.91 ft
Depth to Water (btoc): 45.50 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 47.91 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 27.41 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
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 AND Water Column Height and Screen Length are ⟨ 4ft,
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

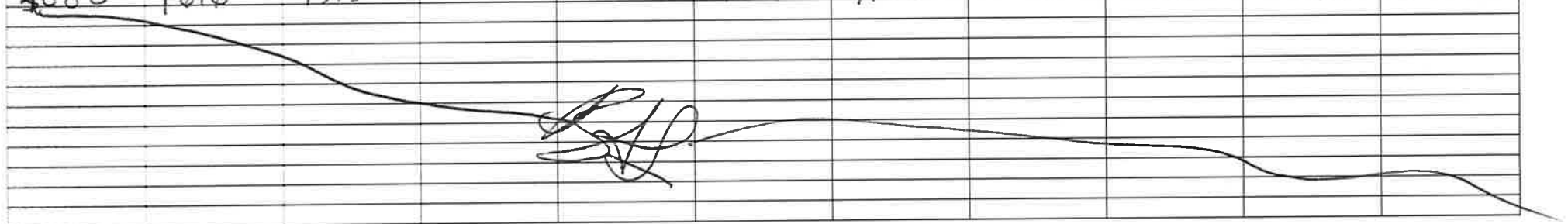
Volume of Flow Through Cell : 990* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2971 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 194.7 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1606	45.51	clear	Moderate	6.65	1.336	-90	0.04	7.318	20.54
800	1609	45.51	"	"	6.65	1.336	-90	0.04	7.318	20.54
1600	1610	45.50	"	"	6.63	1.339	-95	-0.01	12.25	20.51
2800	1613	45.50	"	"	6.63	1.317	-95	-0.01	5.921	20.23
4000	1616	45.50	"	"	6.63	1.318	-96	-0.02	4.956	20.31



Start Time: 1606
Stop Time: 1616

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

Water Quality Meter ID & SN: TROLL 9500 - 24097
Date Calibrated: 10/10/13

SAMPLING DATA

Sample Date: 10/10/13
Sample Time: 10/10/13
Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow
Sample Flow Rate (mL/min): 400
QA/QCSamples: none
VOA Vials. No Headspace ☒ Initials:

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 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** B. Lehan, L. Rathmon

DATE: 10/10/13 **WEATHER:** 65°F partly cloudy

MONITORING WELL ID: P-66 **SAMPLE ID:** P66-ROX-101013

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 59.72 ft
Depth to Water (btoc): 33.66 ft
Depth to LNAPL/DNAPL (btoc): —— ft
Depth to Top of Screen (btoc): 34.72 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 26.06 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 47.22 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
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: ~~1011.2~~ 101.2 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
STABLE: (over 3 readings)					+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C
0	1015	33.68	clear	Slight	6.49	1.450	-77	0.15	16.11	20.11
800	1017	33.68	"	"	6.47	1.443	-79	0.08	14.49	20.21
1600	1019	33.68	"	"	6.46	1.437	-80	0.04	13.86	20.13
2400	1021	33.68	"	"	6.46	1.435	-81	0.03	12.68	20.10
3600	1024	33.68	"	"	6.46	1.459	-82	0.02	13.42	20.11
4400	1026	33.68	"	"						

Start Time: 1015
Stop Time: 1024
Elapsed Time (min): 9
Average Purge Rate (mL/min): 400
Water Quality Meter ID & SN: TROLL 9500 – 24097
Date Calibrated: 10/10/13

SAMPLING DATA

Sample Date: 10/10/13
Sample Time: 1030
Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow
Sample Flow Rate (mL/min): 400
QA/QCSamples: none
VOA Vials. No Headspace ☒ Initials: [illegible]

COMMENTS:

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

Total Purge Volume: 3600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** D. Chace / B. Smith

DATE: 11-7-13 **WEATHER:** Sunny 50°F

MONITORING WELL ID: P-66 **SAMPLE ID:** PEW-ROX-110713

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 59.72 ft
Depth to Water (btoc): 34.54 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 34.72 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 25.18 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ≥4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 47.22 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ≥ 4ft,
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

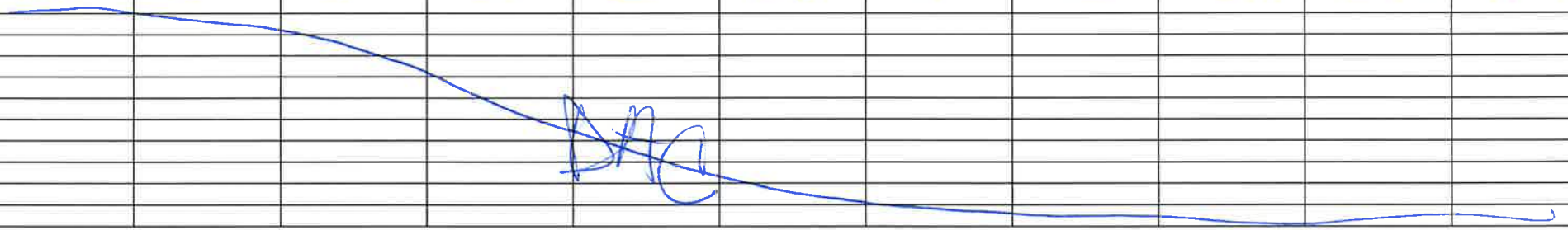
Volume of Flow Through Cell : 896* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2687 mL
Ambient PID/FID Reading: 0.3 ppm
Wellbore PID/FID Reading: 0.5 ppm

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	µS/cm ~~mS/cm~~ Cond.	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1517	34.55	clear	slight	6.25	1308	-89	0.03	15.06	19.83
800	1519				6.38	1321	-96	-0.02	21.51	19.79
1600	1521				6.40	1530	-95	-0.04	33.72	19.82
2800	1524				6.41	1339	-95	-0.06	14.23	19.85
4000	1527				6.42	1331	-100	-0.07	8.55	19.74



Start Time: 1517 Elapsed Time (min): 10 Water Quality Meter ID & SN: TROLL 9500 -- R24911

Stop Time: 1527 Average Purge Rate (mL/min): 400 Date Calibrated: 11-7-13

SAMPLING DATA

Sample Date: 11-7-13 Sample Time: 1535 Lab Analysis: VOC

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

VOA Vials, No Headspace ☑ Initials: DAC BS

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 4Q13 GW PROJECT NUMBER: 21562850.03004 FIELD PERSONNEL: C. Williams, C. Kretzer

DATE: 10/2/13 WEATHER: Sunny

MONITORING WELL ID: P-68 SAMPLE ID: —

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 70.26 ft
Depth to Water (btoc): 43.52 ft
Depth to LNAPL/DNAPL (btoc): 43.42 ft
Depth to Top of Screen (btoc): 45.26 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 26.74 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
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 AND Water Column Height and Screen Length are ⟨ 4ft,
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: 101.6 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C
Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)

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: No sample taken due to LNAPL present in well.

Total Purge Volume: — mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW PROJECT NUMBER: 21562850.03004 FIELD PERSONNEL: B.Lehan / L. Rathnow

DATE: 10/14/13 WEATHER: 65°F Mostly cloudy

MONITORING WELL ID: P-74 SAMPLE ID: P74-ROX-101413

INITIAL DATA

Well Diameter): 4 in
Total Well Depth (btoc): 69.43 ft
Depth to Water (btoc): 41.72 ft
Depth to LNAPL/DNAPL (btoc): ____ ft
Depth to Top of Screen (btoc): 44.43 ft
Screen Length): 25 ft

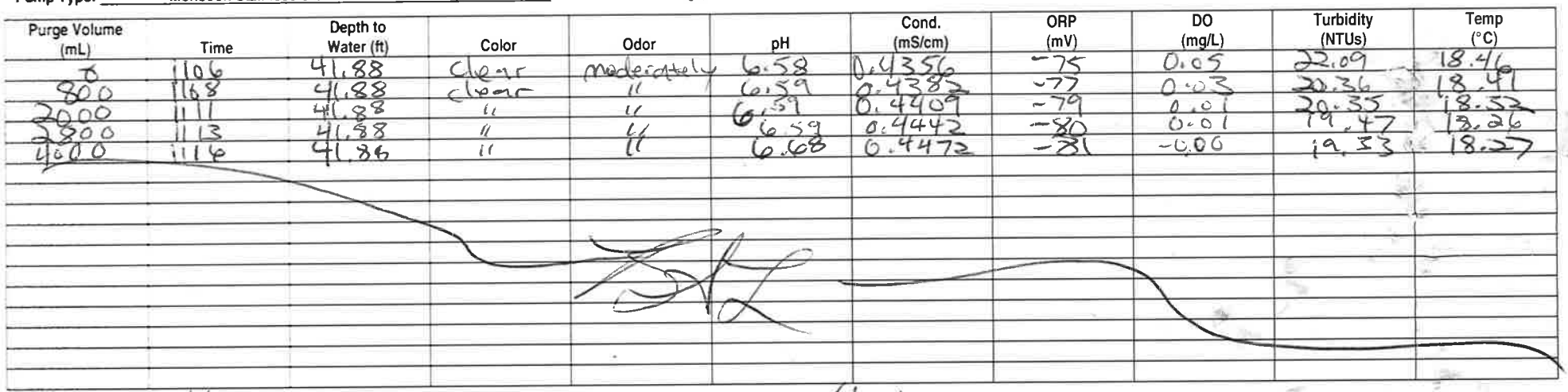
Water Column Height (do not include LNAPL or DNAPL): 27.71 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 56.93 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ____ ft btoc

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

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
STABLE: (over 3 readings)					+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C
0	1106	41.88	clear	moderately	6.58	0.4356	-75	0.05	22.09	18.46
800	1108	41.88	clear	"	6.59	0.4382	-77	0.03	20.36	18.49
2000	1111	41.88	"	"	6.59	0.4409	-79	0.01	28.35	18.53
2800	1113	41.88	"	"	6.59	0.4442	-80	0.01	19.47	18.26
4000	1116	41.86	"	"	6.68	0.4472	-81	-0.06	19.33	18.27



Start Time: 1106 Elapsed Time (min): ~~1208~~ 10 Water Quality Meter ID & SN: TROLL 9500 -- 24097

Stop Time: 1116 Average Purge Rate (mL/min): 400 Date Calibrated: 10/14/13

SAMPLING DATA

Sample Date: 10/14/13 Sample Time: 1120 Lab Analysis: VOC, SVOC

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

VOA Vials. No Headspace ☒ Initials: [signature]

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 4Q13 GW PROJECT NUMBER: 21562850.03004 FIELD PERSONNEL: C. Kretzer / C. Williams

DATE: 10-11-13 WEATHER: Partly Cloudy, 75°F

MONITORING WELL ID: P-93A SAMPLE ID: P93A-ROX-101113

INITIAL DATA

Well Diameter: 2 in
Total Well Depth (btoc): 63.17 ft
Depth to Water (btoc): 44.18 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 48.17 ft
Screen Length): 15 ft

Water Column Height (do not include LNAPL or DNAPL): 18.99 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 40.67 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
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 ppm
Wellbore PID/FID Reading: 0 ppm

PURGE DATA

Pump Type: Dedicated Well Wizard

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
STABLE: (over 3 readings)					+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C
0	1526	44.18	clear	moderate	7.01	1.634	-92	5.08	538.4	23.54
~~2800~~ ~~1200~~	1533	"	"	"	7.14	1.628	-106	6.54	45.53	23.89
~~5600~~ ~~2400~~	1540	"	"	"	7.21	1.621	-108	6.78	55.72	24.22
~~8400~~ ~~3600~~	1547	"	"	"	7.28	1.617	-106	6.91	73.55	24.78
~~11200~~ ~~4800~~	1554	"	"	"	7.13	1.621	-93	6.32	40.92	23.87
14000	1601	44.18	"	"	7.12	1.620	-92	6.36	213.1	23.77
16,800	1608	"	"	"	7.13	1.619	-85	6.20	46.16	24.30
~~19600~~ ~~8400~~	1615	"	"	"	7.13	1.618	-80	6.09	56.57	24.82
23,200	1624	"	"	"	7.14	1.618	-73	6.01	62.25	25.26
26,000	1631	"	"	"	7.14	1.618	-66	5.94	60.63	25.67
29,800	1638	44.18	"	"	7.15	1.618	-59	5.92	70.19	26.01
33,600	1645	"	"	"	7.15	1.618	-50	5.89	72.75	26.33

Start Time: 1526 Elapsed Time (min): 119 Water Quality Meter ID & SN: TROLL 9500 – R24097

Stop Time: 1645 Average Purge Rate (mL/min): 400 Date Calibrated: 10-11-13

SAMPLING DATA

Sample Date: 10-11-13 Sample Time: 1645 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: CAK

COMMENTS:

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

Called Wendy.

Total Purge Volume: 47,600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW PROJECT NUMBER: 21562850.03004 FIELD PERSONNEL: C. Kretzer / C. Williams

DATE: 10-16-13 WEATHER: 75°F, Partly Cloudy

MONITORING WELL ID: P-93B SAMPLE ID: P93B-ROX-101613

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 76.60 ft
Depth to Water (btoc): 44.43 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 74.60 ft
Screen Length): 2 ft

Water Column Height (do not include LNAPL or DNAPL): 32.17 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 73.60 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
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 ppm
Wellbore PID/FID Reading: 0 ppm

PURGE DATA

Pump Type: Dedicated Well Wizard

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp ~~°C~~ F
0	1016	44.43	clear	moderate	6.85	1.953	-0.08	1.94	6.530	65.30
3600	1025	"	"	"	6.85	1.939	-0.09	1.89	8.060	65.46
7200	1034	"	"	"	6.85	1.897	-0.09	1.84	2240	65.57 18.65
10,800	1043	"	"	"	6.85	1.931	-0.09	1.90	18.04	65.41
14,400	1052	"	"	"	6.85	1.928	-0.10	1.75	9.702	65.35 18.53

Start Time: 1016 Elapsed Time (min): 36 Water Quality Meter ID & SN: TROLL 9500 --

Stop Time: 1051 Average Purge Rate (mL/min): 400 Date Calibrated: 10-16-13

SAMPLING DATA

Sample Date: 10-16-13 Sample Time: ~~25~~ 1055 Lab Analysis: VOC, SVOC

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

VOA Vials. No Headspace [X] Initials: CK

COMMENTS:

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

Total Purge Volume: 14,400 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW | PROJECT NUMBER: 21562850.03004 | FIELD PERSONNEL: C.Kreher / C.Williams

DATE: 10-16-13 | WEATHER: 75°F, Partly Cloudy

MONITORING WELL ID: P-93C | SAMPLE ID: P93C-ROX-101613

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 96.26 ft
Depth to Water (btoc): ~~44.31~~ ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 94.26 ft
Screen Length): 2 ft

Water Column Height (do not include LNAPL or DNAPL): ~~NE~~ 51.95 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 93.260 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
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

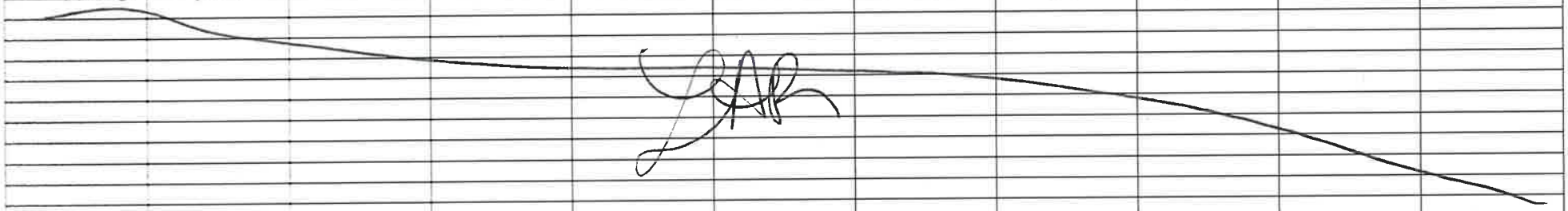
Volume of Flow Through Cell : 2791* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 8374 mL
Ambient PID/FID Reading: 0 ppm
Wellbore PID/FID Reading: 0 ppm

PURGE DATA

Pump Type: Dedicated Well Wizard

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1146	44.31	clear	Moderate	6.91	1.364	-85	0.98	8.405	18.90
2800	1153	"	"	"	6.91	1.363	-84	1.00	0.0265	19.04
5600	1200	"	"	"	6.90	1.364	-84	0.82354+	354.1	18.99
8400	1207	44.31	"	"	6.90	1.368	-84	0.78	-0.1883	18.95
11,200	1214	"	"	"	6.91	1.366	-82	0.87	0.2825	18.92



Start Time: 1146 | Elapsed Time (min): 28 | Water Quality Meter ID & SN: TROLL 9500 --
Stop Time: 1214 | Average Purge Rate (mL/min): 400 | Date Calibrated: 10-16-13

SAMPLING DATA

Sample Date: 10-16-13 | Sample Time: [redacted] 1220 | Lab Analysis: VOC, SVOC
Sample Method: Bladder Pump / Low Flow | Sample Flow Rate (mL/min): 400 | QA/QCSamples: None
VOA Vials. No Headspace ☒ Initials: CK

COMMENTS:

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

Total Purge Volume: 11,200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** B. Lehan / C. Kretzer / C. Williams

DATE: 10/11/13 **WEATHER:** 70°F partly cloudy

MONITORING WELL ID: P-93D **SAMPLE ID:** P93D - Rox - 10113

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 128.00 ft
Depth to Water (btoc): 44.24 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 125.75 ft
Screen Length): 2 ft

Water Column Height (do not include LNAPL or DNAPL): 83.76 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 126.75 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
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: 11.5 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C
Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1319	44.24	clear	moderate	6.92	1.450	-94	0.04	0.3503	20.43
1200	1322	"	clear	moderate	6.94	1.455	-99	0.02	0.0620	20.46
2400	1325	"	"	"	6.96	1.460	-101	0.01	0.1458	20.56
3600	1328	"	"	"	6.97	1.463	-102	0.00	0.2649	20.47
4800	1331	44.24	"	"	6.98	1.467	-103	-0.00	0.431	20.50

Start Time: 1319 Elapsed Time (min): 12 Water Quality Meter ID & SN: TROLL 9500 -- 24097

Stop Time: 1331 Average Purge Rate (mL/min): 400 Date Calibrated: 10/11/13

SAMPLING DATA

Sample Date: 10/11/13 Sample Time: 1335 Lab Analysis: VOC, SVOC

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

VOA Vials. No Headspace ☒ Initials: RL

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 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** B. Lehan / L. Rathnow

DATE: 10/15/13 **WEATHER:** 70°F cloudy

MONITORING WELL ID: T-12 **SAMPLE ID:** T12-ROX-101513

INITIAL DATA

Well Diameter): 6 in
Total Well Depth (btoc): 72.46 ft
Depth to Water (btoc): 43.73 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 46.46 ft
Screen Length): 26 ft

Water Column Height (do not include LNAPL or DNAPL): 28.73 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 59.46 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 990* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2971 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.1 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time 1441	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
1440	1443	43.75	Clear	Moderate	6.58	1.295	-91	0.13	7.670	19.42
800	1443	43.75	"	4	6.61	1.302	-93	0.06	7.894	19.41
2000	1446	43.75	"	4	6.63	1.312	-95	0.03	10.43	19.44
2800	1448	43.75	"	4	6.65	1.318	-96	0.01	6.775	19.38
4000	1451	43.75	"	"	6.65	1.321	-97	0.00	6.840	19.39

Start Time: 1441 Elapsed Time (min): 100 Water Quality Meter ID & SN: TROLL 9500 – 24097

Stop Time: 1451 Average Purge Rate (mL/min): 400 Date Calibrated: 10/15/13

SAMPLING DATA

Sample Date: 10/15/13 Sample Time: 1455 Lab Analysis: VOC, SVOC

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

VOA Vials. No Headspace ☒ Initials: BL

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 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** B. Lehan, L. Rathnow

DATE: 10/9/13 **WEATHER:** 66°F Sunny

MONITORING WELL ID: ROST-3-MW **SAMPLE ID:** ROST3MW-ROX-100913

INITIAL DATA

Well Diameter): 2 YAR in
Total Well Depth (btoc): 48.06 ft
Depth to Water (btoc): 40.16 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): ~~38.16~~ ft
Screen Length): 10 ft 37.81 YAR

Water Column Height (do not include LNAPL or DNAPL): 7.9 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 42.81 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
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 : 879* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2636 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 150.7 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1026	40.20	Cloudy	none	6.89	0.9130	-102	0.09	451.7	17.54
800	1028	40.20	"	"	6.89	0.9129	-105	0.05	341.0	17.65
2000	1031	40.20	"	"	6.88	0.9185	-105	0.04	324.4	17.71
2800	1033	40.26	"	"	6.88	0.9197	-106	0.03	157.9	17.80
3600	1035	40.20	"	"	6.88	0.9192	-106	0.02	98.07	17.87
4400	1037	40.26	"	"	6.88	0.9183	-107	0.02	68.73	17.91
5200	1039	40.20	"	"	6.88	0.9177	-108	0.01	44.69	17.91
6400	1042	40.20	"	"	6.88	0.9167	-109	0.01	32.80	17.93
7200	1044	40.26	"	"	6.88	0.9154	-109	0.00	25.71	17.93
8000	1046	40.20	"	"	6.89	0.9152	-110	0.00	20.12	17.93
9200	1049	40.20	"	"	6.89	0.9140	-110	0.00	14.36	17.95
10000	1051	40.20	"	"	6.89	0.9143	-110	-0.00	11.47	17.98
10800	1053	40.20	"	"	6.89	0.9148	-111	-0.00	10.36	18.00
11600	1055	40.20	"	"	6.89	0.9147	-111	-0.00	8.23	18.00

Start Time: 1026 Elapsed Time (min): 29 Water Quality Meter ID & SN: TROLL 9500 -- 24097

Stop Time: 1055 Average Purge Rate (mL/min): 400 Date Calibrated: 10/9/13

SAMPLING DATA

Sample Date: 10/9/13 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:

COMMENTS:

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

Total Purge Volume: 11600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** B. Lehan, L. Rathman

DATE: 10/9/13 **WEATHER:** 68°F Sunny

MONITORING WELL ID: ROST-4-PZ(C) **SAMPLE ID:** ROST4PZC - ROX-100913

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 45.20 ft
Depth to Water (btoc): 39.91 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 34.95 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 5.29 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 40.95 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ——— ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ——— ft btoc

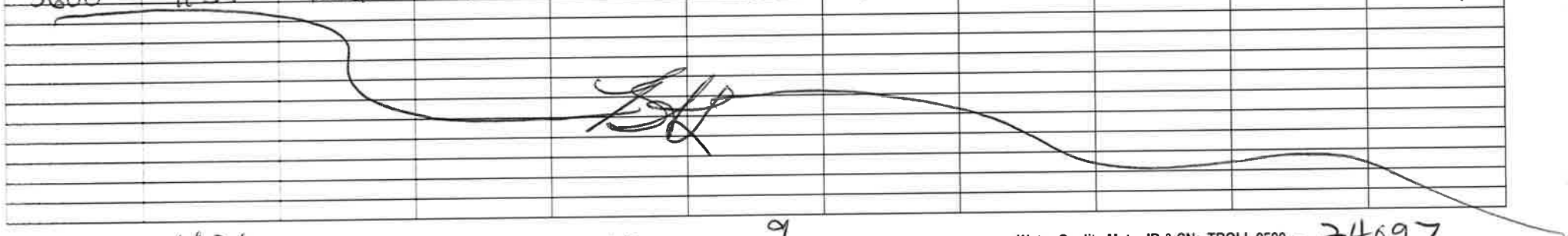
Volume of Flow Through Cell : 851* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2553 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1126	40.22	clear	none	6.69	1.772	-108	0.32	6.877	18.92
800	1128	40.21	"	"	6.69	1.790	-113	0.10	5.310	18.87
1600	1130	40.21	"	"	6.69	1.793	-115	0.03	5.844	18.85
2400	1132	40.21	"	"	6.69	1.776	-118	0.01	5.844	18.85
3600	1135	40.21	"	"	6.69	1.769	-119	-0.00	5.712	18.87



Start Time: 1126
Stop Time: 1135

Elapsed Time (min): 9
Average Purge Rate (mL/min): 400

Water Quality Meter ID & SN: TROLL 9500 – 24097
Date Calibrated: 10/9/13

SAMPLING DATA

Sample Date: 10/9/13
Sample Method: Monsoon Pump / Low Flow
VOA Vials. No Headspace [X] Initials:

Sample Time: 1140
Sample Flow Rate (mL/min): 400

Lab Analysis: VOC, SVOC
QA/QCSamples: none

COMMENTS:

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

Total Purge Volume: 3600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW | PROJECT NUMBER: 21562850.03004 | FIELD PERSONNEL: L. Rathnow, C. Williams

DATE: 10/17/13 | WEATHER: 55°F Sunny

MONITORING WELL ID: P-114 | SAMPLE ID: P114-ROX-101713

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 52.67 ft
Depth to Water (btoc): 29.48 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 32.67 ft
Screen Length): 20 ft

Water Column Height (do not include LNAPL or DNAPL): 23.19 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 42.67 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ⟨ 4ft,
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: 0.0 ppm

PURGE DATA

Pump Type: Dedicated Well Wizard

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

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	14:17	29.85	cloudy	none	7.22	1.191	-76	1.43	52.22	20.52
2000	14:22	29.84	clear	none	7.60	1.112	-91	1.53	25.64	20.64
3600 ~~3600~~	14:26	29.82	clear	none	7.53	1.105	-101	1.70	33.94	20.62
5200	14:30	29.82	clear	none	7.43	1.122	-100	1.91	34.83	20.73
6800	14:34	29.80	clear	none	7.30	1.138	-101	2.04	21.90	20.74
8400	14:38	29.80	clear	none	7.31	1.160	-101	2.16	25.16	20.70
10400	14:43	29.78	clear	none	7.28	1.157	-100	2.26	15.68	20.76
12000	14:47	29.77	clear	none	7.25	1.164	-100	2.26	21.70	20.73
13600	14:51	29.75	clear	none	7.23	1.178	-99	2.38	15.60	20.76
15200	14:55	29.76	clear	none	7.21	1.184	-98	2.48	12.63	20.81
16400	14:59	29.75	clear	none	7.20	1.189	-97	2.57	12.181	20.83
17400	15:03	29.78	clear	none	7.18	1.191	-96	2.43	14.90	20.79
19000	15:07	29.80	clear	none	7.18	1.191	-96	2.37	15.43	20.63
20600	15:11	29.90	clear	none	7.16	1.191	-95	2.36	15.82	20.73

LAR

Start Time: 14:17 | Elapsed Time (min): 54 | Water Quality Meter ID & SN: TROLL 9500 -- R24097

Stop Time: 15:11 | Average Purge Rate (mL/min): 400 | Date Calibrated: 10/17/13

SAMPLING DATA

Sample Date: 10/17/13 | Sample Time: 15:15 | Lab Analysis: VOC, SVOC

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

VOA Vials. No Headspace ☒ | Initials: LAR

COMMENTS:

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

Total Purge Volume: 20600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** Brian Smith, Craig Williams

DATE: 10/21/13 **WEATHER:** 50°, cloudy, 10-15mph NW

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

INITIAL DATA

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

Water Column Height (do not include LNAPL or DNAPL): — ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is <4 feet,
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 AND Water Column Height and Screen Length are < 4ft,
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: 0.4 ppm

PURGE DATA

Pump Type: Geotech Peristaltic Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C
Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)

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

COMMENTS: Well DRY at 23.05'

Total Purge Volume: — mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** Brian Smith, Craig Williams

DATE: 10/21/13 **WEATHER:** 50°, Cloudy, 10-15 mph NW

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): 22.58 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): 7.42 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
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 AND Water Column Height and Screen Length are ⟨ 4ft,
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: 1.9 ppm

PURGE DATA

Pump Type: Geotech Peristaltic Pump

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

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

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: 30.00 − 22.58 = 7.42 ft of H_2O
7.42 ft × 0.041 gal/ft = 0.304 gallons 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 4Q13 GW PROJECT NUMBER: 21562850.03004 FIELD PERSONNEL: B. Smith, C. Williams

DATE: 10/21/13 WEATHER: 50°F Cloudy

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): 19.91 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): 0.09 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
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 AND Water Column Height and Screen Length are ⟨ 4ft,
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: 0.2 ppm

PURGE DATA

Pump Type: Geotech Peristaltic Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C
Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)

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 - 19.91 = 0.09 ft
0.09 ft x 0.041 gal/ft = 0.004 gal H_2O based on historically slow recharge rates, Not enough water to sample per SOP.

Total Purge Volume: — mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** C. Williams, B. Smith

DATE: 10/21/13 **WEATHER:** 50F Cloudy

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): 19.56 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): _____ ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is <4 feet,
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 AND Water Column Height and Screen Length are < 4ft,
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: 5.6 ppm

PURGE DATA

Pump Type: Geotech Peristaltic Pump

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

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

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 - 19.56 = 0.44 ft
0.44ft @ 0.041 gal/ft = 0.02 gal H2O Based on historically slow recharge rates, Not enough water to sample per SOP

Total Purge Volume: 1 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** L. Rathrow, W. Pennington

DATE: 10/21/13 **WEATHER:** 60°F Cloudy

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): 19.30 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 13.84 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 4.54 ft ~~btoc~~
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
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 AND Water Column Height and Screen Length are ⟨ 4ft,
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: 0.1 ppm

PURGE DATA

Pump Type: Geotech Peristaltic Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C
Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)

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:

23.84 - 19.30 = 4.54 ft of H₂O
4.54 ft × 0.041 gal/ft = ~~0.19~~ 0.19 gal of H₂O 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 4Q13 GW **PROJECT NUMBER:** 21562850.03004 **FIELD PERSONNEL:** L. Rathnow, W. Pennington

DATE: 10/21/13 **WEATHER:** 60°F Cloudy

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): 17.78 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): 2.22 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
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 AND Water Column Height and Screen Length are ⟨ 4ft,
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: 0.2 ppm

PURGE DATA

Pump Type: Geotech Peristaltic Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C
Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)

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:

~~FF~~ 20.00 - 17.78 = 2.22 ft of H_2O

2.22 ft × 0.041 gal/ft = 0.09 gallons H_2O Based on historically slow recharge rates, Not enough water in well to sample, per SOP

Total Purge Volume: — mL

Roxana Groundwater Quarterly – 4th Quarter 2013 Data Review

Laboratory SDG: MC25043

Data Reviewer: Elizabeth Kunkel

Peer Reviewer: Steve Gragert

Date Reviewed: 10/31/2013

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

Sample Identification	Sample Identification
MW1-ROX-100313	MW9-ROX-100313-EB
MW9-ROX-100313	MW10-ROX-100313
TB-ROX-100313-HCL	TB-ROX-100313-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 the VOC LCS recovery for acrolein was outside evaluation criteria. Although not indicated in the laboratory case narrative, the compounds acetone and benzyl alcohol were detected in the equipment blank. These issues are addressed further in the appropriate sections below. Additionally, the initial calibration verification for acrolein exceeded 50 percent difference (%D).

The cooler receipt form indicated that the cooler was received by the laboratory at a temperature of 0.5ºC, 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
MW9-ROX-100313-EB	VOCs	Acetone	3.1 ug/L
MW9-ROX-100313-EB	SVOCs	Benzyl alcohol	2.8 ug/L

Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not required qualification. No qualification of data was required.

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV926-BS	VOCs	Acrolein	**178**	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. No qualification of data was required.

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

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

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

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

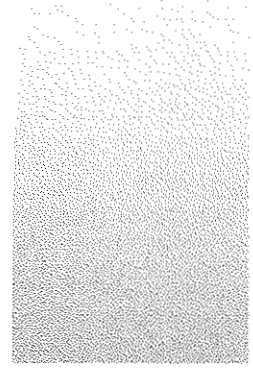
Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

No

New England ACCUTEST LABORATORIES





Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC25043

Sampling Date: 10/03/13

Report to:

URS Corporation

elizabeth.kunkel@URS.com

ATTN: Elizabeth Kunkel

Total number of pages in report: 83

Reviewed on 10/31/2013

ACCREDITED IN ACCORDANCE WITH nelac

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

Reza 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) ISO 17025:2005 (L2235)

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Sample Summary

Shell Oil

Job No: MC25043

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC25043-1	10/03/13	10:45	LRBL	10/04/13	AQ	Ground Water	MW1-ROX-100313
MC25043-2	10/03/13	11:30	LRBL	10/04/13	AQ	Ground Water	MW9-ROX-100313-EB
MC25043-3	10/03/13	14:10	LRBL	10/04/13	AQ	Ground Water	MW9-ROX-100313
MC25043-4	10/03/13	15:30	LRBL	10/04/13	AQ	Ground Water	MW10-ROX-100313
MC25043-5	10/03/13	00:00	LRBL	10/04/13	AQ	Trip Blank Water	TB-ROX-100313-HCL
MC25043-6	10/03/13	00:00	LRBL	10/04/13	AQ	Trip Blank Water	TB-ROX-100313-ST

ACCUTEST LABORATORIES

2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	Job No	MC25043
Site:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central	Report Date	10/22/2013 4:40:18 PM

4 Sample(s), 2 Trip Blank(s) were collected on 10/03/2013 and were received at Accutest on 10/04/2013 properly preserved, at 0.5 Deg. C and intact. These Samples received an Accutest job number of MC25043. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

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

Volatiles by GCMS By Method SW846 8260B

Matrix AQ Batch ID: MSV926

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25069-1MS, MC25069-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MC25069-1MS/MSD Recovery(s) for 2-Butanone (MEK), 2-Chloroethyl vinyl ether, 2-Hexanone, Acetone, Acrolein are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Continuing calibration check standard MSV926-CC864 for acrolein exceed 50% Difference (response bias high). Associated sample is non-detect for this compound.
- MSV926-BS for Acrolein: Outside control limits. Associated samples are non-detect for this compound.

Extractables by GCMS By Method SW846 8270C

Matrix AQ Batch ID: OP35160

- 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) MC24900-18MS, MC24900-18MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for 2,4-Dimethylphenol, Pentachlorophenol are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for Hexachlorocyclopentadiene, Pentachlorophenol, 2,4-Dimethylphenol are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2,4-Dimethylphenol, 4-Nitrophenol are outside control limits for sample OP35160-MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix AQ Batch ID: OP35161

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25015-7MS, MC25015-7MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Volatiles by GC By Method SW846 8011

Matrix AQ	Batch ID: OP35197

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC24900-22MS, MC24900-22MSD 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(MC25043).

Summary of Hits

Job Number: MC25043
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Collected: 10/03/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC25043-1	MW1-ROX-100313					
Methyl Tert Butyl Ether		1.3	1.0	0.43	ug/l	SW846 8260B
bis(2-Ethylhexyl)phthalate		0.65 J	2.2	0.53	ug/l	SW846 8270C
MC25043-2	MW9-ROX-100313-EB					
Acetone		3.1 J	10	2.8	ug/l	SW846 8260B
Benzyl Alcohol		2.8 J	11	0.62	ug/l	SW846 8270C
MC25043-3	MW9-ROX-100313					
No hits reported in this sample.						
MC25043-4	MW10-ROX-100313					
No hits reported in this sample.						
MC25043-5	TB-ROX-100313-HCL					
No hits reported in this sample.						
MC25043-6	TB-ROX-100313-ST					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW1-ROX-100313		
Lab Sample ID:	MC25043-1	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V24223.D	1	10/16/13	AMY	n/a	n/a	MSV926
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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

Report of Analysis

Client Sample ID:	MW1-ROX-100313		
Lab Sample ID:	MC25043-1	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.3	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	MW1-ROX-100313		
Lab Sample ID:	MC25043-1	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 Sonth 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	103%		70-130%
460-00-4	4-Bromofluorobenzene	108%		70-130%

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

ND = Not detected MDL - Method Detection Limit
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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-100313		
Lab Sample ID:	MC25043-1	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R34319.D	1	10/18/13	KR	10/08/13	OP35160	MSR1249
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.4	0.55	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.92	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.99	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.70	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.69	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

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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-100313		
Lab Sample ID:	MC25043-1	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.65	2.2	0.53	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.47	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.87	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.58	ug/l	
110-86-1	Pyridine	ND	11	0.55	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	24%		15-110%
4165-62-2	Phenol-d5	18%		15-110%
118-79-6	2,4,6-Tribromophenol	43%		15-110%
4165-60-0	Nitrobenzene-d5	68%		30-130%
321-60-8	2-Fluorobiphenyl	65%		30-130%
1718-51-0	Terphenyl-d14	95%		30-130%

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

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

Report of Analysis

Client Sample ID:	MW1-ROX-100313		
Lab Sample ID:	MC25043-1	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86482.D	1	10/17/13	KR	10/08/13	OP35161	MSI3218
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
367-12-4	2-Fluorophenol	21%		15-110%
4165-62-2	Phenol-d5	18%		15-110%
118-79-6	2,4,6-Tribromophenol	45%		15-110%
4165-60-0	Nitrobenzene-d5	69%		30-130%
321-60-8	2-Fluorobiphenyl	59%		30-130%
1718-51-0	Terphenyl-d14	89%		30-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Liuit
E = Indicates value exceeds calibration range
J = Indicates 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-100313		
Lab Sample ID:	MC25043-1	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84629.D	1	10/11/13	CZ	10/10/13	OP35197	GYZ7333
Run #2							

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

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	127%		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:	MW9-ROX-100313-EB		
Lab Sample ID:	MC25043-2	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V24224.D	1	10/16/13	AMY	n/a	n/a	MSV926
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	3.1	10	2.8	ug/l	J
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

ND = Not detected MDL - Method Detection Limit
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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:	MW9-ROX-100313-EB		
Lab Sample ID:	MC25043-2	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	MW9-ROX-100313-EB		
Lab Sample ID:	MC25043-2	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		70-130%
2037-26-5	Toluene-D8	104%		70-130%
460-00-4	4-Bromofluorobenzene	107%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW9-ROX-100313-EB		
Lab Sample ID:	MC25043-2	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R34320.D	1	10/18/13	KR	10/08/13	OP35160	MSR1249
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	ND	5.4	0.56	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.93	ug/l	
100-51-6	Benzyl Alcohol	2.8	11	0.62	ug/l	J
91-58-7	2-Chloronaphthalene	ND	5.4	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.71	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.70	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

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

Report of Analysis

Client Sample ID:	MW9-ROX-100313-EB		
Lab Sample ID:	MC25043-2	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.53	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.48	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.88	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.59	ug/l	
110-86-1	Pyridine	ND	11	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	44%		15-110%
4165-62-2	Phenol-d5	30%		15-110%
118-79-6	2,4,6-Tribromophenol	87%		15-110%
4165-60-0	Nitrobenzene-d5	71%		30-130%
321-60-8	2-Fluorobipbenyl	73%		30-130%
1718-51-0	Terphenyl-d14	94%		30-130%

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

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J = Indicates 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-100313-EB		
Lab Sample ID:	MC25043-2	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86483.D	1	10/17/13	KR	10/08/13	OP35161	MSI3218
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
367-12-4	2-Fluorophenol	41%		15-110%
4165-62-2	Phenol-d5	28%		15-110%
118-79-6	2,4,6-Tribromophenol	87%		15-110%
4165-60-0	Nitrobenzene-d5	73%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	87%		30-130%

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

Report of Analysis

Client Sample ID:	MW9-ROX-100313-EB		
Lab Sample ID:	MC25043-2	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84630.D	1	10/11/13	CZ	10/10/13	OP35197	GYZ7333
Run #2							

	Initial Volume	Final Volume
Run #1	34.8 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0055	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	130%		36-173%
460-00-4	Bromofluorobenzene (S)	122%		36-173%

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

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

Report of Analysis

Client Sample ID:	MW9-ROX-100313		
Lab Sample ID:	MC25043-3	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V24225.D	1	10/16/13	AMY	n/a	n/a	MSV926
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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

Report of Analysis

Client Sample ID:	MW9-ROX-100313		
Lab Sample ID:	MC25043-3	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	MW9-ROX-100313		
Lab Sample ID:	MC25043-3	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoroumethane	104%		70-130%
2037-26-5	Toluene-D8	104%		70-130%
460-00-4	4-Bromofluorobenzene	110%		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-100313		
Lab Sample ID:	MC25043-3	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R34321.D	1	10/18/13	KR	10/08/13	OP35160	MSR1249
Run #2							

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

ABN Special List

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

ND = Not detected MDL - Method Detection Limit
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW9-ROX-100313		
Lab Sample ID:	MC25043-3	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	34%		15-110%
4165-62-2	Phenol-d5	26%		15-110%
118-79-6	2,4,6-Tribromophenol	65%		15-110%
4165-60-0	Nitrobenzene-d5	76%		30-130%
321-60-8	2-Fluorobiphenyl	78%		30-130%
1718-51-0	Terphenyl-d14	95%		30-130%

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

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-100313		
Lab Sample ID:	MC25043-3	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86484.D	1	10/17/13	KR	10/08/13	OP35161	MSI3218
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	ND	0.050	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	31%		15-110%
4165-62-2	Phenol-d5	25%		15-110%
118-79-6	2,4,6-Tribromophenol	67%		15-110%
4165-60-0	Nitrobenzene-d5	78%		30-130%
321-60-8	2-Fluorobiphenyl	71%		30-130%
1718-51-0	Terphenyl-d14	92%		30-130%

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

Report of Analysis

Client Sample ID:	MW9-ROX-100313		
Lab Sample ID:	MC25043-3	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84631.D	1	10/11/13	CZ	10/10/13	OP35197	GYZ7333
Run #2							

	Initial Volume	Final Volume
Run #1	36.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	133%		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:	MW10-ROX-100313		
Lab Sample ID:	MC25043-4	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V24226.D	1	10/16/13	AMY	n/a	n/a	MSV926
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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

Report of Analysis

Client Sample ID:	MW10-ROX-100313		
Lab Sample ID:	MC25043-4	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	MW10-ROX-100313		
Lab Sample ID:	MC25043-4	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		70-130%
2037-26-5	Toluene-D8	105%		70-130%
460-00-4	4-Bromofluorobenzene	110%		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-100313		
Lab Sample ID:	MC25043-4	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R34322.D	1	10/18/13	KR	10/08/13	OP35160	MSR1249
Run #2							

	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.43	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.55	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.37	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ng/l	
	3&4-Methylphenol	ND	11	2.3	ng/l	
88-75-5	2-Nitrophenol	ND	11	0.56	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.66	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	ND	5.6	0.58	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.64	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.36	ug/l	
62-53-3	Aniline	ND	11	0.72	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.23	ng/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.96	ng/l	
100-51-6	Benzyl Alcohol	ND	11	0.65	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.28	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.24	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.26	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.73	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.76	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.72	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.56	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.18	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.6	0.44	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.6	0.49	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-100313		
Lab Sample ID:	MC25043-4	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.56	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.56	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.55	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.8	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.49	ug/l	
78-59-1	Isophorone	ND	5.6	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.31	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.56	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.9	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.28	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	0.56	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.91	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.61	ug/l	
110-86-1	Pyridine	ND	11	0.58	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	31%		15-110%
4165-62-2	Phenol-d5	24%		15-110%
118-79-6	2,4,6-Tribromophenol	67%		15-110%
4165-60-0	Nitrobenzene-d5	76%		30-130%
321-60-8	2-Fluorobiphenyl	80%		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:	MW10-ROX-100313		
Lab Sample ID:	MC25043-4	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86485.D	1	10/17/13	KR	10/08/13	OP35161	MSI3218
Run #2							

	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphtbene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.056	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.036	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.046	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.22	0.056	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.083	ug/l	
85-01-8	Phenanthrene	ND	0.056	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	30%		15-110%
4165-62-2	Phenol-d5	22%		15-110%
118-79-6	2,4,6-Tribromophenol	66%		15-110%
4165-60-0	Nitrobenzene-d5	77%		30-130%
321-60-8	2-Fluorobiphenyl	70%		30-130%
1718-51-0	Terphenyl-d14	88%		30-130%

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

Report of Analysis

Client Sample ID:	MW10-ROX-100313		
Lab Sample ID:	MC25043-4	Date Sampled:	10/03/13
Matrix:	AQ - Ground Water	Date Received:	10/04/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84632.D	1	10/11/13	CZ	10/10/13	OP35197	GYZ7333
Run #2							

	Initial Volume	Final Volume
Run #1	36.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	141%		36-173%
460-00-4	Bromofluorobenzene (S)	130%		36-173%

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

Report of Analysis

Client Sample ID:	TB-ROX-100313-HCL		
Lab Sample ID:	MC25043-5	Date Sampled:	10/03/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/04/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V24219.D	1	10/16/13	AMY	n/a	n/a	MSV926
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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

Report of Analysis

Client Sample ID:	TB-ROX-100313-HCL		
Lab Sample ID:	MC25043-5	Date Sampled:	10/03/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/04/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	TB-ROX-100313-HCL		
Lab Sample ID:	MC25043-5	Date Sampled:	10/03/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/04/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		70-130%
2037-26-5	Toluene-D8	104%		70-130%
460-00-4	4-Bromofluorobenzene	109%		70-130%

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

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

J = Indicates 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-100313-ST		
Lab Sample ID:	MC25043-6	Date Sampled:	10/03/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/04/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84633.D	1	10/11/13	CZ	10/10/13	OP35197	GYZ7333
Run #2							

	Initial Volume	Final Volume
Run #1	35.3 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	125%		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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

LAB (LOCATION)
☐ XENCO (.....)
☐ CALSCIENCE (.....)
☑ OTHER (Accutest Labs: 495 Technology Ctr W/ Marlborough, MA 01752 (508-481-6200))
☐ SPL (.....)
☐ Lab Vendor # (.....)
Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

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

Print Bill To Contact Name: Bob Billman
PO #
INCIDENT # (ENV SERVICES): 9 7 2 1 6 6 4 0
SAP #: 3 4 0 0 6 1
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 10/3/13
PAGE: 1 of 1

SAMPLING COMPANY: URS CORPORATION
LOG CODE:
ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110
PROJECT CONTACT (Hardcopy or PDF Report to): Elizabeth Kunkel, Wendy Pennington, Bob Billman
TELEPHONE: 314-429-0100
FAX: 314-429-0462
E-MAIL TO: Elizabeth.Kunkel@urs.com, wendy.pennington@urs.com
SITE ADDRESS (Street and City): 900 South Central Ave, ROXANA
STATE: IL
GLOBAL ID #:
COC DELIVERABLE TO (Name, Company, Office Location):
PHONE NO:
P.O.#:
CONSULTANT PROJECT NO.: Roxana Quarterly GW / 21562560.03004
SAMPLER NAME(S) (Printed): L. Rathnow, B. Lehan
LAB USE ONLY: MC25043

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED (PRE-APPROVAL REQUIRED)
☐ 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 LEVEL IV DATA

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
1	MW1-ROX-100313	10/3/13	1045	Water	2			2	2	6	X	X	X	X	0	
2	MW9-ROX-100313-EB		1130								X	X	X	X		
3	MW9-ROX-100313		1410								X	X	X	X		
4	MW10-ROX-100313		1530								X	X	X	X		
5	TB-ROX-100313-HCL		0000		2					2	X					19C
6	TB-ROX-100313-ST		0000					2	2			X				12C
																3 JY

Relinquished by (Signature)	Received by (Signature)	Date	Time
	FED EX	10/3/13	17:00
FEDX		10-4-13	915

05/2005 Revision

0.5°C

MC25043: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC25043 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 10/4/2013 **Delivery Method:** **Client Service Action Required at Login:** No

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

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

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

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

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

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

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

Comments

5.1

5

MC25043: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC25043

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC25043-1 Collected: 03-OCT-13 10:45 By: LRBL Received: 04-OCT-13 By: BA						
MW1-ROX-100313						
MC25043-1	SW846 8011	11-OCT-13 02:56	CZ	10-OCT-13	MT	V8011SL
MC25043-1	SW846 8260B	16-OCT-13 17:50	AMY			V8260SL+
MC25043-1	SW846 8270C BY SIM	17-OCT-13 20:00	KR	08-OCT-13	NE	B8270SIMSL
MC25043-1	SW846 8270C	18-OCT-13 01:43	KR	08-OCT-13	NE	AB8270SL+
MC25043-2 Collected: 03-OCT-13 11:30 By: LRBL Received: 04-OCT-13 By: BA						
MW9-ROX-100313-EB						
MC25043-2	SW846 8011	11-OCT-13 03:23	CZ	10-OCT-13	MT	V8011SL
MC25043-2	SW846 8260B	16-OCT-13 18:16	AMY			V8260SL+
MC25043-2	SW846 8270C BY SIM	17-OCT-13 20:25	KR	08-OCT-13	NE	B8270SIMSL
MC25043-2	SW846 8270C	18-OCT-13 02:16	KR	08-OCT-13	NE	AB8270SL+
MC25043-3 Collected: 03-OCT-13 14:10 By: LRBL Received: 04-OCT-13 By: BA						
MW9-ROX-100313						
MC25043-3	SW846 8011	11-OCT-13 03:50	CZ	10-OCT-13	MT	V8011SL
MC25043-3	SW846 8260B	16-OCT-13 18:43	AMY			V8260SL+
MC25043-3	SW846 8270C BY SIM	17-OCT-13 20:49	KR	08-OCT-13	NE	B8270SIMSL
MC25043-3	SW846 8270C	18-OCT-13 02:49	KR	08-OCT-13	NE	AB8270SL+
MC25043-4 Collected: 03-OCT-13 15:30 By: LRBL Received: 04-OCT-13 By: BA						
MW10-ROX-100313						
MC25043-4	SW846 8011	11-OCT-13 04:16	CZ	10-OCT-13	MT	V8011SL
MC25043-4	SW846 8260B	16-OCT-13 19:09	AMY			V8260SL+
MC25043-4	SW846 8270C BY SIM	17-OCT-13 21:15	KR	08-OCT-13	NE	B8270SIMSL
MC25043-4	SW846 8270C	18-OCT-13 03:22	KR	08-OCT-13	NE	AB8270SL+
MC25043-5 Collected: 03-OCT-13 00:00 By: LRBL Received: 04-OCT-13 By: BA						
TB-ROX-100313-HCL						
MC25043-5	SW846 8260B	16-OCT-13 16:04	AMY			V8260SL+
MC25043-6 Collected: 03-OCT-13 00:00 By: LRBL Received: 04-OCT-13 By: BA						
TB-ROX-100313-ST						

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC25043

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC25043-6	SW846 8011	11-OCT-13 04:43	CZ	10-OCT-13	MT	V8011SL

Accutest Internal Chain of Custody

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Received: 10/04/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC25043-1.1	Walk In Ref #22	Michael Rolo	10/08/13 07:42	Retrieve from Storage
MC25043-1.1	Michael Rolo		10/09/13 14:36	Depleted
MC25043-1.3	Walk In Ref #9	Michael Rolo	10/10/13 08:07	Retrieve from Storage
MC25043-1.3	Michael Rolo	Walk In Ref #9	10/11/13 09:19	Return to Storage
MC25043-1.6	VOC Ref #3	Amy Min Yang	10/16/13 13:18	Retrieve from Storage
MC25043-1.6	Amy Min Yang	GCMSV	10/16/13 13:18	Load on Instrument
MC25043-1.6	GCMSV	Amy Min Yang	10/17/13 15:10	Unload from Instrument
MC25043-1.6	Amy Min Yang	VOC Ref #3	10/17/13 15:10	Return to Storage
MC25043-2.1	Walk In Ref #22	Michael Rolo	10/08/13 07:42	Retrieve from Storage
MC25043-2.1	Michael Rolo		10/09/13 14:36	Depleted
MC25043-2.3	Walk In Ref #9	Michael Rolo	10/10/13 08:07	Retrieve from Storage
MC25043-2.3	Michael Rolo	Walk In Ref #9	10/11/13 09:19	Return to Storage
MC25043-2.5	VOC Ref #3	Amy Min Yang	10/16/13 13:18	Retrieve from Storage
MC25043-2.5	Amy Min Yang	GCMSV	10/16/13 13:18	Load on Instrument
MC25043-2.5	GCMSV	Amy Min Yang	10/17/13 15:10	Unload from Instrument
MC25043-2.5	Amy Min Yang	VOC Ref #3	10/17/13 15:10	Return to Storage
MC25043-3.2	Walk In Ref #22	Michael Rolo	10/08/13 07:42	Retrieve from Storage
MC25043-3.2	Michael Rolo		10/09/13 14:36	Depleted
MC25043-3.4	Walk In Ref #9	Michael Rolo	10/10/13 08:07	Retrieve from Storage
MC25043-3.4	Michael Rolo	Walk In Ref #9	10/11/13 09:19	Return to Storage
MC25043-3.5	VOC Ref #3	Amy Min Yang	10/16/13 13:18	Retrieve from Storage
MC25043-3.5	Amy Min Yang	GCMSV	10/16/13 13:18	Load on Instrument
MC25043-3.5	GCMSV	Amy Min Yang	10/17/13 15:10	Unload from Instrument
MC25043-3.5	Amy Min Yang	VOC Ref #3	10/17/13 15:10	Return to Storage
MC25043-4.2	Walk In Ref #22	Michael Rolo	10/08/13 07:42	Retrieve from Storage
MC25043-4.2	Michael Rolo		10/09/13 14:36	Depleted
MC25043-4.3	Walk In Ref #9	Michael Rolo	10/10/13 08:07	Retrieve from Storage
MC25043-4.3	Michael Rolo	Walk In Ref #9	10/11/13 09:19	Return to Storage
MC25043-4.5	VOC Ref #3	Amy Min Yang	10/16/13 13:18	Retrieve from Storage
MC25043-4.5	Amy Min Yang	GCMSV	10/16/13 13:18	Load on Instrument
MC25043-4.5	GCMSV	Amy Min Yang	10/17/13 15:10	Unload from Instrument
MC25043-4.5	Amy Min Yang	VOC Ref #3	10/17/13 15:10	Return to Storage

Accutest Internal Chain of Custody

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Received: 10/04/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC25043-5.1	VOC Ref #3	Amy Min Yang	10/16/13 13:18	Retrieve from Storage
MC25043-5.1	Amy Min Yang	GCMSV	10/16/13 13:18	Load on Instrument
MC25043-5.1	GCMSV	Amy Min Yang	10/17/13 15:10	Unload from Instrument
MC25043-5.1	Amy Min Yang	VOC Ref #3	10/17/13 15:10	Return to Storage
MC25043-6.1	Walk In Ref #9	Michael Rolo	10/10/13 08:07	Retrieve from Storage
MC25043-6.1	Michael Rolo	Walk In Ref #9	10/11/13 09:19	Return to 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: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV926-MB	V24214.D	1	10/16/13	AMY	n/a	n/a	MSV926

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

MC25043-1, MC25043-2, MC25043-3, MC25043-4, MC25043-5

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

Method Blank Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV926-MB	V24214.D	1	10/16/13	AMY	n/a	n/a	MSV926

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

MC25043-1, MC25043-2, MC25043-3, MC25043-4, MC25043-5

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

Method Blank Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV926-MB	V24214.D	1	10/16/13	AMY	n/a	n/a	MSV926

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

MC25043-1, MC25043-2, MC25043-3, MC25043-4, MC25043-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	70-130%
2037-26-5	Toluene-D8	103%	70-130%
460-00-4	4-Bromofluorobenzene	107%	70-130%

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

Blank Spike Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV926-BS	V24211.D	1	10/16/13	AMY	n/a	n/a	MSV926

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

MC25043-1, MC25043-2, MC25043-3, MC25043-4, MC25043-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	44.6	89	70-130
107-02-8	Acrolein	250	446	178* a	70-130
107-13-1	Acrylonitrile	50	44.3	89	70-130
71-43-2	Benzene	50	51.4	103	70-130
108-86-1	Bromobenzene	50	55.0	110	70-130
74-97-5	Bromochloromethane	50	50.8	102	70-130
75-27-4	Bromodichloromethane	50	54.9	110	70-130
75-25-2	Bromoform	50	46.1	92	70-130
74-83-9	Bromomethane	50	48.9	98	70-130
78-93-3	2-Butanone (MEK)	50	48.6	97	70-130
104-51-8	n-Butylbenzene	50	56.0	112	70-130
135-98-8	sec-Butylbenzene	50	59.3	119	70-130
98-06-6	tert-Butylbenzene	50	61.2	122	70-130
75-15-0	Carbon disulfide	50	51.7	103	70-130
56-23-5	Carbon tetrachloride	50	55.4	111	70-130
108-90-7	Chlorobenzene	50	45.0	90	70-130
75-00-3	Chloroethane	50	53.1	106	70-130
110-75-8	2-Chloroethyl vinyl ether	50	45.1	90	70-130
67-66-3	Chloroform	50	57.2	114	70-130
74-87-3	Chloromethane	50	48.9	98	70-130
95-49-8	o-Chlorotoluene	50	60.0	120	70-130
106-43-4	p-Chlorotoluene	50	58.9	118	70-130
124-48-1	Dibromochloromethane	50	48.7	97	70-130
95-50-1	1,2-Dichlorobenzene	50	52.4	105	70-130
541-73-1	1,3-Dichlorobenzene	50	53.6	107	70-130
106-46-7	1,4-Dichlorobenzene	50	50.5	101	70-130
75-71-8	Dichlorodifluoromethane	50	40.1	80	70-130
75-34-3	1,1-Dichloroethane	50	60.7	121	70-130
107-06-2	1,2-Dichloroethane	50	48.7	97	70-130
75-35-4	1,1-Dichloroethene	50	52.9	106	70-130
156-59-2	cis-1,2-Dichloroethene	50	54.7	109	70-130
156-60-5	trans-1,2-Dichloroethene	50	52.3	105	70-130
78-87-5	1,2-Dichloropropane	50	50.4	101	70-130
142-28-9	1,3-Dichloropropane	50	48.4	97	70-130
594-20-7	2,2-Dichloropropane	50	58.9	118	70-130
563-58-6	1,1-Dichloropropene	50	56.0	112	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV926-BS	V24211.D	1	10/16/13	AMY	n/a	n/a	MSV926

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

MC25043-1, MC25043-2, MC25043-3, MC25043-4, MC25043-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	50.7	101	70-130
10061-02-6	trans-1,3-Dichloropropene	50	49.5	99	70-130
123-91-1	1,4-Dioxane	250	226	90	70-130
97-63-2	Ethyl methacrylate	50	48.7	97	77-137
100-41-4	Ethylbenzene	50	50.0	100	70-130
87-68-3	Hexachlorobutadiene	50	61.5	123	70-130
591-78-6	2-Hexanone	50	41.6	83	70-130
98-82-8	Isopropylbenzene	50	59.6	119	70-130
99-87-6	p-Isopropyltoluene	50	60.5	121	70-130
1634-04-4	Methyl Tert Butyl Ether	50	56.1	112	70-130
108-10-1	4-Metbyl-2-pentanone (MIBK)	50	41.6	83	70-130
74-95-3	Metbylene bromide	50	53.2	106	70-130
75-09-2	Methylene chloride	50	52.2	104	70-130
91-20-3	Naphthalene	50	49.1	98	70-130
103-65-1	n-Propylbenzene	50	58.0	116	70-130
100-42-5	Styrene	50	48.9	98	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	46.9	94	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	49.1	98	70-130
127-18-4	Tetrachloroethene	50	54.9	110	70-130
108-88-3	Toluene	50	55.4	111	70-130
87-61-6	1,2,3-Trichlorobenzene	50	55.1	110	70-130
120-82-1	1,2,4-Trichlorobenzene	50	54.2	108	70-130
71-55-6	1,1,1-Trichloroethane	50	56.3	113	70-130
79-00-5	1,1,2-Trichloroethane	50	49.1	98	70-130
79-01-6	Trichloroethene	50	49.6	99	70-130
75-69-4	Trichlorofluoromethane	50	47.9	96	70-130
96-18-4	1,2,3-Trichloropropane	50	51.6	103	70-130
95-63-6	1,2,4-Trimethylbenzene	50	55.3	111	70-130
108-67-8	1,3,5-Trimethylbenzene	50	56.9	114	70-130
108-05-4	Vinyl Acetate	50	50.7	101	70-130
75-01-4	Vinyl chloride	50	47.1	94	70-130
	m,p-Xylene	100	99.6	100	70-130
95-47-6	o-Xylene	50	48.3	97	70-130
1330-20-7	Xylene (total)	150	148	99	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV926-BS	V24211.D	1	10/16/13	AMY	n/a	n/a	MSV926

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

MC25043-1, MC25043-2, MC25043-3, MC25043-4, MC25043-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	70-130%
2037-26-5	Toluene-D8	105%	70-130%
460-00-4	4-Bromofluorobenzene	105%	70-130%

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

6.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25069-1MS	V24234.D	5	10/16/13	AMY	n/a	n/a	MSV926
MC25069-1MSD	V24235.D	5	10/16/13	AMY	n/a	n/a	MSV926
MC25069-1	V24227.D	1	10/16/13	AMY	n/a	n/a	MSV926

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

MC25043-1, MC25043-2, MC25043-3, MC25043-4, MC25043-5

CAS No.	Compound	MC25069-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	97.6	39* [a]	120	48* [a]	21	70-130/30
107-02-8	Acrolein	ND		1250	2350	188* [a]	2310	185* [a]	2	70-130/30
107-13-1	Acrylonitrile	ND		250	209	84	206	82	1	70-130/30
71-43-2	Benzene	ND		250	264	106	259	104	2	70-130/30
108-86-1	Bromobenzene	ND		250	277	111	277	111	0	70-130/30
74-97-5	Bromochloromethane	ND		250	260	104	252	101	3	70-130/30
75-27-4	Bromodichloromethane	ND		250	280	112	271	108	3	70-130/30
75-25-2	Bromoform	ND		250	231	92	223	89	4	70-130/30
74-83-9	Bromomethane	ND		250	269	108	262	105	3	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	155	62* [a]	153	61* [a]	1	70-130/30
104-51-8	n-Butylbenzene	8.4		250	273	106	276	107	1	70-130/30
135-98-8	sec-Butylbenzene	12.3		250	286	109	284	109	1	70-130/30
98-06-6	tert-Butylbenzene	1.4	J	250	295	117	288	115	2	70-130/30
75-15-0	Carbon disulfide	ND		250	258	103	249	100	4	70-130/30
56-23-5	Carbon tetrachloride	ND		250	278	111	269	108	3	70-130/30
108-90-7	Chlorobenzene	ND		250	227	91	221	88	3	70-130/30
75-00-3	Chloroethane	ND		250	295	118	284	114	4	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	ND	0* [a]	ND	0* [a]	nc	70-130/30
67-66-3	Chloroform	ND		250	286	114	277	111	3	70-130/30
74-87-3	Chloromethane	ND		250	244	98	266	106	9	70-130/30
95-49-8	o-Chlorotoluene	ND		250	293	117	286	114	2	70-130/30
106-43-4	p-Chlorotoluene	ND		250	296	118	286	114	3	70-130/30
124-48-1	Dibromochloromethane	ND		250	244	98	239	96	2	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	252	101	252	101	0	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	261	104	260	104	0	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	258	103	257	103	0	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	175	70	209	84	18	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	312	125	301	120	4	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	247	99	239	96	3	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	266	106	258	103	3	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	279	112	271	108	3	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	268	107	259	104	3	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	258	103	253	101	2	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	249	100	240	96	4	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	268	107	256	102	5	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	286	114	276	110	4	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25069-1MS	V24234.D	5	10/16/13	AMY	n/a	n/a	MSV926
MC25069-1MSD	V24235.D	5	10/16/13	AMY	n/a	n/a	MSV926
MC25069-1	V24227.D	1	10/16/13	AMY	n/a	n/a	MSV926

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

MC25043-1, MC25043-2, MC25043-3, MC25043-4, MC25043-5

CAS No.	Compound	MC25069-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	237	95	235	94	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	249	100	247	99	1	70-130/30
123-91-1	1,4-Dioxane	ND		1250	1110	89	1050	84	6	70-130/30
97-63-2	Ethyl methacrylate	ND		250	241	96	235	94	3	72-139/30
100-41-4	Ethylbenzene	ND		250	261	104	254	102	3	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	282	113	311	124	10	70-130/30
591-78-6	2-Hexanone	ND		250	121	48* [a]	117	47* [a]	3	70-130/30
98-82-8	Isopropylbenzene	28.6		250	296	107	288	104	3	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	293	117	291	116	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	276	110	271	108	2	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	196	78	193	77	2	70-130/30
74-95-3	Methylene bromide	ND		250	266	106	260	104	2	70-130/30
75-09-2	Methylene chloride	ND		250	263	105	255	102	3	70-130/30
91-20-3	Naphthalene	ND		250	193	77	236	94	20	70-130/30
103-65-1	n-Propylbenzene	40.9		250	281	96	276	94	2	70-130/30
100-42-5	Styrene	ND		250	249	100	241	96	3	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	242	97	236	94	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	248	99	244	98	2	70-130/30
127-18-4	Tetrachloroethene	ND		250	278	111	270	108	3	70-130/30
108-88-3	Toluene	0.49	J	250	287	115	279	111	3	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	206	82	256	102	22	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	238	95	267	107	11	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	282	113	273	109	3	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	247	99	241	96	2	70-130/30
79-01-6	Trichloroethene	ND		250	253	101	244	98	4	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	238	95	229	92	4	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	247	99	244	98	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	276	110	270	108	2	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	280	112	274	110	2	70-130/30
108-05-4	Vinyl Acetate	ND		250	248	99	243	97	2	70-130/30
75-01-4	Vinyl chloride	ND		250	209	84	202	81	3	70-130/30
	m,p-Xylene	ND		500	510	102	490	98	4	70-130/30
95-47-6	o-Xylene	ND		250	243	97	236	94	3	70-130/30
1330-20-7	Xylene (total)	ND		750	754	101	725	97	4	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25069-1MS	V24234.D	5	10/16/13	AMY	n/a	n/a	MSV926
MC25069-1MSD	V24235.D	5	10/16/13	AMY	n/a	n/a	MSV926
MC25069-1	V24227.D	1	10/16/13	AMY	n/a	n/a	MSV926

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

MC25043-1, MC25043-2, MC25043-3, MC25043-4, MC25043-5

CAS No.	Surrogate Recoveries	MS	MSD	MC25069-1	Limits
1868-53-7	Dibromofluoromethane	93%	92%	97%	70-130%
2037-26-5	Toluene-D8	104%	104%	106%	70-130%
460-00-4	4-Bromofluorobenzene	106%	104%	111%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSV926-CC864	Injection Date:	10/16/13
Lab File ID:	V24210.D	Injection Time:	12:04
Instrument ID:	GCMSV	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	388786	6.56	547727	7.75	310566	11.08	288438	13.29	92549	3.50
Upper Limit [a]	777572	7.06	1095454	8.25	621132	11.58	576876	13.79	185098	4.00
Lower Limit [b]	194393	6.06	273864	7.25	155283	10.58	144219	12.79	46275	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
MSV926-BS	390013	6.57	557844	7.75	317275	11.08	295480	13.29	95217	3.51
MSV926-MB	329069	6.57	482799	7.75	275752	11.08	241332	13.29	80155	3.51
ZZZZZZ	323607	6.57	472371	7.75	271950	11.08	239148	13.29	78063	3.51
ZZZZZZ	312645	6.57	464492	7.75	267740	11.08	237431	13.29	78118	3.50
ZZZZZZ	307583	6.57	460263	7.75	262445	11.08	233619	13.29	77646	3.50
ZZZZZZ	302646	6.57	447208	7.75	257928	11.08	225296	13.29	74058	3.50
MC25043-5	291158	6.57	435019	7.75	254583	11.08	219164	13.29	72800	3.52
ZZZZZZ	290167	6.57	434245	7.75	254697	11.08	219212	13.29	71208	3.51
ZZZZZZ	282322	6.58	427024	7.75	250878	11.08	219370	13.29	71363	3.52
ZZZZZZ	309093	6.57	448757	7.75	268186	11.08	241436	13.29	74461	3.51
MC25043-1	299489	6.58	442752	7.75	257939	11.08	223913	13.29	74453	3.51
MC25043-2	293605	6.58	434645	7.75	258676	11.08	223647	13.29	75125	3.51
MC25043-3	283077	6.58	420997	7.76	245677	11.08	212580	13.29	71405	3.52
MC25043-4	309215	6.57	439119	7.75	256743	11.08	221060	13.29	79615	3.51
MC25069-1	311073	6.57	450125	7.75	271060	11.08	241171	13.29	75132	3.50
ZZZZZZ	364797	6.57	507085	7.75	293590	11.08	271546	13.29	93403	3.51
ZZZZZZ	340704	6.58	508735	7.75	290052	11.08	260814	13.29	87799	3.51
ZZZZZZ	342731	6.57	506017	7.75	289940	11.08	257544	13.29	84417	3.51
ZZZZZZ	387492	6.58	553065	7.75	325027	11.08	292595	13.29	182284	3.53
MC25069-1MS	400245	6.57	566256	7.75	317443	11.08	299908	13.30	92961	3.51
MC25069-1MSD	408395	6.57	575307	7.75	324634	11.09	304035	13.30	94182	3.51

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

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

6.4.1

Volatile Surrogate Recovery Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260B Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC25043-1	V24223.D	101.0	103.0	108.0
MC25043-2	V24224.D	104.0	104.0	107.0
MC25043-3	V24225.D	104.0	104.0	110.0
MC25043-4	V24226.D	98.0	105.0	110.0
MC25043-5	V24219.D	104.0	104.0	109.0
MC25069-1MS	V24234.D	93.0	104.0	106.0
MC25069-1MSD	V24235.D	92.0	104.0	104.0
MSV926-BS	V24211.D	94.0	105.0	105.0
MSV926-MB	V24214.D	99.0	103.0	107.0

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

New England ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35160-MB	R34143.D	1	10/11/13	WK	10/08/13	OP35160	MSR1242

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

MC25043-1, MC25043-2, MC25043-3, MC25043-4

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

Method Blank Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35160-MB	R34143.D	1	10/11/13	WK	10/08/13	OP35160	MSR1242

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

MC25043-1, MC25043-2, MC25043-3, MC25043-4

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

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Flnorophenol	47%	15-110%
4165-62-2	Phenol-d5	31%	15-110%
118-79-6	2,4,6-Tribromophenol	93%	15-110%
4165-60-0	Nitrobenzene-d5	67%	30-130%
321-60-8	2-Fluorobiphenyl	66%	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: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35161-MB	I86335.D	1	10/11/13	WK	10/08/13	OP35161	MSI3213

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

MC25043-1, MC25043-2, MC25043-3, MC25043-4

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
367-12-4	2-Fluorophenol	43%	15-110%
4165-62-2	Phenol-d5	30%	15-110%
118-79-6	2,4,6-Tribromophenol	90%	15-110%
4165-60-0	Nitrobenzene-d5	68%	30-130%
321-60-8	2-Fluorobiphenyl	62%	30-130%
1718-51-0	Terphenyl-d14	85%	30-130%

Blank Spike Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35160-BS	R34144.D	1	10/11/13	WK	10/08/13	OP35160	MSR1242

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

MC25043-1, MC25043-2, MC25043-3, MC25043-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	18.1	36	30-130
95-57-8	2-Chlorophenol	50	43.3	87	30-130
59-50-7	4-Chloro-3-methyl phenol	50	45.7	91	30-130
120-83-2	2,4-Dichlorophenol	50	46.3	93	30-130
105-67-9	2,4-Dimethylphenol	50	39.1	78	30-130
51-28-5	2,4-Dinitrophenol	50	48.2	96	30-130
534-52-1	4,6-Dinitro-o-cresol	50	56.3	113	30-130
95-48-7	2-Methylphenol	50	38.1	76	30-130
	3&4-Methylphenol	100	73.0	73	30-130
88-75-5	2-Nitrophenol	50	48.2	96	30-130
100-02-7	4-Nitrophenol	50	19.7	39	30-130
87-86-5	Pentachlorophenol	50	50.9	102	30-130
108-95-2	Phenol	50	18.7	37	30-130
95-95-4	2,4,5-Trichlorophenol	50	50.3	101	30-130
88-06-2	2,4,6-Trichlorophenol	50	51.1	102	30-130
62-53-3	Aniline	50	33.8	68	40-140
101-55-3	4-Bromophenyl phenyl ether	50	50.8	102	40-140
85-68-7	Butyl benzyl phthalate	50	52.5	105	40-140
100-51-6	Benzyl Alcohol	50	35.8	72	40-140
91-58-7	2-Chloronaphthalene	50	45.4	91	40-140
106-47-8	4-Chloroaniline	50	42.6	85	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	43.8	88	40-140
111-44-4	bis(2-Chloroethyl)ether	50	43.6	87	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	52.1	104	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	47.0	94	40-140
122-66-7	1,2-Diphenylhydrazine	50	48.3	97	40-140
121-14-2	2,4-Dinitrotoluene	50	51.3	103	40-140
606-20-2	2,6-Dinitrotoluene	50	47.8	96	40-140
91-94-1	3,3'-Dichlorobenzidine	50	51.1	102	40-140
132-64-9	Dibenzofuran	50	45.0	90	40-140
84-74-2	Di-n-butyl phthalate	50	50.3	101	40-140
117-84-0	Di-n-octyl phtbalate	50	54.4	109	40-140
84-66-2	Diethyl phthalate	50	43.9	88	40-140
131-11-3	Dimethyl phthalate	50	29.2	58	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	56.2	112	40-140
118-74-1	Hexachlorobenzene	50	50.7	101	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35160-BS	R34144.D	1	10/11/13	WK	10/08/13	OP35160	MSR1242

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

MC25043-1, MC25043-2, MC25043-3, MC25043-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	26.4	53	40-140
67-72-1	Hexachloroethane	50	32.9	66	40-140
78-59-1	Isophorone	50	46.8	94	40-140
88-74-4	2-Nitroaniline	50	48.6	97	40-140
99-09-2	3-Nitroaniline	50	48.0	96	40-140
100-01-6	4-Nitroaniline	50	50.7	101	40-140
98-95-3	Nitrobenzene	50	43.7	87	40-140
62-75-9	n-Nitrosodimethylamine	50	29.6	59	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	46.4	93	40-140
86-30-6	N-Nitrosodiphenylamine	50	48.6	97	40-140
110-86-1	Pyridine	50	25.8	52	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	55%	15-110%
4165-62-2	Phenol-d5	36%	15-110%
118-79-6	2,4,6-Tribromophenol	96%	15-110%
4165-60-0	Nitrobenzene-d5	78%	30-130%
321-60-8	2-Fluorobiphenyl	78%	30-130%
1718-51-0	Terphenyl-d14	93%	30-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35161-BS	I86336.D	1	10/11/13	WK	10/08/13	OP35161	MSI3213

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

MC25043-1, MC25043-2, MC25043-3, MC25043-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	38.9	78	40-140
208-96-8	Acenaphthylene	50	33.1	66	40-140
120-12-7	Anthracene	50	40.1	80	40-140
56-55-3	Benzo(a)anthracene	50	46.1	92	40-140
50-32-8	Benzo(a)pyrene	50	45.4	91	40-140
205-99-2	Benzo(b)fluoranthene	50	47.9	96	40-140
191-24-2	Benzo(g,h,i)perylene	50	49.9	100	40-140
207-08-9	Benzo(k)fluoranthene	50	46.2	92	40-140
218-01-9	Chrysene	50	42.8	86	40-140
53-70-3	Dibenzo(a,h)anthracene	50	51.9	104	40-140
206-44-0	Fluoranthene	50	42.7	85	40-140
86-73-7	Fluorene	50	42.1	84	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	52.2	104	40-140
90-12-0	1-Methylnaphthalene	50	36.8	74	40-140
91-57-6	2-Methylnaphthalene	50	34.7	69	40-140
85-01-8	Phenanthrene	50	43.7	87	40-140
129-00-0	Pyrene	50	41.5	83	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	96%	15-110%
4165-60-0	Nitrobenzene-d5	79%	30-130%
321-60-8	2-Fluorobiphenyl	71%	30-130%
1718-51-0	Terphenyl-d14	89%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35160-MS	R34313.D	1	10/17/13	KR	10/08/13	OP35160	MSR1249
OP35160-MSD	R34314.D	1	10/17/13	KR	10/08/13	OP35160	MSR1249
MC24900-18	R34315.D	1	10/17/13	KR	10/08/13	OP35160	MSR1249
MC24900-18 [a]	R34365.D	1	10/21/13	KR	10/08/13	OP35160	MSR1249

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

MC25043-1, MC25043-2, MC25043-3, MC25043-4

7.3.1

7

CAS No.	Compound	MC24900-18 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND [b]		52.1	20.7	40	18.0	33	14	30-130/20
95-57-8	2-Chlorophenol	ND [b]		52.1	38.7	74	34.5	63	11	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND [b]		52.1	29.1	56	31.6	58	8	30-130/20
120-83-2	2,4-Dichlorophenol	ND [b]		52.1	39.1	75	35.9	66	9	30-130/20
105-67-9	2,4-Dimethylphenol	ND [b]		52.1	8.7	17* [c]	11.8	22* [c]	30* [d]	30-130/20
51-28-5	2,4-Dinitrophenol	ND [b]		52.1	57.7	111	51.4	95	12	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND [b]		52.1	60.7	117	58.1	107	4	30-130/20
95-48-7	2-Methylphenol	ND [b]		52.1	21.7	42	26.3	48	19	30-130/20
	3&4-Methylphenol	ND [b]		104	40.5	39	47.6	44	16	30-130/20
88-75-5	2-Nitrophenol	ND [b]		52.1	47.2	91	38.7	71	20	30-130/20
100-02-7	4-Nitrophenol	ND [b]		52.1	28.9	55	20.5	38	34* [d]	30-130/20
87-86-5	Pentachlorophenol	ND [b]		52.1	11.4	22* [c]	13.1	24* [c]	14	30-130/20
108-95-2	Phenol	ND [b]		52.1	18.6	36	17.5	32	6	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND [b]		52.1	45.2	87	43.0	79	5	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND [b]		52.1	40.2	77	40.2	74	0	30-130/20
62-53-3	Aniline	ND [b]		52.1	23.4	45	24.3	45	4	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND [b]		52.1	48.1	92	44.1	81	9	40-140/20
85-68-7	Butyl benzyl phthalate	ND [b]		52.1	50.7	97	50.6	93	0	40-140/20
100-51-6	Benzyl Alcohol	ND [b]		52.1	40.1	77	36.0	66	11	40-140/20
91-58-7	2-Chloronaphthalene	ND [b]		52.1	44.0	84	40.1	74	9	40-140/20
106-47-8	4-Chloroaniline	ND [b]		52.1	35.0	67	33.9	62	3	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND [b]		52.1	41.8	80	35.8	66	15	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND [b]		52.1	41.0	79	36.9	68	11	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND [b]		52.1	44.1	85	39.1	72	12	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND [b]		52.1	46.6	89	41.5	76	12	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND [b]		52.1	43.4	83	40.8	75	6	40-140/20
121-14-2	2,4-Dinitrotoluene	ND [b]		52.1	56.6	109	52.2	96	8	40-140/20
606-20-2	2,6-Dinitrotoluene	ND [b]		52.1	51.8	99	46.4	85	11	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND [b]		52.1	45.0	86	50.1	92	11	40-140/20
132-64-9	Dibenzofuran	ND [b]		52.1	45.2	87	39.8	73	13	40-140/20
84-74-2	Di-n-butyl phthalate	ND [b]		52.1	47.3	91	47.5	87	0	40-140/20
117-84-0	Di-n-octyl phthalate	ND [b]		52.1	53.8	103	53.4	98	1	40-140/20
84-66-2	Diethyl phthalate	ND [b]		52.1	47.1	90	44.1	81	7	40-140/20
131-11-3	Dimethyl phthalate	ND [b]		52.1	33.0	63	31.6	58	4	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND [b]		52.1	53.7	103	53.6	99	0	40-140/20
118-74-1	Hexachlorobenzene	ND [b]		52.1	47.4	91	44.4	82	7	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35160-MS	R34313.D	1	10/17/13	KR	10/08/13	OP35160	MSR1249
OP35160-MSD	R34314.D	1	10/17/13	KR	10/08/13	OP35160	MSR1249
MC24900-18	R34315.D	1	10/17/13	KR	10/08/13	OP35160	MSR1249
MC24900-18 [a]	R34365.D	1	10/21/13	KR	10/08/13	OP35160	MSR1249

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

MC25043-1, MC25043-2, MC25043-3, MC25043-4

7.3.1

7

CAS No.	Compound	MC24900-18 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND [b]		52.1	23.6	45	20.2	37* [c]	16	40-140/20
67-72-1	Hexachloroethane	ND [b]		52.1	25.8	50	23.6	43	9	40-140/20
78-59-1	Isophorone	ND [b]		52.1	43.5	84	38.8	71	11	40-140/20
88-74-4	2-Nitroaniline	ND [b]		52.1	51.3	98	47.8	88	7	40-140/20
99-09-2	3-Nitroaniline	ND [b]		52.1	49.1	94	48.0	88	2	40-140/20
100-01-6	4-Nitroaniline	ND [b]		52.1	52.1	100	51.7	95	1	40-140/20
98-95-3	Nitrobenzene	ND [b]		52.1	39.8	76	33.7	62	17	40-140/20
62-75-9	n-Nitrosodimetbylamine	ND [b]		52.1	28.7	55	25.3	47	13	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND [b]		52.1	43.8	84	40.6	75	8	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND [b]		52.1	47.1	90	43.9	81	7	40-140/20
110-86-1	Pyridine	ND [b]		52.1	21.9	42	21.7	40	1	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC24900-18	MC24900-18	Limits
367-12-4	2-Fluoropbenol	43%	39%	38%	34%	15-110%
4165-62-2	Phenol-d5	29%	29%	24%	22%	15-110%
118-79-6	2,4,6-Tribromophenol	66%	66%	71%	66%	15-110%
4165-60-0	Nitrobenzene-d5	70%	57%	72%	76%	30-130%
321-60-8	2-Fluorobiphenyl	70%	61%	73%	73%	30-130%
1718-51-0	Terphenyl-d14	81%	80%	92%	90%	30-130%

(a) Confirmation run for internal standard areas.
(b) Result is from Run #2.
(c) Ontside control limits due to possible matrix interference. Refer to Blank Spike.
(d) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35161-MS	I86337.D	1	10/11/13	WK	10/08/13	OP35161	MSI3213
OP35161-MSD	I86338.D	1	10/11/13	WK	10/08/13	OP35161	MSI3213
MC25015-7	I86339.D	1	10/11/13	WK	10/08/13	OP35161	MSI3213

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

MC25043-1, MC25043-2, MC25043-3, MC25043-4

CAS No.	Compound	MC25015-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		52.1	38.0	73	34.5	63	10	40-140/20
208-96-8	Acenaphthylene	ND		52.1	32.6	63	29.8	55	9	40-140/20
120-12-7	Anthracene	ND		52.1	39.2	75	37.4	69	5	40-140/20
56-55-3	Benzo(a)anthracene	ND		52.1	44.7	86	44.7	82	0	40-140/20
50-32-8	Benzo(a)pyrene	ND		52.1	42.5	82	42.5	78	0	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		52.1	46.3	89	41.9	77	10	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		52.1	47.4	91	46.6	86	2	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		52.1	42.0	81	46.5	86	10	40-140/20
218-01-9	Chrysene	ND		52.1	40.8	78	40.8	75	0	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		52.1	49.4	95	48.8	90	1	40-140/20
206-44-0	Fluoranthene	0.046		52.1	42.0	81	40.9	75	3	40-140/20
86-73-7	Fluorene	ND		52.1	41.2	79	37.6	69	9	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		52.1	49.2	94	48.8	90	1	40-140/20
90-12-0	1-Methylnaphthalene	ND		52.1	34.9	67	31.2	57	11	40-140/20
91-57-6	2-Methylnaphthalene	ND		52.1	32.9	63	29.3	54	12	40-140/20
85-01-8	Phenanthrene	ND		52.1	43.1	83	41.0	75	5	40-140/20
129-00-0	Pyrene	ND		52.1	40.3	77	39.3	72	3	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25015-7	Limits
367-12-4	2-Fluorophenol	40%	36%		15-110%
4165-62-2	Phenol-d5	27%	25%		15-110%
118-79-6	2,4,6-Tribromophenol	67%	68%		15-110%
4165-60-0	Nitrobenzene-d5	72%	61%	74%	30-130%
321-60-8	2-Fluorobiphenyl	65%	56%	67%	30-130%
1718-51-0	Terphenyl-d14	81%	77%	89%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3213-CC3155	Injection Date:	10/11/13
Lab File ID:	I86310.D	Injection Time:	11:20
Instrument ID:	GCMSI	Method:	SW846 8270C 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	195122	4.10	575800	5.09	340804	6.53	592043	7.88	512004	10.66	847776	12.14
Upper Limit [a]	390244	4.60	1151600	5.59	681608	7.03	1184086	8.38	1024008	11.16	1695552	12.64
Lower Limit [b]	97561	3.60	287900	4.59	170402	6.03	296022	7.38	256002	10.16	423888	11.64
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
OP35097-MB	159138	4.10	469535	5.09	274723	6.53	464906	7.88	409332	10.66	687209	12.14
OP35097-BS	165182	4.10	482287	5.09	282492	6.53	481467	7.88	404429	10.66	693886	12.14
OP35097-MS	157487	4.10	464089	5.09	269313	6.53	471208	7.88	407304	10.66	692755	12.14
OP35097-MSD	166501	4.10	486706	5.09	281223	6.53	477256	7.88	403297	10.66	684974	12.14
MC24900-9	175879	4.10	510003	5.09	294476	6.53	501727	7.88	425207	10.66	709635	12.14
ZZZZZZ	166266	4.10	484001	5.09	283215	6.53	480922	7.88	420165	10.66	713432	12.14
ZZZZZZ	161951	4.10	476321	5.09	276008	6.53	469390	7.88	402343	10.66	670944	12.14
ZZZZZZ	161114	4.10	473921	5.09	278423	6.53	471361	7.88	411180	10.66	693549	12.14
ZZZZZZ	163079	4.10	477315	5.09	278007	6.53	466720	7.88	402395	10.66	674884	12.14
ZZZZZZ	152869	4.10	450119	5.09	264151	6.53	453145	7.88	403459	10.66	692406	12.14
ZZZZZZ	167353	4.10	481473	5.09	282448	6.53	475564	7.88	403959	10.66	678642	12.14
ZZZZZZ	163720	4.10	477963	5.09	276137	6.53	481152	7.88	410560	10.66	686441	12.14
ZZZZZZ	182676	4.11	534278	5.10	306452	6.53	528015	7.88	438342	10.66	721077	12.14
ZZZZZZ	181601	4.10	524395	5.09	305951	6.53	521894	7.88	445893	10.66	755961	12.14
ZZZZZZ	177729	4.10	513642	5.09	297633	6.53	505032	7.88	428896	10.66	719438	12.14
ZZZZZZ	177414	4.10	508738	5.09	297625	6.53	506705	7.88	436445	10.66	728742	12.14
ZZZZZZ	166041	4.10	474524	5.09	274316	6.53	464495	7.88	397715	10.66	673336	12.14
ZZZZZZ	166280	4.10	479788	5.09	277887	6.53	469830	7.88	400659	10.66	672891	12.14
ZZZZZZ	175031	4.10	503741	5.09	289539	6.53	493314	7.88	422726	10.66	691382	12.14
ZZZZZZ	166084	4.10	482751	5.09	279689	6.53	476358	7.88	415735	10.66	693293	12.14
ZZZZZZ	183363	4.10	521788	5.09	296651	6.53	491752	7.88	412424	10.66	685215	12.14
ZZZZZZ	167501	4.10	488399	5.09	285517	6.53	486065	7.88	420384	10.66	699600	12.14
ZZZZZZ	164984	4.10	478271	5.09	279889	6.53	481374	7.88	420029	10.66	701256	12.14
OP35161-MB	178981	4.10	526416	5.09	307327	6.53	524648	7.88	461729	10.66	772857	12.14
OP35161-BS	179631	4.10	518404	5.09	304285	6.53	517701	7.88	435660	10.66	715557	12.14
OP35161-MS	160448	4.10	463470	5.09	267180	6.53	450783	7.88	379677	10.66	640254	12.14
OP35161-MSD	167480	4.10	486965	5.09	283518	6.53	485547	7.88	413663	10.66	696988	12.14
MC25015-7	156314	4.10	452024	5.09	262109	6.53	441050	7.88	373391	10.66	626822	12.14

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

7.4.1

7

Semivolatile Internal Standard Area Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3213-CC3155	Injection Date:	10/11/13
Lab File ID:	I86310.D	Injection Time:	11:20
Instrument ID:	GCMSI	Method:	SW846 8270C BY SIM

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

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

7.4.1

7

Semivolatile Internal Standard Area Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3218-CC3155	Injection Date:	10/17/13
Lab File ID:	I86475.D	Injection Time:	17:14
Instrument ID:	GCMSI	Method:	SW846 8270C 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	186539	4.08	553236	5.07	327771	6.51	572418	7.85	513909	10.64	873289	12.12
Upper Limit [a]	373078	4.58	1106472	5.57	655542	7.01	1144836	8.35	1027818	11.14	1746578	12.62
Lower Limit [b]	93270	3.58	276618	4.57	163886	6.01	286209	7.35	256955	10.14	436645	11.62
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
OP35287-MB	171252	4.08	508401	5.07	303024	6.51	515608	7.85	469061	10.64	787389	12.12
OP35287-BS	178417	4.08	527329	5.07	310779	6.51	538482	7.86	460349	10.64	751898	12.12
OP35287-BSD	160356	4.08	481078	5.07	288664	6.51	496281	7.85	439169	10.64	736923	12.12
OP35287-MS	172743	4.08	511836	5.07	302954	6.51	519687	7.86	452019	10.64	758451	12.12
OP35287-MSD	164541	4.08	480426	5.07	284291	6.51	483193	7.86	410805	10.64	684461	12.12
MC25237-1	171575	4.08	505779	5.07	300701	6.51	517061	7.85	457462	10.64	762887	12.12
MC25043-1	157861	4.08	468565	5.07	281521	6.51	482906	7.85	430578	10.64	735209	12.12
MC25043-2	159655	4.08	477515	5.07	282839	6.51	491205	7.85	441935	10.64	746315	12.12
MC25043-3	166139	4.08	493659	5.07	293538	6.51	497903	7.85	454364	10.64	760524	12.12
MC25043-4	157111	4.08	468747	5.07	278530	6.51	480938	7.85	434643	10.64	731777	12.12
ZZZZZZ	147374	4.08	434347	5.07	260211	6.51	452132	7.85	412041	10.64	686868	12.12
ZZZZZZ	147040	4.08	447381	5.07	262383	6.51	454717	7.85	408504	10.64	662931	12.12
ZZZZZZ	148092	4.08	435286	5.07	259577	6.51	449464	7.85	394839	10.64	646022	12.12
ZZZZZZ	143453	4.08	427401	5.07	255540	6.51	447714	7.85	406328	10.64	669459	12.12
ZZZZZZ	155044	4.08	454073	5.07	272072	6.51	466607	7.85	427744	10.64	711118	12.12
ZZZZZZ	153144	4.08	449210	5.07	267112	6.51	458618	7.85	412185	10.64	669905	12.12
ZZZZZZ	153917	4.08	455693	5.07	273877	6.51	470604	7.85	427275	10.64	683730	12.12
ZZZZZZ	156177	4.08	457378	5.07	273078	6.51	469896	7.85	411033	10.64	655659	12.12
ZZZZZZ	148791	4.08	437204	5.07	261707	6.51	448436	7.85	410557	10.64	667678	12.12
ZZZZZZ	155809	4.08	460267	5.07	272622	6.51	469776	7.85	419414	10.64	686574	12.12
ZZZZZZ	149802	4.08	445240	5.07	268158	6.51	461770	7.85	420268	10.64	688312	12.12
ZZZZZZ	146370	4.08	436742	5.07	258770	6.51	443927	7.85	404157	10.64	665570	12.12
ZZZZZZ	163089	4.08	481081	5.07	287867	6.51	488299	7.85	437756	10.64	716088	12.12
ZZZZZZ	202919	4.09	623028	5.08	387708	6.52	635631	7.86	586125	10.64	954584	12.12
ZZZZZZ	178802	4.08	538019	5.07	333670	6.52	550429	7.86	501852	10.64	829624	12.12
ZZZZZZ	145455	4.08	426804	5.07	253044	6.51	435862	7.85	384821	10.64	640217	12.12
ZZZZZZ	160558	4.08	466102	5.07	272568	6.51	467078	7.85	409249	10.64	680141	12.12

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

Semivolatile Internal Standard Area Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3218-CC3155	Injection Date:	10/17/13
Lab File ID:	I86475.D	Injection Time:	17:14
Instrument ID:	GCMSI	Method:	SW846 8270C BY SIM

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

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

Semivolatile Internal Standard Area Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSR1242-CC1239	Injection Date:	10/11/13
Lab File ID:	R34137.D	Injection Time:	08:25
Instrument ID:	GCMSR	Method:	SW846 8270C

	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	125199	4.80	464067	6.13	288245	8.04	503046	9.65	557071	12.83	533159	16.40
Upper Limit [a]	250398	5.30	928134	6.63	576490	8.54	1006092	10.15	1114142	13.33	1066318	16.90
Lower Limit [b]	62600	4.30	232034	5.63	144123	7.54	251523	9.15	278536	12.33	266580	15.90

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
OP35182-MB	122091	4.80	444279	6.13	270022	8.04	469269	9.65	491907	12.83	478633	16.40
OP35182-BS	131815	4.80	476169	6.13	292839	8.05	495938	9.65	527070	12.83	501360	16.41
OP35182-MS	114526	4.82	406641	6.14	250889	8.05	425813	9.65	464104	12.83	439699	16.41
OP35182-MSD	109748	4.81	406084	6.14	244905	8.05	424721	9.65	469343	12.83	451144	16.41
OP35160-MB	113364	4.80	422412	6.13	260263	8.04	441120	9.65	495947	12.83	473223	16.40
OP35160-BS	115534	4.80	418675	6.13	256827	8.04	422760	9.65	477048	12.83	458914	16.41
ZZZZZZ	101485	4.80	366447	6.13	222486	8.04	383181	9.65	423083	12.83	420224	16.40
ZZZZZZ	111483	4.80	398415	6.13	255661	8.04	427781	9.65	472253	12.83	464812	16.40
MC25138-1	124964	4.82	446766	6.13	278707	8.04	463786	9.65	505501	12.83	490875	16.40
ZZZZZZ	128258	4.82	457004	6.14	277518	8.04	469405	9.65	513618	12.83	502847	16.40
ZZZZZZ	121756	4.82	434535	6.14	262503	8.04	448271	9.65	493010	12.83	475228	16.40
ZZZZZZ	123177	4.80	432535	6.13	262864	8.04	451097	9.65	492352	12.83	446992	16.41
ZZZZZZ	108943	4.80	389876	6.13	241007	8.04	416215	9.65	457459	12.83	427105	16.41
ZZZZZZ	110335	4.80	397931	6.13	248040	8.05	425119	9.65	492562	12.86	479517	16.49
ZZZZZZ	116550	4.80	429327	6.13	262231	8.05	440644	9.65	482711	12.83	482368	16.43
ZZZZZZ	115638	4.80	426463	6.13	259058	8.05	445554	9.65	495746	12.83	484837	16.43
OP35062-MB	111730	4.81	399953	6.13	250846	8.05	430681	9.65	480538	12.83	454894	16.42
OP35062-BS	111392	4.80	397462	6.13	247229	8.05	431134	9.65	455166	12.84	451054	16.43
OP35062-MS	104231	4.80	392413	6.13	237473	8.05	417287	9.65	446175	12.84	438383	16.42
OP35062-MSD	110575	4.80	387493	6.13	239082	8.05	399528	9.65	456347	12.84	450886	16.42
MC24900-6	118171	4.80	434993	6.13	265208	8.05	457145	9.65	501667	12.83	486192	16.42
ZZZZZZ	115435	4.81	421811	6.13	254847	8.05	445107	9.65	510717	12.89	494846	16.47

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

Semivolatile Internal Standard Area Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSR1249-CC1239	Injection Date:	10/17/13
Lab File ID:	R34303.D	Injection Time:	17:27
Instrument ID:	GCMSR	Method:	SW846 8270C

	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	119831	4.75	438323	6.07	276363	7.98	470656	9.59	510356	12.74	486740	16.26
Upper Limit [a]	239662	5.25	876646	6.57	552726	8.48	941312	10.09	1020712	13.24	973480	16.76
Lower Limit [b]	59916	4.25	219162	5.57	138182	7.48	235328	9.09	255178	12.24	243370	15.76
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
ZZZZZZ	64593	4.75	229942	6.07	141041	7.98	240914	9.58	261860	12.73	244706	16.24
ZZZZZZ	61079	4.75	225402	6.07	140527	7.98	240860	9.58	270748	12.73	253747	16.24
ZZZZZZ	65370	4.75	237348	6.07	144879	7.98	252513	9.58	267798	12.73	258321	16.24
ZZZZZZ	66166	4.75	252619	6.07	153183	7.98	260874	9.58	283874	12.73	264828	16.24
ZZZZZZ	69656	4.75	261425	6.07	159414	7.99	265302	9.59	290831	12.73	275643	16.24
OP35160-MS	77558	4.75	282599	6.07	170155	7.98	295201	9.59	322342	12.74	294420	16.25
OP35160-MSD	75334	4.75	287714	6.07	171221	7.98	293526	9.59	323486	12.74	301809	16.25
MC24900-18	46345[c]	4.75	171984[c]	6.07	104979[c]	7.98	179115[c]	9.58	197200[c]	12.73	185388[c]	16.24
ZZZZZZ	76476	4.75	284664	6.07	172383	7.98	291357	9.58	328322	12.73	303469	16.24
ZZZZZZ	72514	4.75	268286	6.07	162494	7.98	280238	9.58	309684	12.73	288961	16.24
ZZZZZZ	76932	4.75	285034	6.07	172775	7.98	296495	9.58	329242	12.73	298144	16.24
MC25043-1	77176	4.75	293341	6.07	177784	7.98	304861	9.58	329234	12.73	310090	16.24
MC25043-2	80654	4.75	297921	6.07	180369	7.98	305885	9.58	331794	12.73	311981	16.25
MC25043-3	78602	4.75	292186	6.07	178508	7.98	305641	9.58	336433	12.73	319975	16.25
MC25043-4	79771	4.75	292481	6.07	175226	7.98	304570	9.58	337356	12.73	325787	16.24

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

7.4.4

Semivolatile Surrogate Recovery Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC25043-1	R34319.D	24.0	18.0	43.0	68.0	65.0	95.0
MC25043-2	R34320.D	44.0	30.0	87.0	71.0	73.0	94.0
MC25043-3	R34321.D	34.0	26.0	65.0	76.0	78.0	95.0
MC25043-4	R34322.D	31.0	24.0	67.0	76.0	80.0	93.0
OP35160-BS	R34144.D	55.0	36.0	96.0	78.0	78.0	93.0
OP35160-MB	R34143.D	47.0	31.0	93.0	67.0	66.0	90.0
OP35160-MS	R34313.D	43.0	29.0	66.0	70.0	70.0	81.0
OP35160-MSD	R34314.D	39.0	29.0	66.0	57.0	61.0	80.0

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorohiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

Semivolatile Surrogate Recovery Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270C BY SIM Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC25043-1	I86482.D	21.0	18.0	45.0	69.0	59.0	89.0
MC25043-2	I86483.D	41.0	28.0	87.0	73.0	68.0	87.0
MC25043-3	I86484.D	31.0	25.0	67.0	78.0	71.0	92.0
MC25043-4	I86485.D	30.0	22.0	66.0	77.0	70.0	88.0
OP35161-BS	I86336.D	49.0	33.0	96.0	79.0	71.0	89.0
OP35161-MB	I86335.D	43.0	30.0	90.0	68.0	62.0	85.0
OP35161-MS	I86337.D	40.0	27.0	67.0	72.0	65.0	81.0
OP35161-MSD	I86338.D	36.0	25.0	68.0	61.0	56.0	77.0

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

7.5.2

7

New England ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35197-MB	YZ84619.D	1	10/10/13	CZ	10/10/13	OP35197	GYZ7333

The QC reported here applies to the following samples: Method: SW846 8011

MC25043-1, MC25043-2, MC25043-3, MC25043-4, MC25043-6

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	114%	36-173%
460-00-4	Bromofluorobenzene (S)	108%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35197-BS	YZ84620.D	1	10/10/13	CZ	10/10/13	OP35197	GYZ7333

The QC reported here applies to the following samples: Method: SW846 8011

MC25043-1, MC25043-2, MC25043-3, MC25043-4, MC25043-6

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	0.069	97	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	126%	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: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35197-MS	YZ84621.D	1	10/10/13	CZ	10/10/13	OP35197	GYZ7333
OP35197-MSD	YZ84622.D	1	10/10/13	CZ	10/10/13	OP35197	GYZ7333
MC24900-22	YZ84623.D	1	10/11/13	CZ	10/10/13	OP35197	GYZ7333

The QC reported here applies to the following samples: Method: SW846 8011

MC25043-1, MC25043-2, MC25043-3, MC25043-4, MC25043-6

CAS No.	Compound	MC24900-22 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.073	103	0.079	111	8	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.093	131	0.091	128	2	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC24900-22	Limits
460-00-4	Bromofluorobenzene (S)	124%	126%	129%	36-173%
460-00-4	Bromofluorobenzene (S)	115%	119%	123%	36-173%

8.3.1

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011 Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC25043-1	YZ84629.D	127.0	117.0
MC25043-2	YZ84630.D	130.0	122.0
MC25043-3	YZ84631.D	133.0	125.0
MC25043-4	YZ84632.D	141.0	130.0
MC25043-6	YZ84633.D	125.0	117.0
OP35197-BS	YZ84620.D	126.0	118.0
OP35197-MB	YZ84619.D	114.0	108.0
OP35197-MS	YZ84621.D	124.0	115.0
OP35197-MSD	YZ84622.D	126.0	119.0

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7333-CC7331	Injection Date:	10/10/13
Lab File ID:	YZ84616.D	Injection Time:	20:59
Instrument ID:	GCYZ	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	2.98	2.90

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	YZ84617.D	10/10/13	21:27	2.98	2.90
ZZZZZZ	YZ84618.D	10/10/13	21:55	2.98	2.90
OP35197-MB	YZ84619.D	10/10/13	22:23	2.98	2.90
OP35197-BS	YZ84620.D	10/10/13	22:51	2.98	2.90
OP35197-MS	YZ84621.D	10/10/13	23:19	2.97	2.90
OP35197-MSD	YZ84622.D	10/10/13	23:45	2.98	2.90
MC24900-22	YZ84623.D	10/11/13	00:12	2.97	2.90
ZZZZZZ	YZ84624.D	10/11/13	00:40	2.97	2.90
ZZZZZZ	YZ84625.D	10/11/13	01:07	2.98	2.90
ZZZZZZ	YZ84626.D	10/11/13	01:34	2.98	2.90

Surrogate Compounds

S1 = Bromoflnorobenzene (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: MC25043
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7333-CC7331	Injection Date:	10/11/13
Lab File ID:	YZ84627.D	Injection Time:	02:01
Instrument ID:	GCYZ	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	2.97	2.90

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	YZ84628.D	10/11/13	02:29	2.97	2.90
MC25043-1	YZ84629.D	10/11/13	02:56	2.97	2.90
MC25043-2	YZ84630.D	10/11/13	03:23	2.98	2.90
MC25043-3	YZ84631.D	10/11/13	03:50	2.98	2.90
MC25043-4	YZ84632.D	10/11/13	04:16	2.98	2.90
MC25043-6	YZ84633.D	10/11/13	04:43	2.98	2.90
OP35198-MB	YZ84634.D	10/11/13	05:10	2.98	2.90
OP35198-BS	YZ84635.D	10/11/13	05:37	2.98	2.90
OP35198-MS	YZ84636.D	10/11/13	06:02	2.98	2.90
OP35198-MSD	YZ84637.D	10/11/13	06:28	2.98	2.90

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.2

Roxana Groundwater Quarterly – 4th Quarter 2013 Data Review

Laboratory SDG: MC25107

Data Reviewer: Elizabeth Kunkel

Peer Reviewer: Steve Gragert

Date Reviewed: 11/14/2013

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

Sample Identification	Sample Identification
MW6D-ROX-100713	MW6C-ROX-100713
MW6B-ROX-100713	MW6A-ROX-100713-EB
MW6A-ROX-100713	MW6A-ROX-100713-Dup
MW12-ROX-100713	MW11-ROX-100713
TB-ROX-100713-HCL	TB-ROX-100713-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. SVOC acid fraction surrogate recoveries were outside evaluation criteria in sample MW12-ROX-100713-Run#1. SVOC sample MW12-ROX-100713 was re-extracted outside of hold time. VOC MS/MSD recoveries were outside evaluation criteria in sample MW11-ROX-100713. Although not indicated in the laboratory case narrative, compounds were detected in the method blank and equipment blank. These issues are addressed further in the appropriate sections below. Additionally, the continuing calibration verification for acrolein exceeded 50 percent difference (%D).

The cooler receipt form indicated that three of three coolers were received by the laboratory at temperatures of 0.5ºC, 0.9ºC, and 0.8ºC 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?

No, sample MW12-ROX-100713 was re-extracted 10 days outside of extraction holding time criteria (7 days) due to low recoveries of acid fraction surrogates in the original analysis. The re-extracted/re-analysis confirmation run indicates matrix interference. Data was reported and qualified from the original analysis (section 6.0 of this data review). No further qualification of data was required.

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
OP35215-MB	SVOCs	Diethyl phthalate	0.99 ug/L
MW6A-ROX-100713-EB	SVOCs	1,2-Diphenylhydrazine	2.3 ug/L
MW6A-ROX-100713-EB	SVOCs	Diethyl phthalate	0.82 ug/L
MW6A-ROX-100713-EB	SVOCs	bis(2-Ethylhexyl)phthalate	0.62 ug/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-100713	SVOCs	Diethyl phthalate	-	**U**
MW6C-ROX-100713	SVOCs	Diethyl phthalate	-	**U**
MW6C-ROX-100713	SVOCs	bis(2-Ethylhexyl)phthalate	-	**U**
MW6B-ROX-100713	SVOCs	Diethyl phthalate	-	**U**
MW6B-ROX-100713	SVOCs	bis(2-Ethylhexyl)phthalate	-	**U**
MW6A-ROX-100713	SVOCs	Diethyl phthalate	-	**U**
MW12-ROX-100713	SVOCs	Diethyl phthalate	-	**U**
MW11-ROX-100713	SVOCs	Diethyl phthalate	-	**U**
MW11-ROX-100713	SVOCs	bis(2-Ethylhexyl)phthalate	-	**U**

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV929-BS	VOCs	Acetone	**61**	70-130
MSV929-BS	VOCs	Acrolein	**185**	70-130
MSV929-BS	VOCs	2-Hexanone	**57**	70-130
OP35215-BS	SVOCs	Dimethyl phthalate	**31**	40-140
OP35388-BS	SVOCs	4-Nitrophenol	**28**	30-130

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS OP35388-BS was associated with MW12-ROX-100713-Run#2 (confirmation run).

Sample ID	Parameter	Analyte	Qualification
MW6D-ROX-100713	VOCs	Acetone	**UJ**

Sample ID	Parameter	Analyte	Qualification
MW6D-ROX-100713	VOCs	2-Hexanone	**UJ**
MW6D-ROX-100713	SVOCs	Dimethyl phthalate	**UJ**
MW6C-ROX-100713	VOCs	Acetone	**UJ**
MW6C-ROX-100713	VOCs	2-Hexanone	**UJ**
MW6C-ROX-100713	SVOCs	Dimethyl phthalate	**UJ**
MW6B-ROX-100713	VOCs	Acetone	**UJ**
MW6B-ROX-100713	VOCs	2-Hexanone	**UJ**
MW6B-ROX-100713	SVOCs	Dimethyl phthalate	**UJ**
MW6A-ROX-100713	VOCs	Acetone	**UJ**
MW6A-ROX-100713	VOCs	2-Hexanone	**UJ**
MW6A-ROX-100713	SVOCs	Dimethyl phthalate	**UJ**
MW6A-ROX-100713-Dup	VOCs	Acetone	**UJ**
MW6A-ROX-100713-Dup	VOCs	2-Hexanone	**UJ**
MW6A-ROX-100713-Dup	SVOCs	Dimethyl phthalate	**UJ**
MW12-ROX-100713	VOCs	Acetone	**UJ**
MW12-ROX-100713	VOCs	2-Hexanone	**UJ**
MW12-ROX-100713	SVOCs	Dimethyl phthalate	**UJ**
MW11-ROX-100713	VOCs	Acetone	**UJ**
MW11-ROX-100713	VOCs	2-Hexanone	**UJ**
MW11-ROX-100713	SVOCs	Dimethyl phthalate	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW12-ROX-100713-Run#1	SVOCs	2-Fluorophenol	**11**	15-110
MW12-ROX-100713-Run#1	SVOCs	Phenol-d_5	**8**	15-110

Analytical data that required qualification based on surrogate data are included in the table below.

Sample ID	Parameter	Analyte	Qualification
MW12-ROX-100713-Run#1	SVOCs	Benzoic acid	**UJ**
MW12-ROX-100713-Run#1	SVOCs	2-Chlorophenol	**UJ**
MW12-ROX-100713-Run#1	SVOCs	4-Chloro-3-methyl phenol	**UJ**
MW12-ROX-100713-Run#1	SVOCs	2,4-Dichlorophenol	**UJ**
MW12-ROX-100713-Run#1	SVOCs	2,4-Dimethylphenol	**UJ**
MW12-ROX-100713-Run#1	SVOCs	2,4-Dinitrophenol	**UJ**
MW12-ROX-100713-Run#1	SVOCs	4,6-Dinitro-o-cresol	**UJ**
MW12-ROX-100713-Run#1	SVOCs	2-Methylphenol	**UJ**
MW12-ROX-100713-Run#1	SVOCs	3&4-Methylphenol	**UJ**
MW12-ROX-100713-Run#1	SVOCs	2-Nitrophenol	**UJ**
MW12-ROX-100713-Run#1	SVOCs	4-Nitrophenol	**UJ**
MW12-ROX-100713-Run#1	SVOCs	Pentachlorophenol	**J**

Sample ID	Parameter	Analyte	Qualification
MW12-ROX-100713-Run#1	SVOCs	Phenol	**UJ**
MW12-ROX-100713-Run#1	SVOCs	2,4,5-Trichlorophenol	**UJ**
MW12-ROX-100713-Run#1	SVOCs	2,4,6-Trichlorophenol	**UJ**

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

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

Yes, sample 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
MW11-ROX-100713	VOCs	Acetone	**50/63**	23	70-130/30
MW11-ROX-100713	VOCs	Acrolein	**199/197**	1	70-130/30
MW11-ROX-100713	VOCs	2-Butanone	**65/64**	2	70-130/30
MW11-ROX-100713	VOCs	Chloroethane	**134/131**	2	70-130/30
MW11-ROX-100713	VOCs	2-Chloroethyl vinyl ether	**0/0**	NA	70-130/30
MW11-ROX-100713	VOCs	2-Hexanone	**54/53**	2	70-130/30

USEPA National Functional Guidelines for Organic Data Review indicates that organic data does not require qualification based on MS/MSD data alone. LCS/LCSD recoveries were within evaluation criteria with the exception of compounds listed and qualified as appropriate in Section 5.0 of this data review. No further qualification of data was required.

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
MW6A-ROX-100713	MW6A-ROX-100713-Dup

Were field duplicates within evaluation criteria?

Yes

11.0 Sample Dilutions

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

Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

No

New England ACCUTEST LABORATORIES



Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC25107

Sampling Date: 10/07/13

Report to:

URS Corporation

elizabeth.kunkel@URS.com

ATTN: Elizabeth Kunkel

Total number of pages in report: 117

Reviewed on 11/21/2013

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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Test results relate only to samples analyzed.

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November 21, 2013

Accutest Job MC25107 (revision 1)

Ms. Kunkel,

The report of Accutest job number MC25107 has been revised to include acid compound results from the original extraction. These revision has been incorporated into the attached report.

Sincerely,

Nancy Ma
Accutest Laboratories of New England, Inc.

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Sample Summary

Shell Oil

Job No: MC25107

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time By	Received	Matrix Code	Matrix Type	Client Sample ID
MC25107-1	10/07/13	09:35 LRBL	10/08/13	AQ	Ground Water	MW6D-ROX-100713
MC25107-2	10/07/13	10:25 LRBL	10/08/13	AQ	Ground Water	MW6C-ROX-100713
MC25107-3	10/07/13	11:15 LRBL	10/08/13	AQ	Ground Water	MW6B-ROX-100713
MC25107-4	10/07/13	11:30 LRBL	10/08/13	AQ	Equipment Blank	MW6A-ROX-100713-EB
MC25107-5	10/07/13	12:30 LRBL	10/08/13	AQ	Ground Water	MW6A-ROX-100713
MC25107-6	10/07/13	12:30 LRBL	10/08/13	AQ	Ground Water	MW6A-ROX-100713-DUP
MC25107-7	10/07/13	14:30 LRBL	10/08/13	AQ	Ground Water	MW12-ROX-100713
MC25107-8	10/07/13	15:25 LRBL	10/08/13	AQ	Ground Water	MW11-ROX-100713
MC25107-8D	10/07/13	15:25 LRBL	10/08/13	AQ	Water Dup/MSD	MW11-ROX-100713
MC25107-8S	10/07/13	15:25 LRBL	10/08/13	AQ	Water Matrix Spike	MW11-ROX-100713
MC25107-9	10/07/13	00:00 LRBL	10/08/13	AQ	Trip Blank Water	TB-ROX-100713-HCL
MC25107-10	10/07/13	00:00 LRBL	10/08/13	AQ	Trip Blank Water	TB-ROX-100713-ST

ACCUTEST LABORATORIES

2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	Job No	MC25107
Site:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central	Report Date	10/29/2013 9:55:02 AM

8 Sample(s), 2 Trip Blank(s) and 0 Field Blank(s) were collected on 10/07/2013 and were received at Accutest on 10/08/2013 properly preserved, at 0.5 Deg. C and intact. These Samples received an Accutest job number of MC25107. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

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

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ	Batch ID: MSV929

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25107-8MS, MC25107-8MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MSV929-BS for 2-Hexanone, Acetone are outside control limits. Blank Spike meets program technical requirements.
- MC25107-8MS/MSD for 2-Butanone (MEK), 2-Chloroethyl vinyl ether, 2-Hexanone, Acetone, Acrolein, Chloroethane are outside control limits due to possible matrix interference. Refer to Blank Spike.
- MSV929-BS for Acrolein: Outside control limits. Associated samples are non-detect for this compound.
- Continuing calibration check standard MSV929-CC864 for acrolein exceed 50% Difference (results biased high). Associated samples are non-detect for these compounds.

Extractables by GCMS By Method SW846 8270C

Matrix: AQ	Batch ID: OP35215

- All samples were extracted and analyzed within the recommended method holding time.
- MC25107-7 for 2-Fluorophenol, Phenol-d5: Outside control limits. Sample re-extracted/reanalyzed.
- Sample(s) MC25107-8MS, MC25107-8MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- OP35215-BS for Dimethyl phthalate are outside control limits. Blank Spike meets program technical requirements.

Matrix: AQ	Batch ID: OP35388

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC25500-18MS, MC25500-18MSD were used as the QC samples indicated.
- The following samples were extracted outside of holding time for method SW846 8270C: MC25107-7. Sample re-extracted beyond recommended holding time.
- OP35388-BS for 4-Nitrophenol are outside control limits. Blank Spike meets program technical requirements.
- OP35388-MS/MSD for 4-Nitrophenol are outside control limits due to possible matrix interference. Refer to Blank Spike.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix: AQ	Batch ID: OP35216

- 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) MC25107-8MS, MC25107-8MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8011

Matrix: AQ	Batch ID: OP35198

- 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) MC25107-8MS, MC25107-8MSD 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(MC25107).

Summary of Hits

Job Number: MC25107
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Collected: 10/07/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC25107-1	MW6D-ROX-100713					
Diethyl phthalate		~~1.0~~ J U	5.4	0.54	ug/l	SW846 8270C
MC25107-2	MW6C-ROX-100713					
Methyl Tert Butyl Ether		0.75 J	1.0	0.43	ug/l	SW846 8260B
Di-n-butyl phthalate		0.43 J	5.5	0.43	ug/l	SW846 8270C
Diethyl phthalate		~~1.3~~ J U	5.5	0.55	ug/l	SW846 8270C
bis(2-Ethylhexyl)phthalate		~~0.56~~ J U	2.2	0.54	ug/l	SW846 8270C
MC25107-3	MW6B-ROX-100713					
Methyl Tert Butyl Ether		11.3	1.0	0.43	ug/l	SW846 8260B
2,6-Dinitrotoluene		22.4	11	0.70	ug/l	SW846 8270C
Diethyl phthalate		~~0.84~~ J U	5.4	0.54	ug/l	SW846 8270C
bis(2-Ethylhexyl)phthalate		~~0.57~~ J U	2.2	0.53	ug/l	SW846 8270C
MC25107-4	MW6A-ROX-100713-EB					
1,2-Diphenylhydrazine		2.3 J	5.4	0.70	ug/l	SW846 8270C
Diethyl phthalate		0.82 J	5.4	0.54	ug/l	SW846 8270C
bis(2-Ethylhexyl)phthalate		0.62 J	2.2	0.53	ug/l	SW846 8270C
MC25107-5	MW6A-ROX-100713					
Methyl Tert Butyl Ether		13.1	1.0	0.43	ug/l	SW846 8260B
Diethyl phthalate		~~0.82~~ J U	5.6	0.56	ug/l	SW846 8270C
Acenaphthene		0.10 J	0.11	0.077	ug/l	SW846 8270C BY SIM
MC25107-6	MW6A-ROX-100713-DUP					
Methyl Tert Butyl Ether		13.2	1.0	0.43	ug/l	SW846 8260B
Diethyl phthalate		~~0.78~~ J U	5.4	0.54	ug/l	SW846 8270C
Acenaphthene		0.093 J	0.11	0.074	ug/l	SW846 8270C BY SIM
MC25107-7	MW12-ROX-100713					
Pentachlorophenol		1.8 J	11	1.4	ug/l	SW846 8270C
Diethyl phthalate		~~0.62~~ J U	5.5	0.55	ug/l	SW846 8270C
MC25107-8	MW11-ROX-100713					
Diethyl phthalate		~~1.1~~ J U	5.5	0.55	ug/l	SW846 8270C
bis(2-Ethylhexyl)phthalate		~~1.1~~ J U	2.2	0.54	ug/l	SW846 8270C

Summary of Hits

Job Number: MC25107
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Collected: 10/07/13

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method

MC25107-9 TB-ROX-100713-HCL

No hits reported in this sample.

MC25107-10 TB-ROX-100713-ST

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW6D-ROX-100713		
Lab Sample ID:	MC25107-1	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V24304.D	1	10/18/13	AMY	n/a	n/a	MSV929
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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

Report of Analysis

Client Sample ID:	MW6D-ROX-100713		
Lab Sample ID:	MC25107-1	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	UJ
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	MW6D-ROX-100713		
Lab Sample ID:	MC25107-1	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	110%		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-100713		
Lab Sample ID:	MC25107-1	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F67782.D	1	10/22/13	KR	10/11/13	OP35215	MSF3121
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	ND	5.4	0.56	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.93	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.71	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.70	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

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

Report of Analysis

Client Sample ID:	MW6D-ROX-100713		
Lab Sample ID:	MC25107-1	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	~~1.0~~ U	5.4	0.54	ug/l	J U
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	U
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.53	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.48	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.88	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.59	ug/l	
110-86-1	Pyridine	ND	11	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	19%		15-110%
4165-62-2	Phenol-d5	15%		15-110%
118-79-6	2,4,6-Tribromophenol	64%		15-110%
4165-60-0	Nitrobenzene-d5	76%		30-130%
321-60-8	2-Fluorobiphenyl	78%		30-130%
1718-51-0	Terphenyl-d14	107%		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-100713		
Lab Sample ID:	MC25107-1	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86539.D	1	10/21/13	WK	10/11/13	OP35216	MSI3220
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	76%		30-130%
321-60-8	2-Fluorobiphenyl	72%		30-130%
1718-51-0	Terphenyl-d14	91%		30-130%

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

Report of Analysis

Client Sample ID:	MW6D-ROX-100713		
Lab Sample ID:	MC25107-1	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84639.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333
Run #2							

	Initial Volume	Final Volume
Run #1	35.7 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	150%		36-173%
460-00-4	Bromofluorobenzene (S)	141%		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-100713		
Lab Sample ID:	MC25107-2	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V24305.D	1	10/18/13	AMY	n/a	n/a	MSV929
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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

Report of Analysis

Client Sample ID:	MW6C-ROX-100713		
Lab Sample ID:	MC25107-2	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	UJ
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75	1.0	0.43	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	MW6C-ROX-100713		
Lab Sample ID:	MC25107-2	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	108%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW6C-ROX-100713		
Lab Sample ID:	MC25107-2	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F67783.D	1	10/22/13	KR	10/11/13	OP35215	MSF3121
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.5	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.54	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.55	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.64	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	ND	5.5	0.56	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.63	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.35	ug/l	
62-53-3	Aniline	ND	11	0.70	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.5	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.5	0.94	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.63	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.5	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.5	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.5	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.5	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.5	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.5	0.72	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.74	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.71	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.5	0.55	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	0.43	5.5	0.43	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.5	0.48	ug/l	

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

Report of Analysis

Client Sample ID:	MW6C-ROX-100713		
Lab Sample ID:	MC25107-2	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	~~1.3~~ U	5.5	0.55	ug/l	J U
131-11-3	Dimethyl phthalate	ND	5.5	0.55	ug/l	U J
117-81-7	bis(2-Ethylhexyl)phthalate	~~0.56~~ U	2.2	0.54	ug/l	J U
118-74-1	Hexachlorobenzene	ND	5.5	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.5	0.48	ug/l	
78-59-1	Isophorone	ND	5.5	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.31	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.55	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.8	ug/l	
98-95-3	Nitrobenzene	ND	5.5	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.5	0.55	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.5	0.89	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.5	0.59	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	29%		15-110%
4165-62-2	Phenol-d5	20%		15-110%
118-79-6	2,4,6-Tribromophenol	76%		15-110%
4165-60-0	Nitrobenzene-d5	78%		30-130%
321-60-8	2-Fluorobiphenyl	78%		30-130%
1718-51-0	Terphenyl-d14	102%		30-130%

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

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

Report of Analysis

Client Sample ID:	MW6C-ROX-100713		
Lab Sample ID:	MC25107-2	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86540.D	1	10/21/13	WK	10/11/13	OP35216	MSI3220
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.076	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.055	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.055	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.22	0.055	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.082	ug/l	
85-01-8	Phenanthrene	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	75%		30-130%
321-60-8	2-Fluorobiphenyl	72%		30-130%
1718-51-0	Terphenyl-d14	90%		30-130%

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

Report of Analysis

Client Sample ID:	MW6C-ROX-100713		
Lab Sample ID:	MC25107-2	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84640.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333
Run #2							

	Initial Volume	Final Volume
Run #1	36.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	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:	MW6B-ROX-100713		
Lab Sample ID:	MC25107-3	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V24306.D	1	10/18/13	AMY	n/a	n/a	MSV929
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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

Report of Analysis

Client Sample ID:	MW6B-ROX-100713		
Lab Sample ID:	MC25107-3	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	UJ
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	11.3	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethaue	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	MW6B-ROX-100713		
Lab Sample ID:	MC25107-3	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		70-130%
2037-26-5	Toluene-D8	104%		70-130%
460-00-4	4-Bromofluorobenzene	109%		70-130%

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

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-100713		
Lab Sample ID:	MC25107-3	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F67784.D	1	10/22/13	KR	10/11/13	OP35215	MSF3121
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	ND	5.4	0.56	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.93	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.71	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	22.4	11	0.70	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

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

Report of Analysis

Client Sample ID:	MW6B-ROX-100713		
Lab Sample ID:	MC25107-3	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	~~0.84~~ U	5.4	0.54	ug/l	J U
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	UJ
117-81-7	bis(2-Ethylhexyl)phthalate	~~0.57~~ U	2.2	0.53	ug/l	J U
118-74-1	Hexachlorohenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.48	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.88	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.59	ug/l	
110-86-1	Pyridine	ND	11	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	32%		15-110%
4165-62-2	Phenol-d5	22%		15-110%
118-79-6	2,4,6-Tribromophenol	83%		15-110%
4165-60-0	Nitrobenzene-d5	82%		30-130%
321-60-8	2-Fluorohiphenyl	80%		30-130%
1718-51-0	Terphenyl-d14	107%		30-130%

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

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

Report of Analysis

Client Sample ID:	MW6B-ROX-100713		
Lab Sample ID:	MC25107-3	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86541.D	1	10/21/13	WK	10/11/13	OP35216	MSI3220
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)flooranthene	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	79%		30-130%
321-60-8	2-Fluorobiphenyl	75%		30-130%
1718-51-0	Terphenyl-d14	91%		30-130%

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

Report of Analysis

Client Sample ID:	MW6B-ROX-100713		
Lab Sample ID:	MC25107-3	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84641.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333
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	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	95%		36-173%
460-00-4	Bromofluorobenzene (S)	88%		36-173%

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

Report of Analysis

Client Sample ID:	MW6A-ROX-100713-EB		
Lab Sample ID:	MC25107-4	Date Sampled:	10/07/13
Matrix:	AQ - Equipment Blank	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V24302.D	1	10/18/13	AMY	n/a	n/a	MSV929
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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

Report of Analysis

Client Sample ID:	MW6A-ROX-100713-EB		
Lab Sample ID:	MC25107-4	Date Sampled:	10/07/13
Matrix:	AQ - Equipment Blank	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	MW6A-ROX-100713-EB		
Lab Sample ID:	MC25107-4	Date Sampled:	10/07/13
Matrix:	AQ - Equipment Blank	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	109%		70-130%

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

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-100713-EB		
Lab Sample ID:	MC25107-4	Date Sampled:	10/07/13
Matrix:	AQ - Equipment Blank	Date Received:	10/08/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F67785.D	1	10/22/13	KR	10/11/13	OP35215	MSF3121
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.4	0.55	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.92	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.99	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	2.3	5.4	0.70	ug/l	J
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.69	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

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

Report of Analysis

Client Sample ID:	MW6A-ROX-100713-EB		
Lab Sample ID:	MC25107-4	Date Sampled:	10/07/13
Matrix:	AQ - Equipment Blank	Date Received:	10/08/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	0.82	5.4	0.54	ug/l	J
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.62	2.2	0.53	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.47	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.87	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.58	ug/l	
110-86-1	Pyridine	ND	11	0.55	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	32%		15-110%
4165-62-2	Phenol-d5	21%		15-110%
118-79-6	2,4,6-Tribromophenol	66%		15-110%
4165-60-0	Nitrobenzene-d5	56%		30-130%
321-60-8	2-Fluorobiphenyl	55%		30-130%
1718-51-0	Terphenyl-d14	101%		30-130%

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

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

Report of Analysis

Client Sample ID:	MW6A-ROX-100713-EB		
Lab Sample ID:	MC25107-4	Date Sampled:	10/07/13
Matrix:	AQ - Equipment Blank	Date Received:	10/08/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86542.D	1	10/21/13	WK	10/11/13	OP35216	MSI3220
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,b)antbracene	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	56%		30-130%
321-60-8	2-Fluorobiphenyl	52%		30-130%
1718-51-0	Terphenyl-d14	88%		30-130%

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

Report of Analysis

Client Sample ID:	MW6A-ROX-100713-EB		
Lab Sample ID:	MC25107-4	Date Sampled:	10/07/13
Matrix:	AQ - Equipment Blank	Date Received:	10/08/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84642.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333
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	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	141%		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

Report of Analysis

Client Sample ID:	MW6A-ROX-100713		
Lab Sample ID:	MC25107-5	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V24307.D	1	10/18/13	AMY	n/a	n/a	MSV929
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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

Report of Analysis

Client Sample ID:	MW6A-ROX-100713		
Lab Sample ID:	MC25107-5	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	U J
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	13.1	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methyleue bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	MW6A-ROX-100713		
Lab Sample ID:	MC25107-5	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		70-130%
2037-26-5	Toluene-D8	105%		70-130%
460-00-4	4-Bromofluorobenzene	107%		70-130%

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

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Report of Analysis

Client Sample ID:	MW6A-ROX-100713		
Lab Sample ID:	MC25107-5	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F67786.D	1	10/22/13	KR	10/11/13	OP35215	MSF3121
Run #2							

	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.43	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.55	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.37	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.3	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.56	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.66	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	ND	5.6	0.58	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.64	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.36	ug/l	
62-53-3	Aniline	ND	11	0.72	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.23	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.96	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.65	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.28	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.24	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.26	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.73	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.76	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.72	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.56	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.18	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.6	0.44	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.6	0.49	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6A-ROX-100713		
Lab Sample ID:	MC25107-5	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	~~0.82~~ U	5.6	0.56	ug/l	J U
131-11-3	Dimethyl phthalate	ND	5.6	0.56	ug/l	U J
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.55	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.8	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.49	ug/l	
78-59-1	Isophorone	ND	5.6	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.31	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.56	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.9	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.28	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	0.56	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.91	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.61	ug/l	
110-86-1	Pyridine	ND	11	0.58	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	44%		15-110%
4165-62-2	Phenol-d5	33%		15-110%
118-79-6	2,4,6-Tribromophenol	96%		15-110%
4165-60-0	Nitrobenzene-d5	76%		30-130%
321-60-8	2-Fluorobiphenyl	80%		30-130%
1718-51-0	Terphenyl-d14	104%		30-130%

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

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

Report of Analysis

Client Sample ID:	MW6A-ROX-100713		
Lab Sample ID:	MC25107-5	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86543.D	1	10/21/13	WK	10/11/13	OP35216	MSI3220
Run #2							

	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.10	0.11	0.077	ug/l	J
208-96-8	Acenaphthylene	ND	0.11	0.056	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.036	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.046	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.22	0.056	ug/l	
91-57-6	2-Methylnapbthalene	ND	0.22	0.083	ug/l	
85-01-8	Phenanthrene	ND	0.056	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# I	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	73%		30-130%
321-60-8	2-Fluorobiphenyl	75%		30-130%
1718-51-0	Terphenyl-d14	87%		30-130%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6A-ROX-100713		
Lab Sample ID:	MC25107-5	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84643.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333
Run #2							

	Initial Volume	Final Volume
Run #1	36.0 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	150%		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 componnd

Report of Analysis

Client Sample ID:	MW6A-ROX-100713-DUP		
Lab Sample ID:	MC25107-6	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V24308.D	1	10/18/13	AMY	n/a	n/a	MSV929
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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

Report of Analysis

Client Sample ID:	MW6A-ROX-100713-DUP		
Lab Sample ID:	MC25107-6	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ng/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	UJ
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	13.2	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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Report of Analysis

Client Sample ID:	MW6A-ROX-100713-DUP		
Lab Sample ID:	MC25107-6	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	108%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW6A-ROX-100713-DUP		
Lab Sample ID:	MC25107-6	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F67787.D	1	10/22/13	KR	10/11/13	OP35215	MSF3121
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.4	0.55	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.92	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.99	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.70	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.69	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
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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-100713-DUP		
Lab Sample ID:	MC25107-6	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	~~0.78~~ U	5.4	0.54	ug/l	J U
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	U J
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.53	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.47	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.87	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.58	ug/l	
110-86-1	Pyridine	ND	11	0.55	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	41%		15-110%
4165-62-2	Phenol-d5	33%		15-110%
118-79-6	2,4,6-Tribromophenol	97%		15-110%
4165-60-0	Nitrobenzene-d5	77%		30-130%
321-60-8	2-Fluorobiphenyl	81%		30-130%
1718-51-0	Terphenyl-d14	103%		30-130%

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

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RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6A-ROX-100713-DUP		
Lab Sample ID:	MC25107-6	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86544.D	1	10/21/13	WK	10/11/13	OP35216	MSI3220
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	0.093	0.11	0.074	ug/l	J
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	75%		30-130%
321-60-8	2-Fluorobiphenyl	75%		30-130%
1718-51-0	Terphenyl-d14	90%		30-130%

ND = Not detected MDL - Method Detection Limit
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6A-ROX-100713-DUP		
Lab Sample ID:	MC25107-6	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84644.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333
Run #2							

	Initial Volume	Final Volume
Run #1	34.8 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0055	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	152%		36-173%
460-00-4	Bromofluorobenzene (S)	126%		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-100713		
Lab Sample ID:	MC25107-7	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V24309.D	1	10/18/13	AMY	n/a	n/a	MSV929
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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E = Indicates value exceeds calibration range
J = Indicates 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-100713		
Lab Sample ID:	MC25107-7	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	UJ
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

ND = Not detected MDL - Method Detection Limit
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J = Indicates 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-100713		
Lab Sample ID:	MC25107-7	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		70-130%
2037-26-5	Toluene-D8	104%		70-130%
460-00-4	4-Bromofluorobenzene	108%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW12-ROX-100713		
Lab Sample ID:	MC25107-7	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F67788.D	1	10/22/13	KR	10/11/13	OP35215	MSF3121
Run #2 [a]	W15028.D	1	10/24/13	KR	10/23/13	OP35388	MSW677

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2	940 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.4	ug/l	UJ
65-85-0	Benzoic Acid	ND [b]	11	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.5	0.42	ug/l	UJ
95-57-8	2-Chlorophenol	ND [b]	5.3	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.54	ug/l	UJ
59-50-7	4-Chloro-3-methyl phenol	ND [b]	11	0.52	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	UJ
120-83-2	2,4-Dichlorophenol	ND [b]	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.3	ug/l	UJ
105-67-9	2,4-Dimethylphenol	ND [b]	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	UJ
51-28-5	2,4-Dinitrophenol	ND [b]	21	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	UJ
534-52-1	4,6-Dinitro-o-cresol	ND [b]	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	UJ
95-48-7	2-Methylphenol	ND [b]	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	UJ
	3&4-Methylphenol	ND [b]	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.55	ug/l	UJ
88-75-5	2-Nitrophenol	ND [b]	11	0.53	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.64	ug/l	UJ
100-02-7	4-Nitrophenol	ND [b]	21	0.62	ug/l	
87-86-5	Pentachlorophenol	1.8	11	1.4	ug/l	J J
87-86-5	Pentachlorophenol	ND [b]	11	1.3	ug/l	
108-95-2	Phenol	ND	5.5	0.56	ug/l	UJ
108-95-2	Phenol	ND [b]	5.3	0.54	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.63	ug/l	UJ
95-95-4	2,4,5-Trichlorophenol	ND [b]	11	0.61	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.35	ug/l	UJ
88-06-2	2,4,6-Trichlorophenol	ND [b]	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.70	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.5	0.22	ug/l	

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:	MW12-ROX-100713		
Lab Sample ID:	MC25107-7	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

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ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
85-68-7	Butyl benzyl phthalate	ND	5.5	0.94	ug/l	
100-51-6	Benzyl Alcobol	ND	11	0.63	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.5	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.5	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.5	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.5	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.5	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.5	0.72	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.74	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.71	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.5	0.55	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.5	0.43	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.5	0.48	ug/l	
84-66-2	Diethyl phthalate	~~0.62~~ U	5.5	0.55	ug/l	J U
131-11-3	Dimethyl phthalate	ND	5.5	0.55	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.54	ug/l	
118-74-1	Hexachlorobenzene	ND	5.5	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.5	0.48	ug/l	
78-59-1	Isophorone	ND	5.5	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.31	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.55	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.8	ug/l	
98-95-3	Nitrobenzene	ND	5.5	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.5	0.55	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.5	0.89	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.5	0.59	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	11% [c]	24%	15-110%
4165-62-2	Phenol-d5	8% [c]	17%	15-110%
118-79-6	2,4,6-Tribromophenol	19%	37%	15-110%
4165-60-0	Nitrobenzene-d5	69%		30-130%
321-60-8	2-Fluorobiphenyl	69%		30-130%
1718-51-0	Terphenyl-d14	93%		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-100713		
Lab Sample ID:	MC25107-7	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

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

(a) Sample re-extracted beyond recommended holding time.
(b) Result is from Run# 2
(c) Outside control limits. Sample re-extracted/reanalyzed.

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

Report of Analysis

Client Sample ID:	MW12-ROX-100713		
Lab Sample ID:	MC25107-7	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86545.D	1	10/21/13	WK	10/11/13	OP35216	MSI3220
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.076	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.055	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.055	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.22	0.055	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.082	ug/l	
85-01-8	Phenanthrene	ND	0.055	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.042	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	69%		30-130%
321-60-8	2-Fluorobiphenyl	66%		30-130%
1718-51-0	Terphenyl-d14	82%		30-130%

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

Report of Analysis

Client Sample ID:	MW12-ROX-100713		
Lab Sample ID:	MC25107-7	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84645.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333
Run #2							

	Initial Volume	Final Volume
Run #1	36.1 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	159%		36-173%
460-00-4	Bromofluorobenzene (S)	146%		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-100713		
Lab Sample ID:	MC25107-8	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V24303.D	1	10/18/13	AMY	n/a	n/a	MSV929
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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

Report of Analysis

Client Sample ID:	MW11-ROX-100713		
Lab Sample ID:	MC25107-8	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	MW11-ROX-100713		
Lab Sample ID:	MC25107-8	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		70-130%
2037-26-5	Toluene-D8	105%		70-130%
460-00-4	4-Bromofluorobenzene	109%		70-130%

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

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

J = Indicates 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-100713		
Lab Sample ID:	MC25107-8	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F67780.D	1	10/22/13	KR	10/11/13	OP35215	MSF3121
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.5	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.54	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.55	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.64	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	ND	5.5	0.56	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.63	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.35	ug/l	
62-53-3	Aniline	ND	11	0.70	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.5	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.5	0.94	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.63	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.5	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.5	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.5	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.5	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.5	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.5	0.72	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.74	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.71	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.5	0.55	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.5	0.43	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.5	0.48	ug/l	

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

Report of Analysis

Client Sample ID:	MW11-ROX-100713		
Lab Sample ID:	MC25107-8	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	~~1.1~~ U	5.5	0.55	ug/l	J U
131-11-3	Dimethyl phthalate	ND	5.5	0.55	ug/l	UJ
117-81-7	bis(2-Ethylhexyl)phthalate	~~1.1~~ U	2.2	0.54	ug/l	J U
118-74-1	Hexachlorobenzene	ND	5.5	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.5	0.48	ug/l	
78-59-1	Isophorone	ND	5.5	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.31	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.55	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.8	ug/l	
98-95-3	Nitrobenzene	ND	5.5	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.5	0.55	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.5	0.89	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.5	0.59	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	33%		15-110%
4165-62-2	Phenol-d5	25%		15-110%
118-79-6	2,4,6-Tribromophenol	77%		15-110%
4165-60-0	Nitrobenzene-d5	68%		30-130%
321-60-8	2-Fluorobiphenyl	66%		30-130%
1718-51-0	Terphenyl-d14	102%		30-130%

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

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

Report of Analysis

Client Sample ID:	MW11-ROX-100713		
Lab Sample ID:	MC25107-8	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86538.D	1	10/21/13	WK	10/11/13	OP35216	MSI3220
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.076	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.055	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.055	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.22	0.055	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.082	ug/l	
85-01-8	Phenanthrene	ND	0.055	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.042	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	66%		30-130%
321-60-8	2-Fluorobiphenyl	64%		30-130%
1718-51-0	Terphenyl-d14	90%		30-130%

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

Report of Analysis

Client Sample ID:	MW11-ROX-100713		
Lab Sample ID:	MC25107-8	Date Sampled:	10/07/13
Matrix:	AQ - Ground Water	Date Received:	10/08/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84646.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333
Run #2							

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

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	117%		36-173%
460-00-4	Bromofluorobenzene (S)	107%		36-173%

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

Report of Analysis

Client Sample ID:	TB-ROX-100713-HCL		
Lab Sample ID:	MC25107-9	Date Sampled:	10/07/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V24301.D	1	10/18/13	AMY	n/a	n/a	MSV929
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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

Report of Analysis

Client Sample ID:	TB-ROX-100713-HCL		
Lab Sample ID:	MC25107-9	Date Sampled:	10/07/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	TB-ROX-100713-HCL		
Lab Sample ID:	MC25107-9	Date Sampled:	10/07/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/08/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	109%		70-130%

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

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-100713-ST		
Lab Sample ID:	MC25107-10	Date Sampled:	10/07/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/08/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84647.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333
Run #2							

	Initial Volume	Final Volume
Run #1	34.5 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	0.0055	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.012	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	144%		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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

LAB (LOCATION)
☐ XENCO (_____)
☐ CALSCIENCE (_____)
☑ OTHER Accutest Labs, 495 Technology Ctr W. (Marlborough, MA 01752 (508-481-6200))
☐ Lab Vendor # (_____)
☐ SPL (_____)
Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

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

Print Bill To Contact Name: Bob Billman
PO #

INCIDENT # (ENV SERVICES): 9 7 2 1 5 6 4 0
SAP #: 3 4 0 0 6 1
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 10/7/13
PAGE: 1 of 2

SAMPLING COMPANY: URS CORPORATION
LOG CODE:
ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110
PROJECT CONTACT (Hardcopy or PDF Report to): Elizabeth Kunkel, Wendy Pennington, Bob Billman
TELEPHONE: 314-429-0100
FAX: 314-429-0462
SEND INVOICE TO (Contact Name): ac_invoices@urs.com, elizabeth.kunkel@urs.com, wendy.pennington@urs.com

SITE ADDRESS (Street and City): 600 South Central Ave, ROXANA
STATE: IL
GLOBAL ID #:
EDF DELIVERABLE TO (Name, Company, Office Location):
PROJECT NO:
PO #:
NAME:
CONSULTANT PROJECT NO.: Roxana Quarterly GW / 21552850.030004

SAMPLER NAME(S) (Print): L. Rothrow, B. Lehan
LAB USE ONLY: MC25107

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RUSH IS NEEDED (Y / N) (PRE-SCHED)

☐ 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 ATTEMPTS
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE VEGO DATA

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	PRESERVATIVE H2SO4	PRESERVATIVE HNO3	PRESERVATIVE NONE	PRESERVATIVE OTHER	NO. OF CONT.	VOC 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	FIELD NOTES: Container PID Readings or Laboratory Notes
-1	MW10-ROX-100713	10/7/13	0935	Water	2			2	2	6	X	X	X	X	0	
-2	MW10C-ROX-100713		1025								X	X	X	X		
-3	MW10B-ROX-100713		1115								X	X	X	X		
-4	MW10A-ROX-100713-EB		1130								X	X	X	X		
-5	MW10A-ROX-100713		1230								X	X	X	X		
-6	MW10A-ROX-100713-Dup		1230								X	X	X	X		
-7	MW12-ROX-100713		1430								X	X	X	X		19AA, 3N3,
-8	MW11-ROX-100713		1525								X	X	X	X		
-8S	MW11-ROX-100713-MS		1525								X	X	X	X		
-8D	MW11-ROX-100713-MSD	↓	1525	↓	↓			↓	↓	↓	X	X	X	X	↓	

Relinquished by (Signature)	Received by (Signature)	Date	Time
L. Rothrow	FED EX	10/7/13	17:00
FED EX		10/8/13	09:30

REL 0.5, 0.9, 0.8

MC25107: Chain of Custody
Page 1 of 3

LAB (LOCATION)
☐ XENCO (_____)
☐ CALSCIENCE (_____)
☑ OTHER Accutest Laboratories 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 SOAOH ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Bilman
PO #

INCIDENT # (ENV SERVICES): 9 7 2 1 6 6 4 0
SAP #: 3 4 0 0 6 1
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 10/7/13
PAGE: 2 of 2

CONTRACTING COMPANY: URS CORPORATION
COST CODE:
SITE ADDRESS: Street and City: 900 South Central Ave, ROXANA
State: IL
ZIP CODE:
ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110
PROJECT CONTACT (Name and/or PDF Report To): Elizabeth Kunkel, Wendy Pennington, Bob Bilman
PHONE #:
E-MAIL:
CONSULTANT PROJECT NO.: Roxana Quarterly GW / 21662850.03004
TELEPHONE: 314-429-0100
FAX: 314-429-0462
Bill To Contact E-MAIL: bob.bilman@urs.com; elizabeth.kunkel@urs.com; wendy.pennington@urs.com
SAMPLER NAME(S) Print: L. Rathbun, B. Lehan
LAB USE ONLY: mc25107

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED (Rush Charges Apply)

☐ LA - PHOCH 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 RATES APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEVEL IV QA

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	PRESERVATIVE HNO3	PRESERVATIVE H2SO4	PRESERVATIVE NONE	PRESERVATIVE OTHER	NO. OF CONT	VOC 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-9	TB-ROX-100713-HCL	10/7/13	0000	Water	2					2	X				0	
-10	TB-ROX-100713-ST	↓	0000	↓					2	2		X			0	

FIELD NOTES:
TEMPERATURE ON RECEIPT C°

Relinquished by (Signature)	Received by (Signature)	Date	Time
Lindsay Rathbun	FED EX	10/7/13	17:00
Relinquished by (Signature)	Received by (Signature)	Date	Time
		10/8/13	09:30
Relinquished by (Signature)	Received by (Signature)	Date	Time

MC 0.5, 0.9, 0.8 °

012.06 Revision

MC25107: Chain of Custody
Page 2 of 3

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC25107 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 10/8/2013 **Delivery Method:** **Client Service Action Required at Login:** No

Project: 900 SOUTH CENTRAL **No. Coolers:** 3 **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

MC25107: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC25107

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC25107-1 Collected: 07-OCT-13 09:35 By: LRBL Received: 08-OCT-13 By: MW6D-ROX-100713						
MC25107-1	SW846 8011	11-OCT-13 07:18	CZ	10-OCT-13	MT	V8011SL
MC25107-1	SW846 8260B	18-OCT-13 13:23	AMY			V8260SL+
MC25107-1	SW846 8270C BY SIM	21-OCT-13 17:48	WK	11-OCT-13	FC	B8270SIMSL
MC25107-1	SW846 8270C	22-OCT-13 10:34	KR	11-OCT-13	FC	AB8270SL+
MC25107-2 Collected: 07-OCT-13 10:25 By: LRBL Received: 08-OCT-13 By: MW6C-ROX-100713						
MC25107-2	SW846 8011	11-OCT-13 07:43	CZ	10-OCT-13	MT	V8011SL
MC25107-2	SW846 8260B	18-OCT-13 13:50	AMY			V8260SL+
MC25107-2	SW846 8270C BY SIM	21-OCT-13 18:12	WK	11-OCT-13	FC	B8270SIMSL
MC25107-2	SW846 8270C	22-OCT-13 11:05	KR	11-OCT-13	FC	AB8270SL+
MC25107-3 Collected: 07-OCT-13 11:15 By: LRBL Received: 08-OCT-13 By: MW6B-ROX-100713						
MC25107-3	SW846 8011	11-OCT-13 08:08	CZ	10-OCT-13	MT	V8011SL
MC25107-3	SW846 8260B	18-OCT-13 14:17	AMY			V8260SL+
MC25107-3	SW846 8270C BY SIM	21-OCT-13 18:36	WK	11-OCT-13	FC	B8270SIMSL
MC25107-3	SW846 8270C	22-OCT-13 11:35	KR	11-OCT-13	FC	AB8270SL+
MC25107-4 Collected: 07-OCT-13 11:30 By: LRBL Received: 08-OCT-13 By: MW6A-ROX-100713-EB						
MC25107-4	SW846 8011	11-OCT-13 08:34	CZ	10-OCT-13	MT	V8011SL
MC25107-4	SW846 8260B	18-OCT-13 12:30	AMY			V8260SL+
MC25107-4	SW846 8270C BY SIM	21-OCT-13 19:00	WK	11-OCT-13	FC	B8270SIMSL
MC25107-4	SW846 8270C	22-OCT-13 12:05	KR	11-OCT-13	FC	AB8270SL+
MC25107-5 Collected: 07-OCT-13 12:30 By: LRBL Received: 08-OCT-13 By: MW6A-ROX-100713						
MC25107-5	SW846 8011	11-OCT-13 08:59	CZ	10-OCT-13	MT	V8011SL
MC25107-5	SW846 8260B	18-OCT-13 14:44	AMY			V8260SL+
MC25107-5	SW846 8270C BY SIM	21-OCT-13 19:24	WK	11-OCT-13	FC	B8270SIMSL
MC25107-5	SW846 8270C	22-OCT-13 12:34	KR	11-OCT-13	FC	AB8270SL+

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC25107

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC25107-6 Collected: 07-OCT-13 12:30 By: LRBL Received: 08-OCT-13 By: MW6A-ROX-100713-DUP						
MC25107-6	SW846 8011	11-OCT-13 09:25	CZ	10-OCT-13	MT	V8011SL
MC25107-6	SW846 8260B	18-OCT-13 15:10	AMY			V8260SL+
MC25107-6	SW846 8270C BY SIM	21-OCT-13 19:48	WK	11-OCT-13	FC	B8270SIMSL
MC25107-6	SW846 8270C	22-OCT-13 13:04	KR	11-OCT-13	FC	AB8270SL+
MC25107-7 Collected: 07-OCT-13 14:30 By: LRBL Received: 08-OCT-13 By: MW12-ROX-100713						
MC25107-7	SW846 8011	11-OCT-13 09:52	CZ	10-OCT-13	MT	V8011SL
MC25107-7	SW846 8260B	18-OCT-13 15:37	AMY			V8260SL+
MC25107-7	SW846 8270C BY SIM	21-OCT-13 20:13	WK	11-OCT-13	FC	B8270SIMSL
MC25107-7	SW846 8270C	22-OCT-13 13:34	KR	11-OCT-13	FC	AB8270SL+
MC25107-7	SW846 8270C	24-OCT-13 15:32	KR	23-OCT-13	MEW	AB8270SL+
MC25107-8 Collected: 07-OCT-13 15:25 By: LRBL Received: 08-OCT-13 By: MW11-ROX-100713						
MC25107-8	SW846 8011	11-OCT-13 10:19	CZ	10-OCT-13	MT	V8011SL
MC25107-8	SW846 8260B	18-OCT-13 12:57	AMY			V8260SL+
MC25107-8	SW846 8270C BY SIM	21-OCT-13 17:24	WK	11-OCT-13	FC	B8270SIMSL
MC25107-8	SW846 8270C	22-OCT-13 09:32	KR	11-OCT-13	FC	AB8270SL+
MC25107-9 Collected: 07-OCT-13 00:00 By: LRBL Received: 08-OCT-13 By: TB-ROX-100713-HCL						
MC25107-9	SW846 8260B	18-OCT-13 12:03	AMY			V8260SL+
MC25107-10 Collected: 07-OCT-13 00:00 By: LRBL Received: 08-OCT-13 By: TB-ROX-100713-ST						
MC25107-10	SW846 8011	11-OCT-13 10:45	CZ	10-OCT-13	MT	V8011SL

Accutest Internal Chain of Custody

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Received: 10/08/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC25107-1.2	Walk In Ref #22	Thomas Abruzzise	10/11/13 14:15	Retrieve from Storage
MC25107-1.3	VOC Ref #3	Amy Min Yang	10/18/13 11:41	Retrieve from Storage
MC25107-1.3	Amy Min Yang	GCMSV	10/18/13 11:41	Load on Instrument
MC25107-1.3	GCMSV	Kerry Ryan	10/21/13 12:02	Unload from Instrument
MC25107-1.3	Kerry Ryan	VOC Ref #3	10/21/13 12:03	Retnrn to Storage
MC25107-1.5	VOC Ref #3	Michael Rolo	10/10/13 08:06	Retrieve from Storage
MC25107-1.5	Michael Rolo		10/11/13 09:20	Depleted
MC25107-2.1	Walk In Ref #22	Thomas Ahruzzise	10/11/13 14:15	Retrieve from Storage
MC25107-2.3	VOC Ref #3	Amy Min Yang	10/18/13 11:41	Retrieve from Storage
MC25107-2.3	Amy Min Yang	GCMSV	10/18/13 11:41	Load on Instrument
MC25107-2.3	GCMSV	Kerry Ryan	10/21/13 12:02	Unload from Instrument
MC25107-2.3	Kerry Ryan	VOC Ref #3	10/21/13 12:03	Return to Storage
MC25107-3.1	Walk In Ref #22	Thomas Abruzzise	10/11/13 14:15	Retrieve from Storage
MC25107-3.3	VOC Ref #3	Amy Min Yang	10/18/13 11:41	Retrieve from Storage
MC25107-3.3	Amy Min Yang	GCMSV	10/18/13 11:41	Load on Instrument
MC25107-3.3	GCMSV	Kerry Ryan	10/21/13 12:02	Unload from Instrument
MC25107-3.3	Kerry Ryan	VOC Ref #3	10/21/13 12:03	Return to Storage
MC25107-4.1	Walk In Ref #22	Thomas Abruzzise	10/11/13 14:15	Retrieve from Storage
MC25107-4.4	VOC Ref #3	Amy Min Yang	10/18/13 11:41	Retrieve from Storage
MC25107-4.4	Amy Min Yang	GCMSV	10/18/13 11:41	Load on Instrument
MC25107-4.4	GCMSV	Kerry Ryan	10/21/13 12:02	Unload from Instrument
MC25107-4.4	Kerry Ryan	VOC Ref #3	10/21/13 12:03	Return to Storage
MC25107-4.6	VOC Ref #3	Michael Rolo	10/10/13 08:06	Retrieve from Storage
MC25107-4.6	Michael Rolo		10/11/13 09:20	Depleted
MC25107-5.1	Walk In Ref #22	Thomas Abruzzise	10/11/13 14:15	Retrieve from Storage
MC25107-5.3	VOC Ref #3	Amy Min Yang	10/18/13 11:41	Retrieve from Storage
MC25107-5.3	Amy Min Yang	GCMSV	10/18/13 11:41	Load on Instrument
MC25107-5.3	GCMSV	Kerry Ryan	10/21/13 12:02	Unload from Instrument
MC25107-5.3	Kerry Ryan	VOC Ref #3	10/21/13 12:03	Return to Storage
MC25107-5.6	VOC Ref #3	Michael Rolo	10/10/13 08:06	Retrieve from Storage
MC25107-5.6	Michael Rolo		10/11/13 09:20	Depleted

Accutest Internal Chain of Custody

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Received: 10/08/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC25107-6.2	Walk In Ref #22	Thomas Abruzzise	10/11/13 14:15	Retrieve from Storage
MC25107-6.3	VOC Ref #3	Amy Min Yang	10/18/13 11:41	Retrieve from Storage
MC25107-6.3	Amy Min Yang	GCMSV	10/18/13 11:41	Load on Instrument
MC25107-6.3	GCMSV	Kerry Ryan	10/21/13 12:02	Unload from Instrument
MC25107-6.3	Kerry Ryan	VOC Ref #3	10/21/13 12:03	Return to Storage
MC25107-6.6	VOC Ref #3	Michael Rolo	10/10/13 08:06	Retrieve from Storage
MC25107-6.6	Michael Rolo		10/11/13 09:20	Depleted
MC25107-7.1	Walk In Ref #22	Thomas Abruzzise	10/23/13 16:40	Retrieve from Storage
MC25107-7.2	Walk In Ref #22	Thomas Abruzzise	10/11/13 14:15	Retrieve from Storage
MC25107-7.4	VOC Ref #3	Amy Min Yang	10/18/13 11:41	Retrieve from Storage
MC25107-7.4	Amy Min Yang	GCMSV	10/18/13 11:41	Load on Instrument
MC25107-7.4	GCMSV	Kerry Ryan	10/21/13 12:02	Unload from Instrument
MC25107-7.4	Kerry Ryan	VOC Ref #3	10/21/13 12:03	Return to Storage
MC25107-7.5	VOC Ref #3	Michael Rolo	10/10/13 08:06	Retrieve from Storage
MC25107-7.5	Michael Rolo		10/11/13 09:20	Depleted
MC25107-8.1	Walk In Ref #22	Thomas Abruzzise	10/11/13 14:15	Retrieve from Storage
MC25107-8.5	Walk In Ref #22	Thomas Abruzzise	10/11/13 14:15	Retrieve from Storage
MC25107-8.6	Walk In Ref #22	Thomas Abruzzise	10/11/13 14:15	Retrieve from Storage
MC25107-8.7	VOC Ref #3	Amy Min Yang	10/18/13 11:41	Retrieve from Storage
MC25107-8.7	Amy Min Yang	GCMSV	10/18/13 11:41	Load on Instrument
MC25107-8.7	GCMSV	Kerry Ryan	10/21/13 12:02	Unload from Instrument
MC25107-8.7	Kerry Ryan	VOC Ref #3	10/21/13 12:03	Return to Storage
MC25107-8.8	VOC Ref #3	Amy Min Yang	10/18/13 11:41	Retrieve from Storage
MC25107-8.8	Amy Min Yang	GCMSV	10/18/13 11:41	Load on Instrument
MC25107-8.8	GCMSV	Kerry Ryan	10/21/13 12:02	Unload from Instrument
MC25107-8.8	Kerry Ryan	VOC Ref #3	10/21/13 12:03	Return to Storage
MC25107-8.10	VOC Ref #3	Amy Min Yang	10/18/13 11:41	Retrieve from Storage
MC25107-8.10	Amy Min Yang	GCMSV	10/18/13 11:41	Load on Instrument
MC25107-8.10	GCMSV	Kerry Ryan	10/21/13 12:02	Unload from Instrument
MC25107-8.10	Kerry Ryan	VOC Ref #3	10/21/13 12:03	Return to Storage
MC25107-8.11	VOC Ref #3	Amy Min Yang	10/18/13 11:41	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Received: 10/08/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC25107-8.11	Amy Min Yang	GCMSV	10/18/13 11:41	Load on Instrument
MC25107-8.11	GCMSV	Kerry Ryan	10/21/13 12:02	Unload from Instrument
MC25107-8.11	Kerry Ryan	VOC Ref #3	10/21/13 12:03	Return to Storage
MC25107-8.13	VOC Ref #3	Michael Rolo	10/10/13 08:06	Retrieve from Storage
MC25107-8.13	Michael Rolo		10/11/13 09:20	Depleted
MC25107-8.16	VOC Ref #3	Michael Rolo	10/10/13 08:06	Retrieve from Storage
MC25107-8.16	Michael Rolo		10/11/13 09:20	Depleted
MC25107-8.18	VOC Ref #3	Michael Rolo	10/10/13 08:06	Retrieve from Storage
MC25107-8.18	Michael Rolo		10/11/13 09:20	Depleted
MC25107-9.2	VOC Ref #3	Amy Min Yang	10/18/13 11:41	Retrieve from Storage
MC25107-9.2	Amy Min Yang	GCMSV	10/18/13 11:41	Load on Iustrument
MC25107-9.2	GCMSV	Kerry Ryan	10/21/13 12:02	Unload from Instrument
MC25107-9.2	Kerry Ryan	VOC Ref #3	10/21/13 12:03	Return to Storage
MC25107-10.2	VOC Ref #3	Michael Rolo	10/10/13 08:06	Retrieve from Storage
MC25107-10.2	Michael Rolo		10/11/13 09:20	Depleted

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 Snmmaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV929-MB	V24300.D	1	10/18/13	AMY	n/a	n/a	MSV929

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

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8, MC25107-9

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

Method Blank Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV929-MB	V24300.D	1	10/18/13	AMY	n/a	n/a	MSV929

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

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8, MC25107-9

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

6.1.1

Method Blank Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV929-MB	V24300.D	1	10/18/13	AMY	n/a	n/a	MSV929

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

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8, MC25107-9

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	103%	70-130%
2037-26-5	Toluene-D8	103%	70-130%
460-00-4	4-Bromofluorobenzene	110%	70-130%

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

Blank Spike Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV929-BS	V24297.D	1	10/18/13	AMY	n/a	n/a	MSV929

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

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8, MC25107-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	30.6	61* a	70-130
107-02-8	Acrolein	250	463	185* b	70-130
107-13-1	Acrylonitrile	50	44.0	88	70-130
71-43-2	Benzene	50	51.9	104	70-130
108-86-1	Bromobenzene	50	55.4	111	70-130
74-97-5	Bromochloromethane	50	52.1	104	70-130
75-27-4	Bromodichloromethane	50	58.2	116	70-130
75-25-2	Bromoform	50	47.3	95	70-130
74-83-9	Bromomethane	50	58.6	117	70-130
78-93-3	2-Butanone (MEK)	50	37.5	75	70-130
104-51-8	n-Butylbenzene	50	54.6	109	70-130
135-98-8	sec-Butylbenzene	50	56.8	114	70-130
98-06-6	tert-Butylbenzene	50	60.3	121	70-130
75-15-0	Carbon disulfide	50	53.4	107	70-130
56-23-5	Carbon tetrachloride	50	57.7	115	70-130
108-90-7	Chlorobenzene	50	43.2	86	70-130
75-00-3	Chloroethane	50	62.6	125	70-130
110-75-8	2-Chloroethyl vinyl ether	50	53.7	107	70-130
67-66-3	Chloroform	50	58.0	116	70-130
74-87-3	Chloromethane	50	57.5	115	70-130
95-49-8	o-Chlorotoluene	50	57.8	116	70-130
106-43-4	p-Chlorotoluene	50	58.5	117	70-130
124-48-1	Dibromochloromethane	50	49.9	100	70-130
95-50-1	1,2-Dichlorobenzene	50	51.5	103	70-130
541-73-1	1,3-Dichlorobenzene	50	52.2	104	70-130
106-46-7	1,4-Dichlorobenzene	50	51.5	103	70-130
75-71-8	Dichlorodifluoromethane	50	44.3	89	70-130
75-34-3	1,1-Dichloroethane	50	62.7	125	70-130
107-06-2	1,2-Dichloroethane	50	52.5	105	70-130
75-35-4	1,1-Dichloroethene	50	54.5	109	70-130
156-59-2	cis-1,2-Dichloroethene	50	54.9	110	70-130
156-60-5	trans-1,2-Dichloroethene	50	54.9	110	70-130
78-87-5	1,2-Dichloropropane	50	51.1	102	70-130
142-28-9	1,3-Dichloropropane	50	48.4	97	70-130
594-20-7	2,2-Dichloropropane	50	58.5	117	70-130
563-58-6	1,1-Dichloropropene	50	58.5	117	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV929-BS	V24297.D	1	10/18/13	AMY	n/a	n/a	MSV929

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

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8, MC25107-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	50.0	100	70-130
10061-02-6	trans-1,3-Dichloropropene	50	53.1	106	70-130
123-91-1	1,4-Dioxane	250	232	93	70-130
97-63-2	Ethyl methacrylate	50	49.8	100	77-137
100-41-4	Ethylbenzene	50	50.3	101	70-130
87-68-3	Hexachlorobutadiene	50	59.6	119	70-130
591-78-6	2-Hexanone	50	28.6	57* a	70-130
98-82-8	Isopropylbenzene	50	57.4	115	70-130
99-87-6	p-Isopropyltoluene	50	60.0	120	70-130
1634-04-4	Methyl Tert Butyl Ether	50	56.5	113	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	42.5	85	70-130
74-95-3	Methylene bromide	50	55.9	112	70-130
75-09-2	Methylene chloride	50	52.3	105	70-130
91-20-3	Naphthalene	50	50.6	101	70-130
103-65-1	n-Propylbenzene	50	54.4	109	70-130
100-42-5	Styrene	50	48.7	97	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	48.0	96	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	51.8	104	70-130
127-18-4	Tetrachloroethene	50	53.6	107	70-130
108-88-3	Toluene	50	56.2	112	70-130
87-61-6	1,2,3-Trichlorobenzene	50	55.8	112	70-130
120-82-1	1,2,4-Trichlorobenzene	50	54.1	108	70-130
71-55-6	1,1,1-Trichloroethane	50	57.9	116	70-130
79-00-5	1,1,2-Trichloroethane	50	49.6	99	70-130
79-01-6	Trichloroethene	50	51.1	102	70-130
75-69-4	Trichlorofluoromethane	50	51.4	103	70-130
96-18-4	1,2,3-Trichloropropane	50	54.0	108	70-130
95-63-6	1,2,4-Trimethylbenzene	50	54.2	108	70-130
108-67-8	1,3,5-Trimethylbenzene	50	55.6	111	70-130
108-05-4	Vinyl Acetate	50	51.5	103	70-130
75-01-4	Vinyl chloride	50	43.3	87	70-130
	m,p-Xylene	100	97.4	97	70-130
95-47-6	o-Xylene	50	46.3	93	70-130
1330-20-7	Xylene (total)	150	144	96	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV929-BS	V24297.D	1	10/18/13	AMY	n/a	n/a	MSV929

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

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8, MC25107-9

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	95%	70-130%
2037-26-5	Toluene-D8	105%	70-130%
460-00-4	4-Bromofluorobenzene	106%	70-130%

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

* = Ontside of Control Limits.

6.2.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25107-8MS	V24310.D	1	10/18/13	AMY	n/a	n/a	MSV929
MC25107-8MSD	V24311.D	1	10/18/13	AMY	n/a	n/a	MSV929
MC25107-8	V24303.D	1	10/18/13	AMY	n/a	n/a	MSV929

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

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8, MC25107-9

CAS No.	Compound	MC25107-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	25.0	50* a	31.5	63* a	23	70-130/30
107-02-8	Acrolein	ND		250	497	199* a	493	197* a	1	70-130/30
107-13-1	Acrylonitrile	ND		50	44.4	89	43.7	87	2	70-130/30
71-43-2	Benzene	ND		50	50.5	101	49.7	99	2	70-130/30
108-86-1	Bromobenzene	ND		50	52.8	106	51.3	103	3	70-130/30
74-97-5	Bromochloromethane	ND		50	49.6	99	49.9	100	1	70-130/30
75-27-4	Bromodichloromethane	ND		50	59.4	119	57.2	114	4	70-130/30
75-25-2	Bromoform	ND		50	47.1	94	46.4	93	1	70-130/30
74-83-9	Bromomethane	ND		50	63.1	126	61.3	123	3	70-130/30
78-93-3	2-Butanone (MEK)	ND		50	32.3	65* a	31.8	64* a	2	70-130/30
104-51-8	n-Butylbenzene	ND		50	51.4	103	50.1	100	3	70-130/30
135-98-8	sec-Butylbenzene	ND		50	52.8	106	51.0	102	3	70-130/30
98-06-6	tert-Butylbenzene	ND		50	57.7	115	55.2	110	4	70-130/30
75-15-0	Carbon disulfide	ND		50	49.4	99	48.1	96	3	70-130/30
56-23-5	Carbon tetrachloride	ND		50	58.3	117	55.9	112	4	70-130/30
108-90-7	Chlorobenzene	ND		50	41.4	83	40.8	82	1	70-130/30
75-00-3	Chloroethane	ND		50	66.9	134* a	65.7	131* a	2	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		50	ND	0* a	ND	0* a	nc	70-130/30
67-66-3	Chloroform	ND		50	58.0	116	55.8	112	4	70-130/30
74-87-3	Chloromethane	ND		50	59.4	119	58.8	118	1	70-130/30
95-49-8	o-Chlorotoluene	ND		50	55.6	111	53.7	107	3	70-130/30
106-43-4	p-Chlorotoluene	ND		50	56.5	113	54.5	109	4	70-130/30
124-48-1	Dibromochloromethaue	ND		50	49.5	99	48.1	96	3	70-130/30
95-50-1	1,2-Dichlorobenzeue	ND		50	48.4	97	48.2	96	0	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		50	49.8	100	49.6	99	0	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		50	49.3	99	48.5	97	2	70-130/30
75-71-8	Dichlorodifluoromethane	ND		50	54.8	110	49.6	99	10	70-130/30
75-34-3	1,1-Dichloroethane	ND		50	61.2	122	59.8	120	2	70-130/30
107-06-2	1,2-Dichloroethane	ND		50	54.8	110	52.8	106	4	70-130/30
75-35-4	1,1-Dichloroethene	ND		50	51.1	102	49.8	100	3	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50	53.1	106	52.2	104	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50	51.6	103	50.7	101	2	70-130/30
78-87-5	1,2-Dichloropropaue	ND		50	49.6	99	48.5	97	2	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	47.3	95	47.3	95	0	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	58.0	116	55.5	111	4	70-130/30
563-58-6	1,1-Dichloropropene	ND		50	56.7	113	54.9	110	3	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25107-8MS	V24310.D	1	10/18/13	AMY	n/a	n/a	MSV929
MC25107-8MSD	V24311.D	1	10/18/13	AMY	u/a	n/a	MSV929
MC25107-8	V24303.D	1	10/18/13	AMY	n/a	n/a	MSV929

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

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8, MC25107-9

6.3.1

CAS No.	Compound	MC25107-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		50	48.0	96	47.6	95	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		50	53.0	106	52.5	105	1	70-130/30
123-91-1	1,4-Dioxane	ND		250	212	85	245	98	14	70-130/30
97-63-2	Ethyl methacrylate	ND		50	49.9	100	49.8	100	0	72-139/30
100-41-4	Ethylbenzene	ND		50	48.6	97	47.6	95	2	70-130/30
87-68-3	Hexachlorobutadiene	ND		50	54.9	110	54.5	109	1	70-130/30
591-78-6	2-Hexanone	ND		50	27.0	54* a	26.5	53* a	2	70-130/30
98-82-8	Isopropylbenzene	ND		50	53.8	108	51.9	104	4	70-130/30
99-87-6	p-Isopropyltoluene	ND		50	56.6	113	55.2	110	3	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		50	56.0	112	55.9	112	0	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	44.7	89	44.4	89	1	70-130/30
74-95-3	Methylene bromide	ND		50	56.8	114	55.4	111	2	70-130/30
75-09-2	Methylene chloride	ND		50	50.0	100	49.7	99	1	70-130/30
91-20-3	Naphthalene	ND		50	40.8	82	49.1	98	18	70-130/30
103-65-1	n-Propylbenzene	ND		50	51.6	103	49.3	99	5	70-130/30
100-42-5	Styrene	ND		50	46.8	94	45.9	92	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	46.8	94	45.7	91	2	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	50.2	100	50.1	100	0	70-130/30
127-18-4	Tetrachloroethene	ND		50	50.4	101	48.5	97	4	70-130/30
108-88-3	Toluene	ND		50	54.9	110	53.7	107	2	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	44.2	88	50.4	101	13	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	46.9	94	49.7	99	6	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		50	56.1	112	54.0	108	4	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50	49.6	99	49.5	99	0	70-130/30
79-01-6	Trichloroethene	ND		50	49.5	99	48.2	96	3	70-130/30
75-69-4	Trichlorofluoromethane	ND		50	61.9	124	56.9	114	8	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		50	52.9	106	52.0	104	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		50	52.3	105	50.4	101	4	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		50	53.2	106	51.1	102	4	70-130/30
108-05-4	Vinyl Acetate	ND		50	50.7	101	49.9	100	2	70-130/30
75-01-4	Viuyl chloride	ND		50	46.2	92	44.4	89	4	70-130/30
	m,p-Xylene	ND		100	92.5	93	90.8	91	2	70-130/30
95-47-6	o-Xylene	ND		50	44.5	89	43.6	87	2	70-130/30
1330-20-7	Xylene (total)	ND		150	137	91	134	89	2	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25107-8MS	V24310.D	1	10/18/13	AMY	n/a	n/a	MSV929
MC25107-8MSD	V24311.D	1	10/18/13	AMY	n/a	n/a	MSV929
MC25107-8	V24303.D	1	10/18/13	AMY	n/a	n/a	MSV929

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

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8, MC25107-9

CAS No.	Surrogate Recoveries	MS	MSD	MC25107-8	Limits
1868-53-7	Dibromofluoromethane	98%	97%	102%	70-130%
2037-26-5	Toluene-D8	106%	106%	105%	70-130%
460-00-4	4-Bromofluorobenzene	108%	106%	109%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSV929-CC864	Injection Date:	10/18/13
Lab File ID:	V24297.D	Injection Time:	10:16
Instrument ID:	GCMSV	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	357615	6.59	503723	7.77	294078	11.09	273257	13.30	90901	3.52
Upper Limit [a]	715230	7.09	1007446	8.27	588156	11.59	546514	13.80	181802	4.02
Lower Limit [b]	178808	6.09	251862	7.27	147039	10.59	136629	12.80	45451	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
MSV929-BS	357615	6.59	503723	7.77	294078	11.09	273257	13.30	90901	3.52
MSV929-MB	296571	6.59	439800	7.77	255714	11.09	222059	13.30	80281	3.53
MC25107-9	285149	6.59	431252	7.76	251839	11.09	220762	13.30	77210	3.52
MC25107-4	285129	6.59	429468	7.77	252243	11.09	219863	13.30	79088	3.53
MC25107-8	289980	6.58	424107	7.76	248956	11.09	216151	13.30	82276	3.52
MC25107-1	270806	6.59	410521	7.77	244301	11.09	207294	13.30	78827	3.52
MC25107-2	267122	6.59	402828	7.77	240362	11.09	210219	13.30	79261	3.53
MC25107-3	266599	6.58	398117	7.76	239377	11.09	209335	13.30	78260	3.52
MC25107-5	262536	6.59	388540	7.77	233270	11.09	212444	13.30	77877	3.53
MC25107-6	270630	6.58	402306	7.76	242127	11.09	219263	13.30	81437	3.52
MC25107-7	264002	6.58	398761	7.76	237086	11.09	206785	13.30	77693	3.52
MC25107-8MS	319972	6.59	445259	7.77	266105	11.09	249984	13.30	88621	3.53
MC25107-8MSD	337073	6.59	464492	7.76	276602	11.09	262566	13.30	91397	3.52
ZZZZZZ	328429	6.58	454485	7.76	263050	11.09	234823	13.30	88955	3.52
ZZZZZZ	308718	6.58	445038	7.76	258687	11.09	237200	13.30	84618	3.52
ZZZZZZ	310412	6.59	449023	7.76	261426	11.09	226680	13.30	80492	3.52
ZZZZZZ	282562	6.59	425169	7.76	249386	11.09	216675	13.30	75817	3.52
ZZZZZZ	271923	6.58	410039	7.76	244105	11.09	208137	13.30	69632	3.52
ZZZZZZ	269820	6.59	400681	7.76	237402	11.09	205009	13.30	67057	3.52
ZZZZZZ	276972	6.58	409891	7.76	246113	11.09	210976	13.30	68739	3.51
ZZZZZZ	293051	6.59	434290	7.76	257765	11.09	240596	13.30	69991	3.53
ZZZZZZ	262763	6.58	393538	7.76	235841	11.09	204250	13.30	55969	3.51
ZZZZZZ	260540	6.58	386962	7.76	231591	11.09	199302	13.30	57133	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: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260B Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC25107-1	V24304.D	107.0	103.0	110.0
MC25107-2	V24305.D	107.0	103.0	108.0
MC25107-3	V24306.D	106.0	104.0	109.0
MC25107-4	V24302.D	105.0	103.0	109.0
MC25107-5	V24307.D	105.0	105.0	107.0
MC25107-6	V24308.D	105.0	103.0	108.0
MC25107-7	V24309.D	108.0	104.0	108.0
MC25107-8	V24303.D	102.0	105.0	109.0
MC25107-9	V24301.D	106.0	103.0	109.0
MC25107-8MS	V24310.D	98.0	106.0	108.0
MC25107-8MSD	V24311.D	97.0	106.0	106.0
MSV929-BS	V24297.D	95.0	105.0	106.0
MSV929-MB	V24300.D	103.0	103.0	110.0

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

6.5.1

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35215-MB	F67776.D	1	10/22/13	KR	10/11/13	OP35215	MSF3121

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

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.39	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	ug/l	
84-66-2	Diethyl phthalate	0.99	5.0	0.50	ug/l	J
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	

Method Blank Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35215-MB	F67776.D	1	10/22/13	KR	10/11/13	OP35215	MSF3121

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

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8

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

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	44%	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	79%	30-130%
321-60-8	2-Fluorobiphenyl	76%	30-130%
1718-51-0	Terphenyl-d14	110%	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: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35388-MB	W15020.D	1	10/24/13	KR	10/23/13	OP35388	MSW677

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

MC25107-7

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	45%	15-110%
4165-62-2	Phenol-d5	31%	15-110%
118-79-6	2,4,6-Tribromophenol	75%	15-110%
4165-60-0	Nitrobenzene-d5	72%	30-130%
321-60-8	2-Fluorobiphenyl	70%	30-130%
1718-51-0	Terphenyl-d14	103%	30-130%

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

Method Blank Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35216-MB	I86533.D	1	10/21/13	WK	10/11/13	OP35216	MSI3220

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

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.032	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	ug/l	
85-01-8	Phenanthrene	ND	0.050	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	45%	15-110%
4165-62-2	Phenol-d5	28%	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	71%	30-130%
1718-51-0	Terphenyl-d14	97%	30-130%

Blank Spike Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35215-BS	F67777.D	1	10/22/13	KR	10/11/13	OP35215	MSF3121

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

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	18.3	37	30-130
95-57-8	2-Chlorophenol	50	47.7	95	30-130
59-50-7	4-Chloro-3-methyl phenol	50	48.3	97	30-130
120-83-2	2,4-Dichlorophenol	50	50.6	101	30-130
105-67-9	2,4-Dimethylphenol	50	40.8	82	30-130
51-28-5	2,4-Dinitrophenol	50	49.6	99	30-130
534-52-1	4,6-Dinitro-o-cresol	50	57.7	115	30-130
95-48-7	2-Methylphenol	50	41.3	83	30-130
	3&4-Methylphenol	100	75.7	76	30-130
88-75-5	2-Nitrophenol	50	50.4	101	30-130
100-02-7	4-Nitrophenol	50	25.5	51	30-130
87-86-5	Pentachlorophenol	50	45.8	92	30-130
108-95-2	Phenol	50	21.3	43	30-130
95-95-4	2,4,5-Trichlorophenol	50	54.4	109	30-130
88-06-2	2,4,6-Trichlorophenol	50	53.0	106	30-130
62-53-3	Auiline	50	34.3	69	40-140
101-55-3	4-Bromophenyl phenyl ether	50	51.0	102	40-140
85-68-7	Butyl benzyl phthalate	50	51.1	102	40-140
100-51-6	Benzyl Alcohol	50	36.9	74	40-140
91-58-7	2-Chloronaphthalene	50	44.9	90	40-140
106-47-8	4-Chloroaniline	50	42.2	84	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	44.2	88	40-140
111-44-4	bis(2-Chloroethyl)ether	50	51.2	102	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	53.4	107	40-140
7005-72-3	4-Chlorophenyl pheuyl ether	50	46.8	94	40-140
122-66-7	1,2-Diphenylhydrazine	50	45.3	91	40-140
121-14-2	2,4-Dinitrotoluene	50	50.7	101	40-140
606-20-2	2,6-Dinitrotoluene	50	47.5	95	40-140
91-94-1	3,3'-Dichlorobenzidine	50	54.8	110	40-140
132-64-9	Dibenzofuran	50	44.2	88	40-140
84-74-2	Di-n-butyl phthalate	50	48.0	96	40-140
117-84-0	Di-n-octyl phthalate	50	57.7	115	40-140
84-66-2	Diethyl phthalate	50	38.5	77	40-140
131-11-3	Dimethyl phthalate	50	15.7	31* a	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	59.5	119	40-140
118-74-1	Hexachlorobenzene	50	49.9	100	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35215-BS	F67777.D	1	10/22/13	KR	10/11/13	OP35215	MSF3121

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

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	21.7	43	40-140
67-72-1	Hexachloroethane	50	25.9	52	40-140
78-59-1	Isophorone	50	46.7	93	40-140
88-74-4	2-Nitroaniline	50	48.9	98	40-140
99-09-2	3-Nitroaniline	50	45.4	91	40-140
100-01-6	4-Nitroaniline	50	46.8	94	40-140
98-95-3	Nitrobenzene	50	44.8	90	40-140
62-75-9	n-Nitrosodimethylamine	50	25.8	52	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	49.2	98	40-140
86-30-6	N-Nitrosodiphenylamine	50	49.2	98	40-140
110-86-1	Pyridine	50	21.0	42	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	54%	15-110%
4165-62-2	Phenol-d5	35%	15-110%
118-79-6	2,4,6-Tribromophenol	100%	15-110%
4165-60-0	Nitrobenzene-d5	89%	30-130%
321-60-8	2-Fluorobiphenyl	86%	30-130%
1718-51-0	Terphenyl-d14	108%	30-130%

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

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35388-BS	W15021.D	1	10/24/13	KR	10/23/13	OP35388	MSW677

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

MC25107-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	26.0	52	30-130
95-57-8	2-Chlorophenol	50	37.3	75	30-130
59-50-7	4-Chloro-3-methyl phenol	50	33.1	66	30-130
120-83-2	2,4-Dichlorophenol	50	39.8	80	30-130
105-67-9	2,4-Dimethylphenol	50	33.7	67	30-130
51-28-5	2,4-Dinitrophenol	50	38.9	78	30-130
534-52-1	4,6-Dinitro-o-cresol	50	50.1	100	30-130
95-48-7	2-Methylphenol	50	34.0	68	30-130
	3&4-Methylphenol	100	64.9	65	30-130
88-75-5	2-Nitrophenol	50	41.5	83	30-130
100-02-7	4-Nitrophenol	50	14.0	28* [a]	30-130
87-86-5	Pentachlorophenol	50	38.5	77	30-130
108-95-2	Phenol	50	18.4	37	30-130
95-95-4	2,4,5-Trichlorophenol	50	41.5	83	30-130
88-06-2	2,4,6-Trichlorophenol	50	42.9	86	30-130

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	52%	15-110%
4165-62-2	Phenol-d5	36%	15-110%
118-79-6	2,4,6-Tribromophenol	86%	15-110%
4165-60-0	Nitrobenzene-d5	79%	30-130%
321-60-8	2-Fluorobiphenyl	81%	30-130%
1718-51-0	Terphenyl-d14	105%	30-130%

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

* = Outside of Control Limits.

7.2.2

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Blank Spike/Blank Spike Duplicate Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35216-BS	I86534.D	1	10/21/13	WK	10/11/13	OP35216	MSI3220
OP35216-BSD	I86535.D	1	10/21/13	WK	10/11/13	OP35216	MSI3220

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

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	50	39.6	79	37.1	74	7	40-140/30
208-96-8	Acenaphthylene	50	34.6	69	31.9	64	8	40-140/30
120-12-7	Anthracene	50	42.0	84	38.8	78	8	40-140/30
56-55-3	Benzo(a)anthracene	50	47.8	96	43.6	87	9	40-140/30
50-32-8	Benzo(a)pyrene	50	45.8	92	42.2	84	8	40-140/30
205-99-2	Benzo(b)fluoranthene	50	46.4	93	42.8	86	8	40-140/30
191-24-2	Benzo(g,h,i)perylene	50	49.6	99	45.5	91	9	40-140/30
207-08-9	Benzo(k)fluoranthene	50	48.9	98	44.1	88	10	40-140/30
218-01-9	Chrysene	50	44.0	88	40.4	81	9	40-140/30
53-70-3	Dibenzo(a,h)anthracene	50	52.0	104	48.0	96	8	40-140/30
206-44-0	Fluoranthene	50	43.7	87	40.3	81	8	40-140/30
86-73-7	Fluorene	50	42.7	85	40.1	80	6	40-140/30
193-39-5	Indeno(1,2,3-cd)pyrene	50	51.9	104	48.1	96	8	40-140/30
90-12-0	1-Methylnaphthalene	50	38.8	78	34.8	70	11	40-140/30
91-57-6	2-Methylnaphthalene	50	35.8	72	32.1	64	11	40-140/30
85-01-8	Phenanthrene	50	44.9	90	41.5	83	8	40-140/30
129-00-0	Pyrene	50	42.3	85	38.9	78	8	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	50%		15-110%
4165-62-2	Phenol-d5	33%		15-110%
118-79-6	2,4,6-Tribromophenol	105%		15-110%
4165-60-0	Nitrobenzene-d5	90%	78%	30-130%
321-60-8	2-Fluorobiphenyl	79%	73%	30-130%
1718-51-0	Terphenyl-d14	99%	90%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35215-MS	F67778.D	1	10/22/13	KR	10/11/13	OP35215	MSF3121
OP35215-MSD	F67779.D	1	10/22/13	KR	10/11/13	OP35215	MSF3121
MC25107-8	F67780.D	1	10/22/13	KR	10/11/13	OP35215	MSF3121

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

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8

CAS No.	Compound	MC25107-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		54.9	19.8	36	22.9	41	15	30-130/20
95-57-8	2-Chlorophenol	ND		54.9	45.3	82	48.1	87	6	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		54.9	47.5	86	51.1	92	7	30-130/20
120-83-2	2,4-Dichlorophenol	ND		54.9	48.1	88	52.3	94	8	30-130/20
105-67-9	2,4-Dimethylphenol	ND		54.9	44.4	81	46.2	83	4	30-130/20
51-28-5	2,4-Dinitrophenol	ND		54.9	52.4	95	55.3	100	5	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		54.9	59.8	109	65.8	118	10	30-130/20
95-48-7	2-Methylphenol	ND		54.9	42.7	78	44.3	80	4	30-130/20
	3&4-Methylphenol	ND		110	76.4	70	78.6	71	3	30-130/20
88-75-5	2-Nitrophenol	ND		54.9	52.5	96	57.2	103	9	30-130/20
100-02-7	4-Nitrophenol	ND		54.9	26.8	49	29.1	52	8	30-130/20
87-86-5	Pentachlorophenol	ND		54.9	46.7	85	52.1	94	11	30-130/20
108-95-2	Phenol	ND		54.9	22.5	41	24.2	44	7	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		54.9	54.1	98	56.3	101	4	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		54.9	53.3	97	57.2	103	7	30-130/20
62-53-3	Aniline	ND		54.9	37.3	68	38.1	69	2	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		54.9	53.9	98	58.7	106	9	40-140/20
85-68-7	Butyl benzyl phthalate	ND		54.9	58.0	106	60.5	109	4	40-140/20
100-51-6	Benzyl Alcohol	ND		54.9	35.2	64	41.0	74	15	40-140/20
91-58-7	2-Chloronaphthalene	ND		54.9	49.7	90	52.8	95	6	40-140/20
106-47-8	4-Chloroaniline	ND		54.9	43.3	79	47.1	85	8	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		54.9	47.5	86	50.4	91	6	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		54.9	54.3	99	56.3	101	4	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		54.9	58.0	106	59.8	108	3	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		54.9	50.2	91	53.8	97	7	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		54.9	46.7	85	50.5	91	8	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		54.9	54.3	99	54.8	99	1	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		54.9	50.0	91	51.1	92	2	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		54.9	58.2	106	57.6	104	1	40-140/20
132-64-9	Dibenzofuran	ND		54.9	46.4	84	49.3	89	6	40-140/20
84-74-2	Di-n-butyl phthalate	ND		54.9	53.5	97	56.4	102	5	40-140/20
117-84-0	Di-n-octyl phthalate	ND		54.9	60.9	111	63.7	115	4	40-140/20
84-66-2	Diethyl phthalate	1.1	J	54.9	55.7	99	58.5	103	5	40-140/20
131-11-3	Dimethyl phthalate	ND		54.9	52.1	95	54.6	98	5	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	1.1	J	54.9	61.5	110	65.0	115	6	40-140/20
118-74-1	Hexachlorobenzene	ND		54.9	51.0	93	55.1	99	8	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35215-MS	F67778.D	1	10/22/13	KR	10/11/13	OP35215	MSF3121
OP35215-MSD	F67779.D	1	10/22/13	KR	10/11/13	OP35215	MSF3121
MC25107-8	F67780.D	1	10/22/13	KR	10/11/13	OP35215	MSF3121

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

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8

CAS No.	Compound	MC25107-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		54.9	29.4	54	32.5	59	10	40-140/20
67-72-1	Hexachloroethane	ND		54.9	32.6	59	34.4	62	5	40-140/20
78-59-1	Isophorone	ND		54.9	49.0	89	51.7	93	5	40-140/20
88-74-4	2-Nitroaniline	ND		54.9	51.4	94	53.4	96	4	40-140/20
99-09-2	3-Nitroaniline	ND		54.9	48.2	88	49.7	89	3	40-140/20
100-01-6	4-Nitroaniline	ND		54.9	49.1	89	52.0	94	6	40-140/20
98-95-3	Nitrobenzene	ND		54.9	47.0	86	49.0	88	4	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		54.9	30.3	55	31.5	57	4	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		54.9	51.2	93	53.8	97	5	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		54.9	52.2	95	55.2	99	6	40-140/20
110-86-1	Pyridine	ND		54.9	25.2	46	26.0	47	3	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25107-8	Limits
367-12-4	2-Fluorophenol	44%	49%	33%	15-110%
4165-62-2	Phenol-d5	34%	35%	25%	15-110%
118-79-6	2,4,6-Tribromophenol	86%	96%	77%	15-110%
4165-60-0	Nitrobenzene-d5	84%	89%	68%	30-130%
321-60-8	2-Fluorobiphenyl	87%	89%	66%	30-130%
1718-51-0	Terphenyl-d14	103%	105%	102%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35388-MS	W15022.D	1	10/24/13	KR	10/23/13	OP35388	MSW677
OP35388-MSD	W15023.D	1	10/24/13	KR	10/23/13	OP35388	MSW677
MC25500-18	W15024.D	1	10/24/13	KR	10/23/13	OP35388	MSW677

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

MC25107-7

CAS No.	Compound	MC25500-18 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		51	28.7	56	29.7	58	3	30-130/20
95-57-8	2-Chlorophenol	ND		51	35.8	70	35.7	70	0	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		51	32.5	64	33.5	66	3	30-130/20
120-83-2	2,4-Dichlorophenol	ND		51	38.9	76	39.1	77	1	30-130/20
105-67-9	2,4-Dimethylphenol	ND		51	35.0	69	34.9	68	0	30-130/20
51-28-5	2,4-Dinitrophenol	ND		51	40.8	80	43.5	85	6	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		51	49.4	97	51.1	100	3	30-130/20
95-48-7	2-Methylphenol	ND		51	32.6	64	31.4	62	4	30-130/20
	3&4-Methylphenol	ND		102	61.3	60	60.8	60	1	30-130/20
88-75-5	2-Nitrophenol	ND		51	40.5	79	41.5	81	2	30-130/20
100-02-7	4-Nitrophenol	ND		51	14.4	28* [a]	14.7	29* [a]	2	30-130/20
87-86-5	Pentachlorophenol	ND		51	39.9	78	40.6	80	2	30-130/20
108-95-2	Phenol	ND		51	17.5	34	17.7	35	1	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		51	41.3	81	40.7	80	1	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		51	42.8	84	42.5	83	1	30-130/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25500-18	Limits
367-12-4	2-Fluorophenol	48%	47%	43%	15-110%
4165-62-2	Phenol-d5	33%	33%	29%	15-110%
118-79-6	2,4,6-Tribromophenol	83%	83%	81%	15-110%
4165-60-0	Nitrobenzene-d5	76%	76%	69%	30-130%
321-60-8	2-Fluorohiphenyl	79%	79%	69%	30-130%
1718-51-0	Terphenyl-d14	104%	106%	103%	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: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35216-MS	I86536.D	1	10/21/13	WK	10/11/13	OP35216	MSI3220
OP35216-MSD	I86537.D	1	10/21/13	WK	10/11/13	OP35216	MSI3220
MC25107-8	I86538.D	1	10/21/13	WK	10/11/13	OP35216	MSI3220

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

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8

7.4.3

7

CAS No.	Compound	MC25107-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		54.9	42.8	78	44.9	81	5	40-140/20
208-96-8	Acenaphthylene	ND		54.9	36.9	67	39.0	70	6	40-140/20
120-12-7	Anthracene	ND		54.9	43.8	80	45.8	82	4	40-140/20
56-55-3	Benzo(a)anthracene	ND		54.9	50.3	92	53.1	96	5	40-140/20
50-32-8	Benzo(a)pyrene	ND		54.9	48.5	88	50.6	91	4	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		54.9	48.9	89	51.0	92	4	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		54.9	52.6	96	53.7	97	2	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		54.9	51.2	93	53.2	96	4	40-140/20
218-01-9	Chrysene	ND		54.9	46.4	84	48.9	88	5	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		54.9	55.3	101	57.0	103	3	40-140/20
206-44-0	Fluoranthene	ND		54.9	45.8	83	48.1	87	5	40-140/20
86-73-7	Fluorene	ND		54.9	45.4	83	47.3	85	4	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		54.9	55.3	101	56.9	102	3	40-140/20
90-12-0	1-Methylnaphthalene	ND		54.9	42.1	77	43.9	79	4	40-140/20
91-57-6	2-Methylnaphthalene	ND		54.9	39.5	72	41.4	75	5	40-140/20
85-01-8	Phenanthrene	ND		54.9	47.5	86	48.9	88	3	40-140/20
129-00-0	Pyrene	ND		54.9	44.2	80	46.7	84	6	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25107-8	Limits
367-12-4	2-Fluorophenol	43%	46%		15-110%
4165-62-2	Phenol-d5	32%	33%		15-110%
118-79-6	2,4,6-Tribromophenol	93%	99%		15-110%
4165-60-0	Nitrobenzene-d5	85%	87%	66%	30-130%
321-60-8	2-Fluorobiphenyl	77%	82%	64%	30-130%
1718-51-0	Terphenyl-d14	94%	97%	90%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3119-CC3107	Injection Date:	10/22/13
Lab File ID:	F67775.D	Injection Time:	07:03
Instrument ID:	GCMSF	Method:	SW846 8270C

	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	116938	4.36	446272	5.68	293719	7.58	550103	9.16	635983	11.86	528192	14.40
Upper Limit [a]	233876	4.86	892544	6.18	587438	8.08	1100206	9.66	1271966	12.36	1056384	14.90
Lower Limit [b]	58469	3.86	223136	5.18	146860	7.08	275052	8.66	317992	11.36	264096	13.90
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
OP35215-MB	97883	4.36	365971	5.68	228258	7.57	429365	9.15	486485	11.85	430394	14.37
OP35215-BS	88853	4.36	334231	5.68	215389	7.57	401561	9.16	463269	11.86	398234	14.38
OP35215-MS	91222	4.36	343721	5.68	221209	7.57	415601	9.16	480460	11.86	409093	14.38
OP35215-MSD	94681	4.36	351686	5.68	226318	7.57	417437	9.16	495108	11.86	417347	14.38
MC25107-8	95580	4.36	355668	5.68	230981	7.57	425695	9.15	481085	11.85	434846	14.38
ZZZZZZ	97472	4.36	368211	5.68	242957	7.57	443881	9.15	506210	11.85	451501	14.38
MC25107-1	101366	4.36	377208	5.68	236896	7.57	427316	9.16	478141	11.85	435283	14.37
MC25107-2	83283	4.36	309077	5.68	195479	7.57	354563	9.16	420467	11.85	390009	14.37
MC25107-3	103861	4.36	383423	5.68	242047	7.57	432557	9.15	460617	11.85	415239	14.37
MC25107-4	97354	4.36	365685	5.68	229752	7.57	417413	9.15	468731	11.85	413421	14.37
MC25107-5	103931	4.36	385489	5.68	242119	7.57	423632	9.15	434887	11.86	404359	14.38
MC25107-6	101381	4.36	376568	5.68	238791	7.57	426912	9.15	466416	11.85	440627	14.39
MC25107-7	112771	4.36	409936	5.68	266095	7.57	491255	9.15	520609	11.85	467028	14.38
ZZZZZZ	90381	4.36	327956	5.68	203989	7.57	337882	9.16	444115	11.85	424199	14.37
ZZZZZZ	94374	4.36	345902	5.68	224638	7.57	408351	9.15	458000	11.85	415714	14.37
ZZZZZZ	97234	4.36	357490	5.68	229441	7.57	390608	9.15	388650	11.85	353802	14.38
ZZZZZZ	100553	4.36	358528	5.68	215701	7.57	363689	9.16	463187	11.85	427711	14.37

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

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

7.5.1

7

Semivolatile Internal Standard Area Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3121-CC3107	Injection Date:	10/22/13
Lab File ID:	F67775.D	Injection Time:	07:03
Instrument ID:	GCMSF	Method:	SW846 8270C

	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	116938	4.36	446272	5.68	293719	7.58	550103	9.16	635983	11.86	528192	14.40
Upper Limit [a]	233876	4.86	892544	6.18	587438	8.08	1100206	9.66	1271966	12.36	1056384	14.90
Lower Limit [b]	58469	3.86	223136	5.18	146860	7.08	275052	8.66	317992	11.36	264096	13.90
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
OP35215-MB	97883	4.36	365971	5.68	228258	7.57	429365	9.15	486485	11.85	430394	14.37
OP35215-BS	88853	4.36	334231	5.68	215389	7.57	401561	9.16	463269	11.86	398234	14.38
OP35215-MS	91222	4.36	343721	5.68	221209	7.57	415601	9.16	480460	11.86	409093	14.38
OP35215-MSD	94681	4.36	351686	5.68	226318	7.57	417437	9.16	495108	11.86	417347	14.38
MC25107-8	95580	4.36	355668	5.68	230981	7.57	425695	9.15	481085	11.85	434846	14.38
ZZZZZZ	97472	4.36	368211	5.68	242957	7.57	443881	9.15	506210	11.85	451501	14.38
MC25107-1	101366	4.36	377208	5.68	236896	7.57	427316	9.16	478141	11.85	435283	14.37
MC25107-2	83283	4.36	309077	5.68	195479	7.57	354563	9.16	420467	11.85	390009	14.37
MC25107-3	103861	4.36	383423	5.68	242047	7.57	432557	9.15	460617	11.85	415239	14.37
MC25107-4	97354	4.36	365685	5.68	229752	7.57	417413	9.15	468731	11.85	413421	14.37
MC25107-5	103931	4.36	385489	5.68	242119	7.57	423632	9.15	434887	11.86	404359	14.38
MC25107-6	101381	4.36	376568	5.68	238791	7.57	426912	9.15	466416	11.85	440627	14.39
MC25107-7	112771	4.36	409936	5.68	266095	7.57	491255	9.15	520609	11.85	467028	14.38
ZZZZZZ	90381	4.36	327956	5.68	203989	7.57	337882	9.16	444115	11.85	424199	14.37
ZZZZZZ	94374	4.36	345902	5.68	224638	7.57	408351	9.15	458000	11.85	415714	14.37
ZZZZZZ	97234	4.36	357490	5.68	229441	7.57	390608	9.15	388650	11.85	353802	14.38
ZZZZZZ	100553	4.36	358528	5.68	215701	7.57	363689	9.16	463187	11.85	427711	14.37

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

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

7.5.2

Semivolatile Internal Standard Area Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3220-CC3155	Injection Date:	10/21/13
Lab File ID:	I86525.D	Injection Time:	08:53
Instrument ID:	GCMSI	Method:	SW846 8270C 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	192959	4.08	557935	5.06	331282	6.51	578586	7.85	499185	10.63	843875	12.12
Upper Limit [a]	385918	4.58	1115870	5.56	662564	7.01	1157172	8.35	998370	11.13	1687750	12.62
Lower Limit [b]	96480	3.58	278968	4.56	165641	6.01	289293	7.35	249593	10.13	421938	11.62
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
OP35312-MB	182526	4.08	521286	5.06	306114	6.51	516794	7.85	447830	10.63	765092	12.11
OP35312-BS	206667	4.08	588315	5.07	346269	6.51	591787	7.86	494389	10.64	861806	12.12
OP35312-MS	180823	4.08	519744	5.07	307780	6.51	534029	7.86	454017	10.64	781812	12.12
OP35312-MSD	176977	4.08	506480	5.07	298360	6.51	516136	7.86	439363	10.64	753959	12.12
MC25100-7	150335	4.08	437644	5.06	256364	6.51	438961	7.85	387743	10.63	650749	12.11
ZZZZZZ	160736	4.08	460813	5.06	269455	6.51	464270	7.85	407188	10.63	696994	12.11
ZZZZZZ	159699	4.08	457878	5.06	264543	6.51	451291	7.85	390494	10.63	677070	12.11
OP35216-MB	171512	4.08	487651	5.06	283039	6.51	484602	7.85	421513	10.64	692948	12.12
OP35216-BS	150091	4.08	430641	5.07	257027	6.51	448291	7.85	390407	10.64	663081	12.12
OP35216-BSD	164564	4.08	473595	5.06	280178	6.51	481249	7.85	417839	10.64	713639	12.12
OP35216-MS	147478	4.08	430292	5.07	256545	6.51	446374	7.85	392567	10.64	672949	12.12
OP35216-MSD	157549	4.08	456921	5.07	266183	6.51	458924	7.85	392981	10.64	688898	12.12
MC25107-8	167409	4.08	486544	5.06	282528	6.51	485940	7.85	417266	10.63	701837	12.11
MC25107-1	161393	4.08	468172	5.06	272631	6.51	469752	7.85	414113	10.63	712879	12.11
MC25107-2	145865	4.08	424507	5.06	247715	6.51	425371	7.85	375322	10.63	640534	12.11
MC25107-3	165717	4.08	478767	5.06	276385	6.51	476160	7.85	418350	10.64	714910	12.12
MC25107-4	147757	4.08	433866	5.07	252175	6.51	432778	7.85	385826	10.63	657293	12.11
MC25107-5	159759	4.08	463265	5.06	268889	6.51	461523	7.85	414802	10.64	674163	12.12
MC25107-6	162419	4.08	474721	5.07	277257	6.51	479082	7.85	422027	10.64	673624	12.12
MC25107-7	170299	4.08	497678	5.06	289774	6.51	501744	7.85	444294	10.64	737304	12.11

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

Semivolatile Internal Standard Area Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSW677-CC672	Injection Date:	10/24/13
Lab File ID:	W15019.D	Injection Time:	11:14
Instrument ID:	GCMSW	Method:	SW846 8270C

	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	108906	4.85	420515	6.02	252573	7.68	401818	9.06	416187	12.50	367406	16.26
Upper Limit [a]	217812	5.35	841030	6.52	505146	8.18	803636	9.56	832374	13.00	734812	16.76
Lower Limit [b]	54453	4.35	210258	5.52	126287	7.18	200909	8.56	208094	12.00	183703	15.76
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
OP35388-MB	96143	4.85	372270	6.01	220778	7.67	354640	9.06	378218	12.49	316929	16.25
OP35388-BS	96132	4.85	373129	6.02	226880	7.68	362113	9.06	389909	12.50	321880	16.25
OP35388-MS	91192	4.85	350072	6.01	208883	7.68	328892	9.06	342736	12.50	291164	16.25
OP35388-MSD	103145	4.85	398187	6.02	243543	7.68	386434	9.06	389608	12.50	331351	16.25
MC25500-18	89040	4.85	343347	6.01	203808	7.67	320775	9.06	338334	12.49	286685	16.25
ZZZZZZ	111892	4.85	422678	6.01	253289	7.67	398131	9.06	388292	12.49	330111	16.25
ZZZZZZ	112612	4.86	418411	6.02	259214	7.68	409888	9.06	397144	12.49	322967	16.26
OP35338-MB	99104	4.85	376943	6.02	223326	7.67	351648	9.06	349487	12.49	284810	16.26
MC25107-7 [c]	83252	4.85	323663	6.01	195324	7.67	316772	9.06	282679	12.49	234451	16.26
OP35370-MB1	106571	4.85	405275	6.01	233373	7.68	363200	9.06	381546	12.49	323388	16.26
OP35370-BS1	110167	4.85	424134	6.02	257832	7.68	403143	9.06	388128	12.50	323331	16.27
OP35370-MS	110537	4.85	414920	6.02	255412	7.68	406398	9.06	380588	12.50	331871	16.27
OP35370-MSD	111928	4.85	423538	6.02	256617	7.68	411929	9.06	413265	12.50	354714	16.27
MC25470-1	102977	4.85	395684	6.01	243213	7.67	381069	9.06	338719	12.49	282443	16.26
ZZZZZZ	103190	4.85	393393	6.01	239735	7.67	374344	9.06	374852	12.49	316938	16.25
ZZZZZZ	94188	4.85	362844	6.01	215156	7.67	328799	9.06	333973	12.49	307104	16.25
ZZZZZZ	120526	4.85	472109	6.01	283822	7.68	450934	9.06	463059	12.49	397855	16.26
ZZZZZZ	99802	4.85	369748	6.01	223611	7.67	356752	9.06	355677	12.49	314791	16.25
ZZZZZZ	135288	4.85	533947	6.01	326924	7.68	519440	9.06	513252	12.49	413542	16.25
ZZZZZZ	115446	4.85	452844	6.01	277154	7.68	437916	9.06	440602	12.49	350127	16.26
ZZZZZZ	119229	4.85	455268	6.01	278440	7.67	440366	9.06	404563	12.49	314714	16.25
ZZZZZZ	106397	4.85	391803	6.01	242704	7.67	368343	9.06	373438	12.49	320649	16.25

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Sample re-extracted beyond recommended holding time.

Semivolatile Surrogate Recovery Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC25107-1	F67782.D	19.0	15.0	64.0	76.0	78.0	107.0
MC25107-2	F67783.D	29.0	20.0	76.0	78.0	78.0	102.0
MC25107-3	F67784.D	32.0	22.0	83.0	82.0	80.0	107.0
MC25107-4	F67785.D	32.0	21.0	66.0	56.0	55.0	101.0
MC25107-5	F67786.D	44.0	33.0	96.0	76.0	80.0	104.0
MC25107-6	F67787.D	41.0	33.0	97.0	77.0	81.0	103.0
MC25107-7	W15028.D	24.0	17.0	37.0			
MC25107-7	F67788.D	11.0* [a]	8.0* [a]	19.0	69.0	69.0	93.0
MC25107-8	F67780.D	33.0	25.0	77.0	68.0	66.0	102.0
OP35215-BS	F67777.D	54.0	35.0	100.0	89.0	86.0	108.0
OP35215-MB	F67776.D	44.0	29.0	84.0	79.0	76.0	110.0
OP35215-MS	F67778.D	44.0	34.0	86.0	84.0	87.0	103.0
OP35215-MSD	F67779.D	49.0	35.0	96.0	89.0	89.0	105.0
OP35388-BS	W15021.D	52.0	36.0	86.0	79.0	81.0	105.0
OP35388-MB	W15020.D	45.0	31.0	75.0	72.0	70.0	103.0
OP35388-MS	W15022.D	48.0	33.0	83.0	76.0	79.0	104.0
OP35388-MSD	W15023.D	47.0	33.0	83.0	76.0	79.0	106.0

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

(a) Outside control limits. Sample re-extracted/reanalyzed.

Semivolatile Surrogate Recovery Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270C BY SIM Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC25107-1	I86539.D	76.0	72.0	91.0
MC25107-2	I86540.D	75.0	72.0	90.0
MC25107-3	I86541.D	79.0	75.0	91.0
MC25107-4	I86542.D	56.0	52.0	88.0
MC25107-5	I86543.D	73.0	75.0	87.0
MC25107-6	I86544.D	75.0	75.0	90.0
MC25107-7	I86545.D	69.0	66.0	82.0
MC25107-8	I86538.D	66.0	64.0	90.0
OP35216-BS	I86534.D	90.0	79.0	99.0
OP35216-BSD	I86535.D	78.0	73.0	90.0
OP35216-MB	I86533.D	80.0	71.0	97.0
OP35216-MS	I86536.D	85.0	77.0	94.0
OP35216-MSD	I86537.D	87.0	82.0	97.0

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorohiphenyl	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: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35198-MB	YZ84634.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333

The QC reported here applies to the following samples: Method: SW846 8011

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8, MC25107-10

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	121%	36-173%
460-00-4	Bromofluorobenzene (S)	109%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35198-BS	YZ84635.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333

The QC reported here applies to the following samples: Method: SW846 8011

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8, MC25107-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.089	125	60-140
106-93-4	1,2-Dibromoethane	0.071	0.079	111	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	140%	36-173%
460-00-4	Bromofluorobenzene (S)	128%	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35198-MS	YZ84636.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333
OP35198-MSD	YZ84637.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333
MC25107-8	YZ84646.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333

The QC reported here applies to the following samples: Method: SW846 8011

MC25107-1, MC25107-2, MC25107-3, MC25107-4, MC25107-5, MC25107-6, MC25107-7, MC25107-8, MC25107-10

CAS No.	Compound	MC25107-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.0696	0.088	126	0.074	106	17	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.0696	0.076	109	0.068	98	11	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC25107-8	Limits
460-00-4	Bromofluorobenzene (S)	154%	134%	117%	36-173%
460-00-4	Bromofluorobenzene (S)	139%	120%	107%	36-173%

8.3.1

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011 Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC25107-1	YZ84639.D	150.0	141.0
MC25107-2	YZ84640.D	80.0	74.0
MC25107-3	YZ84641.D	95.0	88.0
MC25107-4	YZ84642.D	141.0	133.0
MC25107-5	YZ84643.D	150.0	124.0
MC25107-6	YZ84644.D	152.0	126.0
MC25107-7	YZ84645.D	159.0	146.0
MC25107-8	YZ84646.D	117.0	107.0
MC25107-10	YZ84647.D	144.0	133.0
OP35198-BS	YZ84635.D	140.0	128.0
OP35198-MB	YZ84634.D	121.0	109.0
OP35198-MS	YZ84636.D	154.0	139.0
OP35198-MSD	YZ84637.D	134.0	120.0

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

GC Surrogate Retention Time Summary

Job Number: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7333-CC7331	Injection Date:	10/11/13
Lab File ID:	YZ84627.D	Injection Time:	02:01
Instrument ID:	GCYZ	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	2.97	2.90

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	YZ84628.D	10/11/13	02:29	2.97	2.90
ZZZZZZ	YZ84629.D	10/11/13	02:56	2.97	2.90
ZZZZZZ	YZ84630.D	10/11/13	03:23	2.98	2.90
ZZZZZZ	YZ84631.D	10/11/13	03:50	2.98	2.90
ZZZZZZ	YZ84632.D	10/11/13	04:16	2.98	2.90
ZZZZZZ	YZ84633.D	10/11/13	04:43	2.98	2.90
OP35198-MB	YZ84634.D	10/11/13	05:10	2.98	2.90
OP35198-BS	YZ84635.D	10/11/13	05:37	2.98	2.90
OP35198-MS	YZ84636.D	10/11/13	06:02	2.98	2.90
OP35198-MSD	YZ84637.D	10/11/13	06:28	2.98	2.90

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: MC25107
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7333-CC7331	Injection Date:	10/11/13
Lab File ID:	YZ84638.D	Injection Time:	06:53
Instrument ID:	GCYZ	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	2.98	2.90

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC25107-1	YZ84639.D	10/11/13	07:18	2.98	2.90
MC25107-2	YZ84640.D	10/11/13	07:43	2.98	2.90
MC25107-3	YZ84641.D	10/11/13	08:08	2.98	2.90
MC25107-4	YZ84642.D	10/11/13	08:34	2.98	2.90
MC25107-5	YZ84643.D	10/11/13	08:59	2.97	2.90
MC25107-6	YZ84644.D	10/11/13	09:25	2.98	2.90
MC25107-7	YZ84645.D	10/11/13	09:52	2.97	2.90
MC25107-8	YZ84646.D	10/11/13	10:19	2.98	2.90
MC25107-10	YZ84647.D	10/11/13	10:45	2.98	2.90
ZZZZZZ	YZ84648.D	10/11/13	11:11	2.98	2.90

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.2

Roxana Groundwater Quarterly – 4th Quarter 2013 Data Review

Laboratory SDG: MC25152

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/18/2013

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

Sample Identification	Sample Identification
MW16-ROX-100813	P54-ROX-100813
MW2-ROX-100813	MW3-ROX-100813
MW5-ROX-100813-EB	MW5-ROX-100813
TB-ROX-100813-HCL	TB-ROX-100813-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 that sample MW16-ROX-100813 was re-extracted for SVOCs and PAHs outside holding time criteria. VOC LCS/LCSD and SVOC LCS recoveries were outside evaluation criteria. SVOC acid and base/neutral fraction surrogate recoveries were outside evaluation criteria in sample MW16-ROX-100813-Run#2, and VOC by 8011 surrogate recoveries were outside evaluation criteria in samples MW2-ROX-100813 and MW3-ROX-100813. SVOC and PAH data from sample MW16-ROX-100813 was re-extracted outside of hold time. Although not indicated in the laboratory case narrative, compounds were detected in the method blank, equipment blank, and trip blank. Sample MW2-ROX-100813 was diluted due to high levels of VOC target analytes. These issues are addressed further in the appropriate sections below. Additionally, the initial calibration verification for dichlorodifluoromethane and chloromethane exceeded 30 percent difference (%D).

The cooler receipt form indicated that two of two coolers were received by the laboratory at temperatures of 1.1ºC and 1.9ºC, 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?

No, sample MW16-ROX-100813 was re-extracted 3 days outside of extraction holding time criteria (7 days) due to low recoveries of acid and base/neutral fraction surrogates in the original analysis. The re-extracted/re-analysis confirmation run indicates matrix interference. Holding time exceedances were not greater than two times (2X) holding time criteria; data requiring qualification is summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
MW16-ROX-100813	SVOCs	All non-detects	**UJ**

Sample ID	Parameter	Analyte	Qualification
MW16-ROX-100813	PAHs	All non-detects	**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
MW5-ROX-100813-EB	VOCs	Acetone	4.6 ug/L
MW5-ROX-100813-EB	SVOCs	Di-n-butyl phthalate	0.57 ug/L
MW5-ROX-100813-EB	SVOCs	bis(2-Ethylhexyl)phthalate	0.56 ug/L
TB-ROX-100813-HCL	VOCs	Acetone	7.8 ug/L
OP35250-MB	SVOCs	Di-n-butyl phthalate	0.73 ug/L
OP35250-MB	SVOCs	bis(2-Ethylhexyl)phthalate	0.50 ug/L

Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not required qualification. No qualification of data was required.

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS/ LCSD ID	Parameter	Analyte	LCS/LCSD Recovery	RPD	LCS/LCSD /RPD Criteria
MSL3635-BS/BSD	VOCs	Bromomethane	119/**139**	15	70-130/25
MSL3635-BS/BSD	VOCs	Chloromethane	122/**136**	10	70-130/25
MSL3635-BS/BSD	VOCs	Dichlorodifluoromethane	**132/142**	7	70-130/25
OP35250-BS	SVOCs	Pyridine	**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 OP35250-BS was associated with the equipment blank. Equipment blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
P54-ROX-100813	SVOCs	Pyridine	**UJ**
MW2-ROX-100813	SVOCs	Pyridine	**UJ**
MW3-ROX-100813	SVOCs	Pyridine	**UJ**
MW5-ROX-100813	SVOCs	Pyridine	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW16-ROX-100813-Run#2	SVOCs	2-Fluorophenol	**2**	15-110
MW16-ROX-100813-Run#2	SVOCs	Phenol-d_5	**8**	15-110
MW16-ROX-100813-Run#2	SVOCs	Nitrobenzene-d_5	**7**	15-110
MW16-ROX-100813-Run#2	PAHs	Nitrobenzene-d_5	**7**	30-130
MW2-ROX-100813	VOCs by 8011	Bromofluorobenzene	**213**	36-173
MW2-ROX-100813	VOCs by 8011	Bromofluorobenzene	**194**	36-173
MW3-ROX-100813	VOCs by 8011	Bromofluorobenzene	**231**	36-173
MW3-ROX-100813	VOCs by 8011	Bromofluorobenzene	**212**	36-173

Data was reported and qualified from the confirmation analysis of sample MW16-ROX-100813 (Run#1). No further qualification of sample MW16-ROX-100813 data was required. 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?

Yes, although not requested, sample MW3-ROX-100813 was spiked and analyzed for VOCs.

Were MS/MSD recoveries within evaluation criteria?

Yes

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

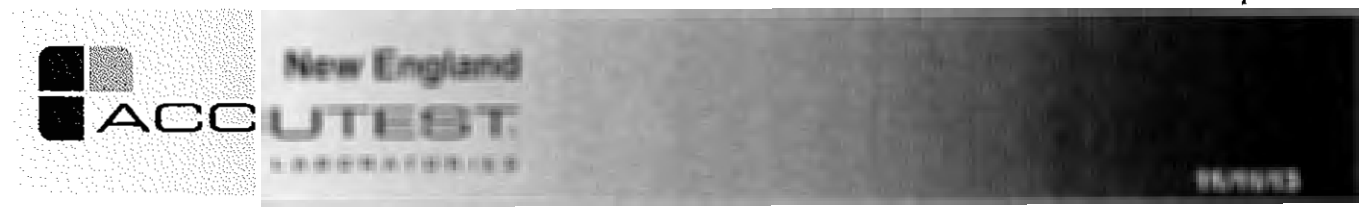
For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

No





Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC25152

Sampling Date: 10/08/13

Report to:

URS Corporation

elizabeth.kunkel@URS.com

ATTN: Elizabeth Kunkel

Total number of pages in report: **117**

Reviewed on
11-18-13

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: MC25152

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time By	Received	Matrix Code	Matrix Type	Client Sample ID
MC25152-1	10/08/13	09:25 LRBL	10/09/13	AQ	Ground Water	MW16-ROX-100813
MC25152-2	10/08/13	10:20 LRBL	10/09/13	AQ	Ground Water	P54-ROX-100813
MC25152-3	10/08/13	11:35 LRBL	10/09/13	AQ	Ground Water	MW2-ROX-100813
MC25152-4	10/08/13	13:20 LRBL	10/09/13	AQ	Ground Water	MW3-ROX-100813
MC25152-5	10/08/13	13:35 LRBL	10/09/13	AQ	Equipment Blank	MW5-ROX-100813-EB
MC25152-6	10/08/13	14:35 LRBL	10/09/13	AQ	Ground Water	MW5-ROX-100813
MC25152-7	10/08/13	00:00 LRBL	10/09/13	AQ	Trip Blank Water	TB-ROX-100813-HCL
MC25152-8	10/08/13	00:00 LRBL	10/09/13	AQ	Trip Blank Water	TB-ROX-100813-ST

ACCUTEST LABORATORIES

2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	Job No	MC25152
Site:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central	Report Date	11/4/2013 11:24:59 AM

6 Sample(s), 2 Trip Blank(s) and 0 Field Blank(s) were collected on 10/08/2013 and were received at Accutest on 10/09/2013 properly preserved, at 1.1 Deg. C and intact. These Samples received an Accutest job number of MC25152. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

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

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ Batch ID: MSL3635

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC25132-1MS, MC25132-1MSD were used as the QC samples indicated.
- MSL3635-BS for Dichlorodifluoromethane are outside control limits. Blank Spike meets program technical requirements.
- MSL3635-BSD for Bromomethane, Chloromethane, Dichlorodifluoromethane are outside control limits. Blank Spike meets program technical requirements.
- MC25132-1MS for Acetone, Dichlorodifluoromethane are outside control limits due to possible matrix interference. Refer to Blank Spike.
- MC25132-1MSD for 2-Butanone (MEK), Acetone are outside control limits due to possible matrix interference. Refer to Blank Spike.
- Initial calibration verification standard MSL3634-ICV3634 for dichlorodifluoromethane, chloromethane exceed 30% Difference (Results biased high). Associated samples are non-detect for these compounds.

Matrix: AQ Batch ID: MSL3637

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25152-4MS, MC25152-4MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC25152-3, MC25152-4, MC25152-6 have compounds reported with "D" qualifiers indicating results from the diluted analysis.

Extractables by GCMS By Method SW846 8270C

Matrix: AQ	Batch ID: OP35250

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25199-1MS, MC25199-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- OP35250-BS for Pyridine are outside control limits. Blank Spike meets program technical requirements.
- OP35250-MS for 4,6-Dinitro-o-cresol, Pyridine are outside control limits due to possible matrix interference. Refer to Blank Spike.
- OP35250-MSD for n-Nitrosodimethylamine, Pyridine are outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for OP35250-MSD for bis(2-Ethylhexyl)phthalate are outside control limits. High RPD due to possible matrix interference and/or sample non-homogeneity.
- MC25152-1: Confirmation run.
- MC25152-1 for Phenol-d5, Nitrobenzene-d5, 2-Fluorophenol: Outside control limits due to possible matrix interference. Sample results confirmed by re-extraction/reanalysis.

Matrix: AQ	Batch ID: OP35324

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC25100-13MS, MC25100-13MSD were used as the QC samples indicated.
- The following samples were extracted outside of holding time for method SW846 8270C: MC25152-1. Sample re-extracted beyond recommended holding time.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix: AQ	Batch ID: OP35251

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC24900-23MS, MC24900-23MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MC25152-1: Confirmation run.
- MC25152-1 for Nitrobenzene-d5: Outside control limits due to possible matrix interferenec. Sample results confirmed by re-extraction/reanalysis.

Matrix: AQ	Batch ID: OP35325

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25100-14MS, MC25100-14MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- The following samples were extracted outside of holding time for method SW846 8270C BY SIM: MC25152-1. Sample re-extracted beyond recommended holding time.

Volatiles by GC By Method SW846 8011

Matrix: AQ	Batch ID: OP35198

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25107-8MS, MC25107-8MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MC25152-3, -4 for Bromofluorobenzene (S): Outside control limits due to possible matrix interference.

VOC: Analysis is performed and evaluated by SW846 8260C.

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(MC25152).

Summary of Hits

Job Number: MC25152
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Collected: 10/08/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC25152-1	MW16-ROX-100813					
No hits reported in this sample.						
MC25152-2	P54-ROX-100813					
No hits reported in this sample.						
MC25152-3	MW2-ROX-100813					
Benzene		13.9	0.50	0.45	ug/l	SW846 8260B
2-Butanone (MEK)		13.3	5.0	1.6	ug/l	SW846 8260B
sec-Butylbenzene		8.2	5.0	0.58	ug/l	SW846 8260B
Ethylbenzene		942	20	7.5	ug/l	SW846 8260B
2-Hexanone		7.9	5.0	2.3	ug/l	SW846 8260B
Isopropylbenzene		98.3	5.0	0.64	ug/l	SW846 8260B
p-Isopropyltoluene		10.4	5.0	0.55	ug/l	SW846 8260B
Methyl Tert Butyl Ether		3.2	1.0	0.43	ug/l	SW846 8260B
Naphthalene		93.9	5.0	0.79	ug/l	SW846 8260B
n-Propylbenzene		132	5.0	0.59	ug/l	SW846 8260B
Toluene		16.4	1.0	0.46	ug/l	SW846 8260B
1,2,4-Trimethylbenzene		368	5.0	0.47	ug/l	SW846 8260B
1,3,5-Trimethylbenzene		174	5.0	1.1	ug/l	SW846 8260B
Vinyl Acetate		76.8	5.0	1.3	ug/l	SW846 8260B
m,p-Xylene		912	20	14	ug/l	SW846 8260B
o-Xylene		51.9	1.0	0.41	ug/l	SW846 8260B
Xylene (total)		912	20	8.2	ug/l	SW846 8260B
1-Methylnaphthalene		9.0	0.22	0.054	ug/l	SW846 8270C BY SIM
2-Methylnaphthalene		20.1	0.22	0.080	ug/l	SW846 8270C BY SIM
MC25152-4	MW3-ROX-100813					
Benzene		0.57	0.50	0.45	ug/l	SW846 8260B
Ethylbenzene		2.5	1.0	0.38	ug/l	SW846 8260B
Methyl Tert Butyl Ether		0.75 J	1.0	0.43	ug/l	SW846 8260B
n-Propylbenzene		2.1 J	5.0	0.59	ug/l	SW846 8260B
Vinyl Acetate		19.7	5.0	1.3	ug/l	SW846 8260B
m,p-Xylene		1.1	1.0	0.70	ug/l	SW846 8260B
Xylene (total)		1.1	1.0	0.41	ug/l	SW846 8260B
1-Methylnaphthalene		0.13 J	0.22	0.054	ug/l	SW846 8270C BY SIM
2-Methylnaphthalene		0.14 J	0.22	0.080	ug/l	SW846 8270C BY SIM
MC25152-5	MW5-ROX-100813-EB					
Acetone		4.6 J	10	2.8	ug/l	SW846 8260B

Summary of Hits

Job Number: MC25152
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Collected: 10/08/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Di-n-butyl phthalate		0.57 J	5.3	0.41	ug/l	SW846 8270C
bis(2-Ethylhexyl)phthalate		0.56 J	2.1	0.51	ug/l	SW846 8270C
MC25152-6	MW5-ROX-100813					
Benzene		1.6	0.50	0.45	ug/l	SW846 8260B
tert-Butylbenzene		6.4	5.0	0.87	ug/l	SW846 8260B
Isopropylbenzene		4.5 J	5.0	0.64	ug/l	SW846 8260B
Methyl Tert Butyl Ether		22.1	1.0	0.43	ug/l	SW846 8260B
Toluene		2.0	1.0	0.46	ug/l	SW846 8260B
Vinyl Acetate		12.9	5.0	1.3	ug/l	SW846 8260B
m,p-Xylene		4.4	1.0	0.70	ug/l	SW846 8260B
o-Xylene		0.97 J	1.0	0.41	ug/l	SW846 8260B
Xylene (total)		5.4	1.0	0.41	ug/l	SW846 8260B
1-Methylnaphthalene		3.8	0.22	0.055	ug/l	SW846 8270C BY SIM
2-Methylnaphthalene		0.090 J	0.22	0.082	ug/l	SW846 8270C BY SIM
MC25152-7	TB-ROX-100813-HCL					
Acetone		7.8 J	10	2.8	ug/l	SW846 8260B
MC25152-8	TB-ROX-100813-ST					

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW16-ROX-100813		
Lab Sample ID:	MC25152-1	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L79216.D	1	10/21/13	KR	n/a	n/a	MSL3635
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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

Report of Analysis

Client Sample ID:	MW16-ROX-100813		
Lab Sample ID:	MC25152-1	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	MW16-ROX-100813		
Lab Sample ID:	MC25152-1	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-130%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	101%		70-130%

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

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-100813		
Lab Sample ID:	MC25152-1	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	X00338.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
Run #2 [b]	W14979.D	1	10/23/13	KR	10/14/13	OP35250	MSW675

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2	890 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.2	0.40	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.51	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.34	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.52	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.60	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.2	0.53	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.59	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.33	ug/l	
62-53-3	Aniline	ND	10	0.66	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.2	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.2	0.88	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.59	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.2	0.95	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.2	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.2	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.2	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.2	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.2	0.67	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.70	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.66	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.2	0.52	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.2	0.40	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.2	0.45	ug/l	

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

Report of Analysis

Client Sample ID:	MW16-ROX-100813		
Lab Sample ID:	MC25152-1	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.2	0.52	ug/l	UJ
131-11-3	Dimethyl phthalate	ND	5.2	0.52	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.50	ug/l	
118-74-1	Hexachlorobenzene	ND	5.2	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.6	ug/l	
67-72-1	Hexachloroethane	ND	5.2	0.45	ug/l	
78-59-1	Isophorone	ND	5.2	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.29	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.52	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.5	ug/l	
98-95-3	Nitrobenzene	ND	5.2	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.2	0.52	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.2	0.83	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.2	0.56	ug/l	
110-86-1	Pyridine	ND	10	0.53	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	47%	2% c	15-110%
4165-62-2	Phenol-d5	32%	8% c	15-110%
118-79-6	2,4,6-Tribromophenol	92%	77%	15-110%
4165-60-0	Nitrobenzene-d5	90%	7% c	30-130%
321-60-8	2-Fluorobiphenyl	89%	38%	30-130%
1718-51-0	Terphenyl-d14	104%	93%	30-130%

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

(a) Sample re-extracted beyond recommended holding time.
(b) Confirmation run.
(c) Outside control limits due to possible matrix interference. Sample results confirmed by re-extraction/reanalysis.

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

Report of Analysis

Client Sample ID:	MW16-ROX-100813		
Lab Sample ID:	MC25152-1	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	I86599.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223
Run #2 [b]	W14858.D	1	10/16/13	KR	10/14/13	OP35251	MSW670

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2	890 ml	1.0 ml

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.071	ng/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	ng/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.076	ug/l	
85-01-8	Phenanthrene	ND	0.052	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.040	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	93%	7% [c]	30-130%
321-60-8	2-Fluorobiphenyl	90%	34%	30-130%
1718-51-0	Terphenyl-d14	109%	94%	30-130%

(a) Sample re-extracted beyond recommended holding time.
(b) Confirmation run.
(c) Outside control limits due to possible matrix interference. Sample results confirmed by re-extraction/reanalysis.

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

Report of Analysis

Client Sample ID:	MW16-ROX-100813		
Lab Sample ID:	MC25152-1	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84648.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333
Run #2							

	Initial Volume	Final Volume
Run #1	36.2 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	169%		36-173%
460-00-4	Bromofluorobenzene (S)	158%		36-173%

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

Report of Analysis

Client Sample ID:	P54-ROX-100813		
Lab Sample ID:	MC25152-2	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L79217.D	1	10/21/13	KR	n/a	u/a	MSL3635
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P54-ROX-100813		
Lab Sample ID:	MC25152-2	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	P54-ROX-100813		
Lab Sample ID:	MC25152-2	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	100%		70-130%
460-00-4	4-Bromoflnorobenzene	104%		70-130%

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

ND = Not detected MDL - Method Detection Limit
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E = Indicates value exceeds calibration range
J = Indicates an estimated value
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Report of Analysis

Client Sample ID:	P54-ROX-100813		
Lab Sample ID:	MC25152-2	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W14980.D	1	10/23/13	KR	10/14/13	OP35250	MSW675
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	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.7	0.44	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.57	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.38	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	23	2.9	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.4	ug/l	
95-48-7	2-Methylpheuol	ND	11	1.5	ug/l	
	3&4-Methylphenol	ND	11	2.3	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.57	ug/l	
100-02-7	4-Nitrophenol	ND	23	0.67	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	ND	5.7	0.59	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.66	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.36	ug/l	
62-53-3	Aniline	ND	11	0.73	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.7	0.23	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.7	0.98	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.66	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.7	1.1	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.29	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.7	0.24	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.7	0.27	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.7	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.7	0.23	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.7	0.75	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.78	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.74	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.7	0.57	ug/l	
132-64-9	Dibenzofuran	ND	2.3	0.18	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.7	0.45	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.7	0.50	ug/l	

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Report of Analysis

Client Sample ID:	P54-ROX-100813		
Lab Sample ID:	MC25152-2	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.7	0.57	ug/l	
131-11-3	Dimethyl phthalate	ND	5.7	0.57	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.3	0.56	ug/l	
118-74-1	Hexachlorobenzene	ND	5.7	0.34	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.9	ug/l	
67-72-1	Hexachloroethane	ND	5.7	0.50	ug/l	
78-59-1	Isophorone	ND	5.7	0.23	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.32	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.57	ug/l	
100-01-6	4-Nitroaniline	ND	11	5.0	ug/l	
98-95-3	Nitrobenzene	ND	5.7	0.29	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.7	0.57	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.7	0.93	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.7	0.62	ug/l	
110-86-1	Pyridine	ND	11	0.59	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	32%		15-110%
4165-62-2	Phenol-d5	22%		15-110%
118-79-6	2,4,6-Tribromophenol	67%		15-110%
4165-60-0	Nitrobenzene-d5	53%		30-130%
321-60-8	2-Fluorobiphenyl	54%		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:	P54-ROX-100813		
Lab Sample ID:	MC25152-2	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W14859.D	1	10/16/13	KR	10/14/13	OP35251	MSW670
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	ND	0.057	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.044	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	57%		30-130%
321-60-8	2-Fluorobiphenyl	49%		30-130%
1718-51-0	Terphenyl-d14	96%		30-130%

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

Report of Analysis

Client Sample ID:	P54-ROX-100813		
Lab Sample ID:	MC25152-2	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84650.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333
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	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	151%		36-173%
460-00-4	Bromofluorobenzene (S)	141%		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:	MW2-ROX-100813		
Lab Sample ID:	MC25152-3	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L79218.D	1	10/21/13	KR	n/a	n/a	MSL3635
Run #2	L79260.D	20	10/22/13	KR	n/a	n/a	MSL3637

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

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	13.9	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	13.3	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	8.2	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

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

Report of Analysis

Client Sample ID:	MW2-ROX-100813		
Lab Sample ID:	MC25152-3	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl metbacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	942 [a]	20	7.5	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	7.9	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	98.3	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	10.4	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3.2	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	93.9	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	132	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	16.4	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ng/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	368	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	174	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	76.8	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	912 [a]	20	14	ug/l	
95-47-6	o-Xylene	51.9	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	912 [a]	20	8.2	ug/l	

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

Report of Analysis

Client Sample ID:	MW2-ROX-100813		
Lab Sample ID:	MC25152-3	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%	92%	70-130%
2037-26-5	Toluene-D8	101%	99%	70-130%
460-00-4	4-Bromofluorobenzene	104%	103%	70-130%

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

(a) Result is from Ruu# 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 fouud in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW2-ROX-100813		
Lab Sample ID:	MC25152-3	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W14981.D	1	10/23/13	KR	10/14/13	OP35250	MSW675
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.4	0.55	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.92	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.99	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.70	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.69	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

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

Report of Analysis

Client Sample ID:	MW2-ROX-100813		
Lab Sample ID:	MC25152-3	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.53	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.47	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.87	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.58	ug/l	
110-86-1	Pyridine	ND	11	0.55	ug/l	uJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	33%		15-110%
4165-62-2	Phenol-d5	28%		15-110%
118-79-6	2,4,6-Tribromophenol	82%		15-110%
4165-60-0	Nitrobenzene-d5	59%		30-130%
321-60-8	2-Fluorobiphenyl	61%		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 fonnd in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW2-ROX-100813		
Lab Sample ID:	MC25152-3	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W14860.D	1	10/16/13	KR	10/14/13	OP35251	MSW670
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	9.0	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	20.1	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	62%		30-130%
321-60-8	2-Fluorobiphenyl	56%		30-130%
1718-51-0	Terphenyl-d14	96%		30-130%

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

Report of Analysis

Client Sample ID:	MW2-ROX-100813		
Lab Sample ID:	MC25152-3	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84651.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333
Run #2							

	Initial Volume	Final Volume
Run #1	36.7 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	213% [a]		36-173%
460-00-4	Bromofluorobenzene (S)	194% [a]		36-173%

(a) Outside control limits due to possible matrix interference.

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

Report of Analysis

Client Sample ID:	MW3-ROX-100813		
Lab Sample ID:	MC25152-4	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L79219.D	1	10/21/13	KR	n/a	n/a	MSL3635
Run #2	L79257.D	1	10/22/13	KR	n/a	n/a	MSL3637

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

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	0.57	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ng/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

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

Report of Analysis

Client Sample ID:	MW3-ROX-100813		
Lab Sample ID:	MC25152-4	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	2.5	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzeue	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.75	1.0	0.43	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	2.1	5.0	0.59	ug/l	J
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzeue	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	19.7	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xyleue	1.1 [a]	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND [a]	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	1.1 [a]	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	MW3-ROX-100813		
Lab Sample ID:	MC25152-4	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%	91%	70-130%
2037-26-5	Toluene-D8	99%	99%	70-130%
460-00-4	4-Bromofluorobenzene	105%	102%	70-130%

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

(a) Result is from Run# 2

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

Report of Analysis

Client Sample ID:	MW3-ROX-100813		
Lab Sample ID:	MC25152-4	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W14982.D	1	10/23/13	KR	10/14/13	OP35250	MSW675
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.4	0.55	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.92	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.99	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.70	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.69	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

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

Report of Analysis

Client Sample ID:	MW3-ROX-100813		
Lab Sample ID:	MC25152-4	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.53	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.47	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroauiline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.87	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.58	ug/l	
110-86-1	Pyridine	ND	11	0.55	ug/l	U

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	86%		15-110%
4165-60-0	Nitrobenzene-d5	63%		30-130%
321-60-8	2-Fluorobiphenyl	64%		30-130%
1718-51-0	Terphenyl-d14	93%		30-130%

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

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

Report of Analysis

Client Sample ID:	MW3-ROX-100813		
Lab Sample ID:	MC25152-4	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W14861.D	1	10/16/13	KR	10/14/13	OP35251	MSW670
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.074	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.053	ug/l	
120-12-7	Anthracene	ND	0.11	0.099	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.034	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	0.13	0.22	0.054	ug/l	J
91-57-6	2-Methylnaphthalene	0.14	0.22	0.080	ug/l	J
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	66%		30-130%
321-60-8	2-Fluorobiphenyl	57%		30-130%
1718-51-0	Terphenyl-d14	96%		30-130%

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

Report of Analysis

Client Sample ID:	MW3-ROX-100813		
Lab Sample ID:	MC25152-4	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84652.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333
Run #2							

	Initial Volume	Final Volume
Run #1	36.7 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	231% [a]		36-173%
460-00-4	Bromofluorobenzene (S)	212% [a]		36-173%

(a) Outside control limits due to possible matrix interference.

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

Report of Analysis

Client Sample ID:	MW5-ROX-100813-EB		
Lab Sample ID:	MC25152-5	Date Sampled:	10/08/13
Matrix:	AQ - Equipment Blank	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L79208.D	1	10/21/13	KR	n/a	n/a	MSL3635
Run #2							

	Purge Volume
Run #I	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	4.6	10	2.8	ug/l	J
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

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

Report of Analysis

Client Sample ID:	MW5-ROX-100813-EB		
Lab Sample ID:	MC25152-5	Date Sampled:	10/08/13
Matrix:	AQ - Equipment Blank	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	traus-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Tricblorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	MW5-ROX-100813-EB		
Lab Sample ID:	MC25152-5	Date Sampled:	10/08/13
Matrix:	AQ - Equipment Blank	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	100%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW5-ROX-100813-EB		
Lab Sample ID:	MC25152-5	Date Sampled:	10/08/13
Matrix:	AQ - Equipment Blank	Date Received:	10/09/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W14983.D	1	10/23/13	KR	10/14/13	OP35250	MSW675
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.3	0.40	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.52	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.53	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.61	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.3	0.54	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.60	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.33	ug/l	
62-53-3	Aniline	ND	11	0.67	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.90	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.61	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.97	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.69	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.71	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.68	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.53	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	0.57	5.3	0.41	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.3	0.46	ug/l	

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

Report of Analysis

Client Sample ID:	MW5-ROX-100813-EB		
Lab Sample ID:	MC25152-5	Date Sampled:	10/08/13
Matrix:	AQ - Equipment Blank	Date Received:	10/09/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.3	0.53	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.53	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.56	2.1	0.51	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.3	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.6	ug/l	
67-72-1	Hexachloroethane	ND	5.3	0.46	ug/l	
78-59-1	Isophorone	ND	5.3	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.29	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.53	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.6	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	0.53	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.85	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.57	ug/l	
110-86-1	Pyridine	ND	11	0.54	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	33%		15-110%
4165-62-2	Phenol-d5	21%		15-110%
118-79-6	2,4,6-Tribromophenol	80%		15-110%
4165-60-0	Nitrobenzene-d5	52%		30-130%
321-60-8	2-Fluorobiphenyl	52%		30-130%
1718-51-0	Terphenyl-d14	94%		30-130%

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

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

Report of Analysis

Client Sample ID:	MW5-ROX-100813-EB		
Lab Sample ID:	MC25152-5	Date Sampled:	10/08/13
Matrix:	AQ - Equipment Blank	Date Received:	10/09/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W14862.D	1	10/16/13	KR	10/14/13	OP35251	MSW670
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-Methylnaphtbalene	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	55%		30-130%
321-60-8	2-Fluorobiphenyl	47%		30-130%
1718-51-0	Terphenyl-d14	99%		30-130%

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

Report of Analysis

Client Sample ID:	MW5-ROX-100813-EB		
Lab Sample ID:	MC25152-5	Date Sampled:	10/08/13
Matrix:	AQ - Equipment Blank	Date Received:	10/09/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84653.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333
Run #2							

	Initial Volume	Final Volume
Run #1	36.5 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	135%		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:	MW5-ROX-100813		
Lab Sample ID:	MC25152-6	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L79220.D	1	10/21/13	KR	n/a	n/a	MSL3635
Run #2	L79258.D	1	10/22/13	KR	n/a	n/a	MSL3637

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

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ng/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	1.6	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzeue	6.4	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobeuzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobeuzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroetheue	ND	1.0	0.54	ug/l	

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

Report of Analysis

Client Sample ID:	MW5-ROX-100813		
Lab Sample ID:	MC25152-6	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl metbacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND [a]	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylhenzene	4.5	5.0	0.64	ug/l	J
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	22.1	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ng/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	2.0	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ng/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ng/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	12.9	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	4.4	1.0	0.70	ug/l	
95-47-6	o-Xylene	0.97	1.0	0.41	ug/l	J
1330-20-7	Xylene (total)	5.4	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	MW5-ROX-100813		
Lab Sample ID:	MC25152-6	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%	127%	70-130%
2037-26-5	Toluene-D8	100%	100%	70-130%
460-00-4	4-Bromofluorobenzene	106%	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
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-100813		
Lab Sample ID:	MC25152-6	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W15117.D	1	10/28/13	KR	10/14/13	OP35250	MSW681
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.5	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.54	ng/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.55	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.64	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	ND	5.5	0.56	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.63	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.35	ug/l	
62-53-3	Aniline	ND	11	0.70	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.5	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.5	0.94	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.63	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.5	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.5	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.5	0.25	ug/l	
108-60-1	bis(2-Cbloroisopropyl)ether	ND	5.5	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.5	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.5	0.72	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.74	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.71	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.5	0.55	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ng/l	
84-74-2	Di-n-butyl phthalate	ND	5.5	0.43	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.5	0.48	ug/l	

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

Report of Analysis

Client Sample ID:	MW5-ROX-100813		
Lab Sample ID:	MC25152-6	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.5	0.55	ug/l	
131-11-3	Dimethyl phtbalate	ND	5.5	0.55	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.54	ug/l	
118-74-1	Hexachlorobenzene	ND	5.5	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.5	0.48	ug/l	
78-59-1	Isophorone	ND	5.5	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.31	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.55	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.8	ug/l	
98-95-3	Nitrobenzene	ND	5.5	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.5	0.55	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.5	0.89	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.5	0.59	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	54%		15-110%
4165-62-2	Phenol-d5	57%		15-110%
118-79-6	2,4,6-Tribromophenol	85%		15-110%
4165-60-0	Nitrobenzene-d5	53%		30-130%
321-60-8	2-Fluorobiphenyl	64%		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:	MW5-ROX-100813		
Lab Sample ID:	MC25152-6	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W14863.D	1	10/16/13	KR	10/14/13	OP35251	MSW670
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.076	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.055	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.055	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	3.8	0.22	0.055	ug/l	
91-57-6	2-Methylnaphthalene	0.090	0.22	0.082	ug/l	J
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	70%		30-130%
321-60-8	2-Fluorobiphenyl	55%		30-130%
1718-51-0	Terphenyl-d14	98%		30-130%

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

Report of Analysis

Client Sample ID:	MW5-ROX-100813		
Lab Sample ID:	MC25152-6	Date Sampled:	10/08/13
Matrix:	AQ - Ground Water	Date Received:	10/09/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84654.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333
Run #2							

	Initial Volume	Final Volume
Run #1	36.6 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	128%		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-ROX-100813-HCL		
Lab Sample ID:	MC25152-7	Date Sampled:	10/08/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #I	L79207.D	I	10/21/13	KR	n/a	n/a	MSL3635
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	7.8	10	2.8	ug/l	J
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorntoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-I	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

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

Report of Analysis

Client Sample ID:	TB-ROX-100813-HCL		
Lab Sample ID:	MC25152-7	Date Sampled:	10/08/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 Sonth Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ng/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	TB-ROX-100813-HCL		
Lab Sample ID:	MC25152-7	Date Sampled:	10/08/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/09/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	104%		70-130%

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

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

Report of Analysis

Client Sample ID:	TB-ROX-100813-ST		
Lab Sample ID:	MC25152-8	Date Sampled:	10/08/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/09/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ84655.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333
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	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

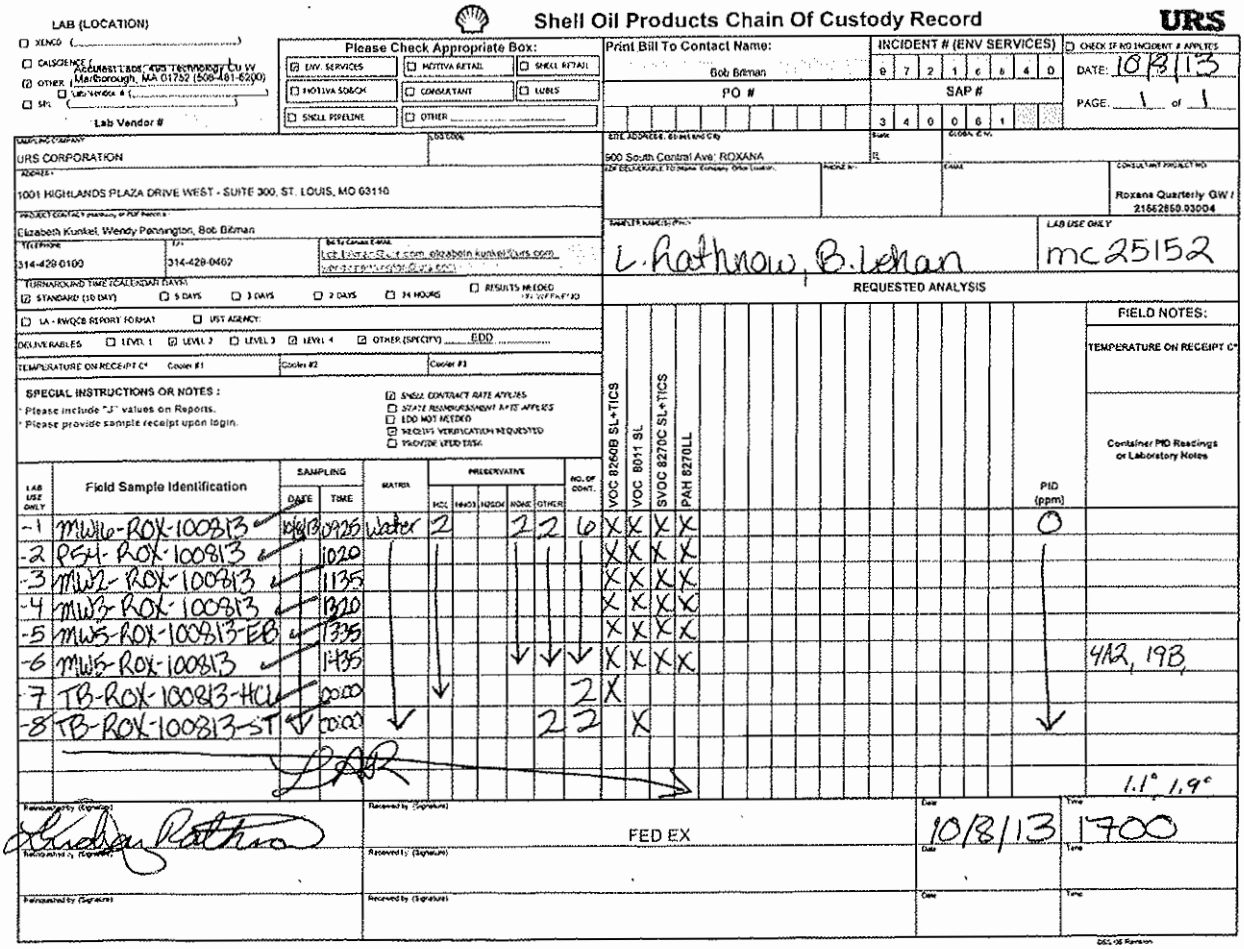
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	167%		36-173%
460-00-4	Bromofluorobenzene (S)	154%		36-173%

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

Custody Documents and Other Forms

Includes the following where applicable:

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



Shell Oil Products Chain Of Custody Record

URS

LAB (LOCATION)
☐ XENCO (_____)
☐ CALSCIENCE (_____)
☑ OTHER (Accutest Laboratories Technology Drive W Marlborough, MA 01752 (508-481-6200))
☐ SPL (_____)
☐ Lab Service # (_____)
Lab Vendor #

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

Print Bill To Contact Name: Bob Bitman
PO #
INCIDENT # (ENV SERVICES) 0 7 2 1 c 5 4 0
SAP # 3 4 0 0 6 1
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 10/8/13
PAGE: 1 of 1

SHIPPING COMPANY: URS CORPORATION
LOG CODE:
ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110
PROJECT CONTACT (name/org. of PDF Report): Elizabeth Kunkel, Wendy Pennington, Bob Bitman
TELEPHONE: 314-429-0100
FAX: 314-429-0462
E-MAIL TO CONTACT: bob.bitman@urs.com, elizabeth.kunkel@urs.com, wendy.pennington@urs.com
SITE ADDRESS, ID and CITY: 500 South Central Ave/ ROXANA
STATE: IL
GLOBAL ID#:
CONSULTANT PROJECT NO.: Roxana Quarterly GW / 21562850.03004
SAMPLER NAME(S) (Print): L. Rathnow, B. Lehan
LAB USE ONLY: mc25152

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED BY (SURCHARGE)
☐ 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 LEVEL IV DATA

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	FIELD NOTES: Container PID Readings or Laboratory Notes
-1	MW10-ROX-100813	10/8/13	0925	Water	2			2	2	6	X	X	X	X	0	
-2	PZ4-ROX-100813		1020								X	X	X	X		
-3	MW2-ROX-100813		1135								X	X	X	X		
-4	MW3-ROX-100813		1320								X	X	X	X		
-5	MW5-ROX-100813-EB		1335								X	X	X	X		
-6	MW6-ROX-100813		1435								X	X	X	X		412, 198
-7	TB-ROX-100813-HCL		0000							2	X					
-8	TB-ROX-100813-ST		0000						2	2		X				
																1.1° 1.9°

Relinquished by (Signature): L. Rathnow
Received by (Signature): FED EX
Date: 10/8/13 Time: 1700
Relinquished by (Signature):
Received by (Signature):
Date: Time:
Relinquished by (Signature):
Received by (Signature):
Date: Time:

DES-05 Revision

5.1
5

MC25152: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC25152 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 10/9/2013 **Delivery Method:** **Client Service Action Required at Login:** No

Project: 900 SOUTH CENTRAL **No. Coolers:** 2 **Airbill #'s:**

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

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

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

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

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

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

Comments

5.1

5

MC25152: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC25152

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC25152-1 Collected: 08-OCT-13 09:25 By: LRBL Received: 09-OCT-13 By: MW16-ROX-100813						
MC25152-1	SW846 8011	11-OCT-13 11:11	CZ	10-OCT-13	MT	V8011SL
MC25152-1	SW846 8270C BY SIM	16-OCT-13 14:00	KR	14-OCT-13	PA	B8270SIMSL
MC25152-1	SW846 8260B	21-OCT-13 17:29	KR			V8260SL+
MC25152-1	SW846 8270C	23-OCT-13 02:18	KR	14-OCT-13	PA	AB8270SL+
MC25152-1	SW846 8270C BY SIM	23-OCT-13 15:59	WK	18-OCT-13	PA	B8270SIMSL
MC25152-1	SW846 8270C	24-OCT-13 19:36	KR	18-OCT-13	PA	AB8270SL+
MC25152-2 Collected: 08-OCT-13 10:20 By: LRBL Received: 09-OCT-13 By: P54-ROX-100813						
MC25152-2	SW846 8011	11-OCT-13 12:02	CZ	10-OCT-13	MT	V8011SL
MC25152-2	SW846 8270C BY SIM	16-OCT-13 14:24	KR	14-OCT-13	PA	B8270SIMSL
MC25152-2	SW846 8260B	21-OCT-13 17:59	KR			V8260SL+
MC25152-2	SW846 8270C	23-OCT-13 02:46	KR	14-OCT-13	PA	AB8270SL+
MC25152-3 Collected: 08-OCT-13 11:35 By: LRBL Received: 09-OCT-13 By: MW2-ROX-100813						
MC25152-3	SW846 8011	11-OCT-13 12:27	CZ	10-OCT-13	MT	V8011SL
MC25152-3	SW846 8270C BY SIM	16-OCT-13 14:49	KR	14-OCT-13	PA	B8270SIMSL
MC25152-3	SW846 8260B	21-OCT-13 18:27	KR			V8260SL+
MC25152-3	SW846 8260B	22-OCT-13 14:51	KR			V8260SL+
MC25152-3	SW846 8270C	23-OCT-13 03:15	KR	14-OCT-13	PA	AB8270SL+
MC25152-4 Collected: 08-OCT-13 13:20 By: LRBL Received: 09-OCT-13 By: MW3-ROX-100813						
MC25152-4	SW846 8011	11-OCT-13 12:52	CZ	10-OCT-13	MT	V8011SL
MC25152-4	SW846 8270C BY SIM	16-OCT-13 15:14	KR	14-OCT-13	PA	B8270SIMSL
MC25152-4	SW846 8260B	21-OCT-13 18:56	KR			V8260SL+
MC25152-4	SW846 8260B	22-OCT-13 13:21	KR			V8260SL+
MC25152-4	SW846 8270C	23-OCT-13 03:44	KR	14-OCT-13	PA	AB8270SL+
MC25152-5 Collected: 08-OCT-13 13:35 By: LRBL Received: 09-OCT-13 By: MW5-ROX-100813-EB						
MC25152-5	SW846 8011	11-OCT-13 13:17	CZ	10-OCT-13	MT	V8011SL

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC25152

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC25152-5	SW846 8270C BY SIM	16-OCT-13 15:38	KR	14-OCT-13	PA	B8270SIMSL
MC25152-5	SW846 8260B	21-OCT-13 13:34	KR			V8260SL+
MC25152-5	SW846 8270C	23-OCT-13 04:12	KR	14-OCT-13	PA	AB8270SL+
MC25152-6 Collected: 08-OCT-13 14:35 By: LRBL Received: 09-OCT-13 By: MW5-ROX-100813						
MC25152-6	SW846 8011	11-OCT-13 13:43	CZ	10-OCT-13	MT	V8011SL
MC25152-6	SW846 8270C BY SIM	16-OCT-13 16:03	KR	14-OCT-13	PA	B8270SIMSL
MC25152-6	SW846 8260B	21-OCT-13 19:26	KR			V8260SL+
MC25152-6	SW846 8260B	22-OCT-13 13:52	KR			V8260SL+
MC25152-6	SW846 8270C	28-OCT-13 16:50	KR	14-OCT-13	PA	AB8270SL+
MC25152-7 Collected: 08-OCT-13 00:00 By: LRBL Received: 09-OCT-13 By: TB-ROX-100813-HCL						
MC25152-7	SW846 8260B	21-OCT-13 13:05	KR			V8260SL+
MC25152-8 Collected: 08-OCT-13 00:00 By: LRBL Received: 09-OCT-13 By: TB-ROX-100813-ST						
MC25152-8	SW846 8011	11-OCT-13 14:08	CZ	10-OCT-13	MT	V8011SL

Accutest Internal Chain of Custody

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Received: 10/09/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC25152-1.1	Walk In Ref #22	Thomas Abruzzise	10/14/13 15:23	Retrieve from Storage
MC25152-1.4	VOC Ref #4	Kerry Ryan	10/21/13 10:37	Retrieve from Storage
MC25152-1.4	Kerry Ryan	GCMSL	10/21/13 10:37	Load ou Instrument
MC25152-1.4	GCMSL	Kerry Ryan	10/22/13 09:50	Unload from Instrument
MC25152-1.4	Kerry Ryan	VOC Ref #4	10/22/13 09:51	Return to Storage
MC25152-1.6	VOC Ref #4	Michael Rolo	10/10/13 08:04	Retrieve from Storage
MC25152-1.6	Michael Rolo		10/11/13 09:20	Depleted
MC25152-2.1	Walk In Ref #22	Thomas Abruzzise	10/14/13 14:31	Retrieve from Storage
MC25152-2.4	VOC Ref #4	Kerry Ryan	10/21/13 10:37	Retrieve from Storage
MC25152-2.4	Kerry Ryan	GCMSL	10/21/13 10:37	Load on Instrument
MC25152-2.4	GCMSL	Kerry Ryan	10/22/13 09:50	Unload from Instrument
MC25152-2.4	Kerry Ryan	VOC Ref #4	10/22/13 09:51	Return to Storage
MC25152-2.5	VOC Ref #4	Michael Rolo	10/10/13 08:04	Retrieve from Storage
MC25152-2.5	Michael Rolo		10/11/13 09:20	Depleted
MC25152-3.2	Walk In Ref #22	Thomas Abruzzise	10/14/13 14:31	Retrieve from Storage
MC25152-3.3	VOC Ref #4	Kerry Ryan	10/21/13 10:37	Retrieve from Storage
MC25152-3.3	Kerry Ryan	GCMSL	10/21/13 10:37	Load on Instrument
MC25152-3.3	GCMSL	Kerry Ryan	10/22/13 09:50	Unload from Instrument
MC25152-3.3	Kerry Ryau	VOC Ref #4	10/22/13 09:51	Return to Storage
MC25152-3.4	VOC Ref #4	Kerry Ryan	10/22/13 11:48	Retrieve from Storage
MC25152-3.4	Kerry Ryan	GCMSL	10/22/13 11:48	Load on Iustrument
MC25152-3.4	GCMSL	Kerry Ryan	10/23/13 09:54	Unload from Instrument
MC25152-3.4	Kerry Ryan	VOC Ref #4	10/23/13 09:54	Return to Storage
MC25152-3.6	VOC Ref #4	Michael Rolo	10/10/13 08:04	Retrieve from Storage
MC25152-3.6	Michael Rolo		10/11/13 09:20	Depleted
MC25152-4.1	Walk In Ref #22	Thomas Abruzzise	10/14/13 14:31	Retrieve from Storage
MC25152-4.3	VOC Ref #4	Kerry Ryan	10/22/13 11:58	Retrieve from Storage
MC25152-4.3	Kerry Ryan	GCMSL	10/22/13 11:58	Load on Instrument
MC25152-4.3	GCMSL	Kerry Ryan	10/23/13 09:54	Unload from Instrument
MC25152-4.3	Kerry Ryan	VOC Ref #4	10/23/13 09:54	Return to Storage
MC25152-4.4	VOC Ref #4	Kerry Ryan	10/21/13 10:37	Retrieve from Storage
MC25152-4.4	Kerry Ryan	GCMSL	10/21/13 10:37	Load on Instrument

Accutest Internal Chain of Custody

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Received: 10/09/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC25152-4.4	GCMSL	Kerry Ryan	10/22/13 09:50	Unload from Instrument
MC25152-4.4	Kerry Ryan	VOC Ref #4	10/22/13 09:51	Return to Storage
MC25152-4.5	VOC Ref #4	Michael Rolo	10/10/13 08:04	Retrieve from Storage
MC25152-4.5	Michael Rolo		10/11/13 09:20	Depleted
MC25152-5.2	Walk In Ref #22	Thomas Abruzzise	10/14/13 14:31	Retrieve from Storage
MC25152-5.4	VOC Ref #4	Kerry Ryan	10/21/13 10:37	Retrieve from Storage
MC25152-5.4	Kerry Ryan	GCMSL	10/21/13 10:37	Load on Instrument
MC25152-5.4	GCMSL	Kerry Ryan	10/22/13 09:50	Unload from Instrument
MC25152-5.4	Kerry Ryan	VOC Ref #4	10/22/13 09:51	Return to Storage
MC25152-5.6	VOC Ref #4	Michael Rolo	10/10/13 08:04	Retrieve from Storage
MC25152-5.6	Michael Rolo		10/11/13 09:20	Depleted
MC25152-6.2	Walk In Ref #22	Thomas Abruzzise	10/14/13 14:31	Retrieve from Storage
MC25152-6.3	VOC Ref #4	Kerry Ryan	10/21/13 10:37	Retrieve from Storage
MC25152-6.3	Kerry Ryan	GCMSL	10/21/13 10:37	Load on Instrument
MC25152-6.3	GCMSL	Kerry Ryan	10/22/13 09:50	Unload from Instrument
MC25152-6.3	Kerry Ryan	VOC Ref #4	10/22/13 09:51	Return to Storage
MC25152-6.4	VOC Ref #4	Kerry Ryan	10/22/13 11:48	Retrieve from Storage
MC25152-6.4	Kerry Ryan	GCMSL	10/22/13 11:48	Load on Instrument
MC25152-6.4	GCMSL	Kerry Ryan	10/23/13 09:54	Unload from Instrument
MC25152-6.4	Kerry Ryan	VOC Ref #4	10/23/13 09:54	Return to Storage
MC25152-6.6	VOC Ref #4	Michael Rolo	10/10/13 08:04	Retrieve from Storage
MC25152-6.6	Michael Rolo		10/11/13 09:20	Depleted
MC25152-7.1	VOC Ref #4	Kerry Ryan	10/21/13 10:37	Retrieve from Storage
MC25152-7.1	Kerry Ryan	GCMSL	10/21/13 10:37	Load on Instrument
MC25152-7.1	GCMSL	Kerry Ryan	10/22/13 09:50	Unload from Instrument
MC25152-7.1	Kerry Ryan	VOC Ref #4	10/22/13 09:51	Return to Storage
MC25152-8.1	VOC Ref #4	Michael Rolo	10/10/13 08:04	Retrieve from Storage
MC25152-8.1	Michael Rolo		10/11/13 09:20	Depleted

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: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3635-MB	L79203.D	1	10/21/13	KR	n/a	n/a	MSL3635

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

MC25152-1, MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6, MC25152-7

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

Method Blank Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3635-MB	L79203.D	1	10/21/13	KR	n/a	n/a	MSL3635

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

MC25152-1, MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6, MC25152-7

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

Method Blank Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3635-MB	L79203.D	1	10/21/13	KR	n/a	n/a	MSL3635

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

MC25152-1, MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6, MC25152-7

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	70-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	102%	70-130%

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

Method Blank Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3637-MB	L79256.D	1	10/22/13	KR	n/a	n/a	MSL3637

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

MC25152-3, MC25152-4, MC25152-6

CAS No.	Compound	Result	RL	MDL	Units	Q
100-41-4	Ethylbenzene	ND	1.0	0.38	ng/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	70-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	105%	70-130%

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

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3635-BS	L79200.D	1	10/21/13	KR	n/a	n/a	MSL3635
MSL3635-BSD	L79201.D	1	10/21/13	KR	n/a	n/a	MSL3635

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

MC25152-1, MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6, MC25152-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	44.3	89	48.6	97	9	70-130/25
107-02-8	Acrolein	250	210	84	226	90	7	70-130/25
107-13-1	Acrylonitrile	50	42.5	85	46.1	92	8	70-130/25
71-43-2	Benzene	50	51.3	103	53.5	107	4	70-130/25
108-86-1	Bromobenzene	50	55.0	110	56.2	112	2	70-130/25
74-97-5	Bromochloromethane	50	54.6	109	57.3	115	5	70-130/25
75-27-4	Bromodichloromethane	50	53.6	107	55.5	111	3	70-130/25
75-25-2	Bromoform	50	47.9	96	49.7	99	4	70-130/25
74-83-9	Bromomethane	50	59.5	119	69.3	139* a	15	70-130/25
78-93-3	2-Butanone (MEK)	50	46.1	92	50.1	100	8	70-130/25
104-51-8	n-Butylbenzene	50	55.7	111	59.1	118	6	70-130/25
135-98-8	sec-Butylbenzene	50	54.9	110	58.0	116	5	70-130/25
98-06-6	tert-Butylbenzene	50	54.3	109	56.9	114	5	70-130/25
75-15-0	Carbon disulfide	50	52.8	106	57.6	115	9	70-130/25
56-23-5	Carbon tetrachloride	50	54.9	110	58.2	116	6	70-130/25
108-90-7	Chlorobenzene	50	50.4	101	51.1	102	1	70-130/25
75-00-3	Chloroethane	50	51.7	103	55.0	110	6	70-130/25
110-75-8	2-Chloroethyl vinyl ether	50	52.1	104	60.1	120	14	70-130/25
67-66-3	Chloroform	50	50.4	101	52.6	105	4	70-130/25
74-87-3	Chloromethane	50	61.2	122	67.9	136* a	10	70-130/25
95-49-8	o-Chlorotoluene	50	52.4	105	54.4	109	4	70-130/25
106-43-4	p-Chlorotoluene	50	54.5	109	56.8	114	4	70-130/25
124-48-1	Dibromochloromethane	50	49.8	100	50.1	100	1	70-130/25
95-50-1	1,2-Dichlorobenzene	50	50.9	102	52.8	106	4	70-130/25
541-73-1	1,3-Dichlorobenzene	50	52.2	104	54.7	109	5	70-130/25
106-46-7	1,4-Dichlorobenzene	50	53.5	107	55.5	111	4	70-130/25
75-71-8	Dichlorodifluoromethane	50	66.0	132* a	71.1	142* a	7	70-130/25
75-34-3	1,1-Dichloroethane	50	52.6	105	55.4	111	5	70-130/25
107-06-2	1,2-Dichloroethane	50	50.6	101	51.9	104	3	70-130/25
75-35-4	1,1-Dichloroethene	50	52.2	104	54.4	109	4	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	52.7	105	55.5	111	5	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	54.3	109	57.1	114	5	70-130/25
78-87-5	1,2-Dichloropropane	50	51.1	102	51.5	103	1	70-130/25
142-28-9	1,3-Dichloropropane	50	50.2	100	51.0	102	2	70-130/25
594-20-7	2,2-Dichloropropane	50	54.5	109	55.9	112	3	70-130/25
563-58-6	1,1-Dichloropropene	50	53.9	108	56.7	113	5	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3635-BS	L79200.D	1	10/21/13	KR	n/a	n/a	MSL3635
MSL3635-BSD	L79201.D	1	10/21/13	KR	n/a	n/a	MSL3635

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

MC25152-1, MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6, MC25152-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	50	46.3	93	47.7	95	3	70-130/25
10061-02-6	trans-1,3-Dichloropropene	50	46.4	93	48.6	97	5	70-130/25
123-91-1	1,4-Dioxane	250	208	83	206	82	1	70-130/25
97-63-2	Ethyl methacrylate	50	45.7	91	48.5	97	6	77-137/25
100-41-4	Ethylbenzene	50	51.3	103	52.3	105	2	70-130/25
87-68-3	Hexachlorobutadiene	50	55.4	111	60.0	120	8	70-130/25
591-78-6	2-Hexanone	50	48.1	96	50.6	101	5	70-130/25
98-82-8	Isopropylbenzene	50	53.0	106	55.8	112	5	70-130/25
99-87-6	p-Isopropyltoluene	50	55.2	110	58.1	116	5	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	49.5	99	51.5	103	4	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	43.5	87	48.1	96	10	70-130/25
74-95-3	Methylene bromide	50	52.1	104	53.1	106	2	70-130/25
75-09-2	Methylene chloride	50	50.7	101	52.7	105	4	70-130/25
91-20-3	Naphthalene	50	48.9	98	52.5	105	7	70-130/25
103-65-1	n-Propylbenzene	50	51.2	102	53.8	108	5	70-130/25
100-42-5	Styrene	50	53.9	108	55.0	110	2	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	54.3	109	55.6	111	2	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	50.2	100	52.3	105	4	70-130/25
127-18-4	Tetrachloroethene	50	55.8	112	58.6	117	5	70-130/25
108-88-3	Toluene	50	52.2	104	54.0	108	3	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	53.7	107	56.0	112	4	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	56.2	112	58.0	116	3	70-130/25
71-55-6	1,1,1-Trichloroethane	50	53.1	106	56.9	114	7	70-130/25
79-00-5	1,1,2-Trichloroethane	50	51.7	103	53.6	107	4	70-130/25
79-01-6	Trichloroethene	50	52.4	105	56.6	113	8	70-130/25
75-69-4	Trichlorofluoromethane	50	52.2	104	56.6	113	8	70-130/25
96-18-4	1,2,3-Trichloropropane	50	46.6	93	50.5	101	8	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	52.0	104	54.1	108	4	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	53.7	107	56.4	113	5	70-130/25
108-05-4	Vinyl Acetate	50	48.9	98	50.8	102	4	70-130/25
75-01-4	Vinyl chloride	50	48.7	97	52.7	105	8	70-130/25
	m,p-Xylene	100	100	100	102	102	2	70-130/25
95-47-6	o-Xylene	50	51.8	104	52.3	105	1	70-130/25
1330-20-7	Xylene (total)	150	152	101	154	103	1	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3635-BS	L79200.D	1	10/21/13	KR	n/a	n/a	MSL3635
MSL3635-BSD	L79201.D	1	10/21/13	KR	n/a	n/a	MSL3635

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

MC25152-1, MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6, MC25152-7

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	93%	94%	70-130%
2037-26-5	Toluene-D8	100%	100%	70-130%
460-00-4	4-Bromofluorobenzene	101%	101%	70-130%

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

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3637-BS	L79253.D	1	10/22/13	KR	n/a	n/a	MSL3637
MSL3637-BSD	L79254.D	1	10/22/13	KR	n/a	n/a	MSL3637

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

MC25152-3, MC25152-4, MC25152-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
100-41-4	Ethylbenzene	50	56.6	113	53.6	107	5	70-130/25
	m,p-Xylene	100	109	109	105	105	4	70-130/25
95-47-6	o-Xylene	50	56.3	113	53.3	107	5	70-130/25
1330-20-7	Xylene (total)	150	165	110	158	105	4	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	92%	93%	70-130%
2037-26-5	Toluene-D8	101%	100%	70-130%
460-00-4	4-Bromofluorobenzene	102%	101%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25132-1MS	L79222.D	1	10/21/13	KR	n/a	n/a	MSL3635
MC25132-1MSD	L79223.D	1	10/21/13	KR	n/a	n/a	MSL3635
MC25132-1	L79215.D	1	10/21/13	KR	n/a	n/a	MSL3635

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

MC25152-1, MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6, MC25152-7

CAS No.	Compound	MC25132-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	25.0	50* a	24.6	49* a	2	70-130/30
107-02-8	Acrolein	ND		250	209	84	208	83	0	70-130/30
107-13-1	Acrylonitrile	ND		50	46.3	93	42.8	86	8	70-130/30
71-43-2	Benzene	ND		50	52.5	105	50.1	100	5	70-130/30
108-86-1	Bromobenzene	ND		50	55.0	110	54.5	109	1	70-130/30
74-97-5	Bromochloromethane	ND		50	53.7	107	53.1	106	1	70-130/30
75-27-4	Bromodichloromethane	ND		50	54.4	109	52.0	104	5	70-130/30
75-25-2	Bromoform	ND		50	49.1	98	47.4	95	4	70-130/30
74-83-9	Bromomethane	ND		50	49.1	98	63.9	128	26	70-130/30
78-93-3	2-Butanone (MEK)	ND		50	36.0	72	34.7	69* a	4	70-130/30
104-51-8	n-Butylbenzene	ND		50	54.1	108	54.5	109	1	70-130/30
135-98-8	sec-Butylbenzene	ND		50	55.2	110	54.5	109	1	70-130/30
98-06-6	tert-Butylbenzene	ND		50	54.4	109	54.2	108	0	70-130/30
75-15-0	Carbon disulfide	ND		50	53.9	108	52.4	105	3	70-130/30
56-23-5	Carbon tetrachloride	ND		50	55.9	112	54.0	108	3	70-130/30
108-90-7	Chlorobenzene	ND		50	50.0	100	49.5	99	1	70-130/30
75-00-3	Chloroethane	ND		50	53.0	106	52.2	104	2	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		50	55.7	111	52.2	104	6	70-130/30
67-66-3	Chloroform	ND		50	50.2	100	50.0	100	0	70-130/30
74-87-3	Chloromethane	ND		50	58.9	118	63.6	127	8	70-130/30
95-49-8	o-Chlorotoluene	ND		50	52.4	105	51.5	103	2	70-130/30
106-43-4	p-Chlorotoluene	ND		50	53.6	107	54.1	108	1	70-130/30
124-48-1	Dibromochloromethane	ND		50	49.1	98	48.7	97	1	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		50	50.4	101	50.9	102	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		50	51.2	102	52.5	105	3	70-130/30
106-46-7	1,4-Dichlorohenzene	ND		50	51.9	104	52.8	106	2	70-130/30
75-71-8	Dichlorodifluoromethane	ND		50	66.8	134* a	64.0	128	4	70-130/30
75-34-3	1,1-Dichloroethane	ND		50	52.7	105	51.7	103	2	70-130/30
107-06-2	1,2-Dichloroethane	ND		50	51.0	102	49.6	99	3	70-130/30
75-35-4	1,1-Dichloroethene	ND		50	52.7	105	51.6	103	2	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50	52.9	106	52.0	104	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50	54.2	108	52.9	106	2	70-130/30
78-87-5	1,2-Dichloropropane	ND		50	50.5	101	50.0	100	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	50.4	101	49.9	100	1	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	46.5	93	45.9	92	1	70-130/30
563-58-6	1,1-Dichloropropene	ND		50	54.5	109	52.9	106	3	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25132-1MS	L79222.D	1	10/21/13	KR	n/a	n/a	MSL3635
MC25132-1MSD	L79223.D	1	10/21/13	KR	n/a	n/a	MSL3635
MC25132-1	L79215.D	1	10/21/13	KR	n/a	n/a	MSL3635

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

MC25152-1, MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6, MC25152-7

CAS No.	Compound	MC25132-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		50	45.3	91	44.7	89	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		50	46.1	92	45.3	91	2	70-130/30
123-91-1	1,4-Dioxane	ND		250	211	84	215	86	2	70-130/30
97-63-2	Ethyl methacrylate	ND		50	48.9	98	46.6	93	5	72-139/30
100-41-4	Ethylbenzene	ND		50	53.5	107	51.0	102	5	70-130/30
87-68-3	Hexachlorohutadiene	ND		50	53.1	106	52.9	106	0	70-130/30
591-78-6	2-Hexanone	ND		50	39.2	78	37.5	75	4	70-130/30
98-82-8	Isopropylbenzene	ND		50	54.8	110	53.2	106	3	70-130/30
99-87-6	p-Isopropyltoluene	ND		50	54.9	110	54.7	109	0	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		50	50.1	100	49.4	99	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	45.7	91	43.8	88	4	70-130/30
74-95-3	Methylene bromide	ND		50	51.8	104	50.7	101	2	70-130/30
75-09-2	Methylene chloride	ND		50	49.6	99	49.6	99	0	70-130/30
91-20-3	Naphthalene	ND		50	50.9	102	50.5	101	1	70-130/30
103-65-1	n-Propylbenzene	ND		50	52.3	105	51.0	102	3	70-130/30
100-42-5	Styrene	ND		50	52.9	106	50.0	100	6	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	54.7	109	54.3	109	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	52.1	104	50.9	102	2	70-130/30
127-18-4	Tetrachloroethene	ND		50	56.5	113	55.0	110	3	70-130/30
108-88-3	Toluene	ND		50	53.4	107	51.5	103	4	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	51.7	103	52.3	105	1	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	52.8	106	53.3	107	1	70-130/30
71-55-6	1,1,1-Trichloroethane	1.8		50	56.3	109	55.2	107	2	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50	52.8	106	52.1	104	1	70-130/30
79-01-6	Trichloroethene	1.0		50	55.9	110	54.4	107	3	70-130/30
75-69-4	Trichlorofluoromethane	ND		50	53.5	107	51.6	103	4	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		50	48.0	96	46.9	94	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		50	54.7	109	51.7	103	6	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		50	54.6	109	52.2	104	4	70-130/30
108-05-4	Vinyl Acetate	ND		50	41.8	84	40.6	81	3	70-130/30
75-01-4	Vinyl chloride	ND		50	49.6	99	47.9	96	3	70-130/30
	m,p-Xylene	ND		100	102	102	98.2	98	4	70-130/30
95-47-6	o-Xylene	ND		50	51.4	103	50.3	101	2	70-130/30
1330-20-7	Xylene (total)	ND		150	154	103	148	99	4	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25132-1MS	L79222.D	1	10/21/13	KR	n/a	n/a	MSL3635
MC25132-1MSD	L79223.D	1	10/21/13	KR	n/a	n/a	MSL3635
MC25132-1	L79215.D	1	10/21/13	KR	n/a	n/a	MSL3635

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

MC25152-1, MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6, MC25152-7

CAS No.	Surrogate Recoveries	MS	MSD	MC25132-1	Limits
1868-53-7	Dibromofluoromethane	93%	93%	92%	70-130%
2037-26-5	Toluene-D8	101%	99%	99%	70-130%
460-00-4	4-Bromofluorobenzene	101%	104%	103%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25152-4MS	L79273.D	5	10/22/13	KR	n/a	n/a	MSL3637
MC25152-4MSD	L79274.D	5	10/22/13	KR	n/a	n/a	MSL3637
MC25152-4	L79257.D	1	10/22/13	KR	n/a	n/a	MSL3637

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

MC25152-3, MC25152-4, MC25152-6

CAS No.	Compound	MC25152-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
100-41-4	Ethylbenzene	ND		250	233	93	245	98	5	70-130/30
	m,p-Xylene	1.1		500	455	91	478	95	5	70-130/30
95-47-6	o-Xylene	ND		250	237	95	247	99	4	70-130/30
1330-20-7	Xylene (total)	1.1		750	692	92	724	96	5	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC25152-4	Limits
1868-53-7	Dibromofluoromethane	94%	94%	91%	70-130%
2037-26-5	Toluene-D8	99%	101%	99%	70-130%
460-00-4	4-Bromofluorobenzene	103%	104%	102%	70-130%

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSL3635-CC3634	Injection Date:	10/21/13
Lab File ID:	L79199.D	Injection Time:	09:11
Instrument ID:	GCMSL	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	104091	8.07	138772	8.90	67736	12.13	68383	14.68	35953	5.75
Upper Limit [a]	208182	8.57	277544	9.40	135472	12.63	136766	15.18	71906	6.25
Lower Limit [b]	52046	7.57	69386	8.40	33868	11.63	34192	14.18	17977	5.25
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSL3635-BS	106036	8.07	140216	8.90	67228	12.12	67769	14.67	38181	5.76
MSL3635-BSD	103377	8.07	137995	8.90	67665	12.12	67041	14.67	40744	5.75
MSL3635-MB	103741	8.07	136372	8.90	61802	12.13	60695	14.68	39910	5.79
ZZZZZZ	101155	8.07	130457	8.90	59082	12.13	59540	14.67	43993	5.79
ZZZZZZ	102813	8.07	136575	8.90	61239	12.13	61134	14.67	43859	5.78
ZZZZZZ	100070	8.07	131294	8.90	59961	12.13	59142	14.67	44563	5.78
MC25152-7	97843	8.07	129489	8.90	58989	12.13	58443	14.67	46608	5.79
MC25152-5	98876	8.07	129844	8.90	59421	12.13	59089	14.67	46337	5.78
ZZZZZZ	97919	8.07	129996	8.90	61931	12.12	67742	14.67	50057	5.75
ZZZZZZ	108054	8.07	141570	8.90	66129	12.12	67341	14.67	60193	5.76
ZZZZZZ	110493	8.07	143057	8.90	68451	12.12	70189	14.67	53193	5.75
ZZZZZZ	110292	8.07	143369	8.90	64758	12.12	64724	14.67	58136	5.76
ZZZZZZ	109345	8.07	144537	8.90	66598	12.12	67282	14.67	57444	5.77
ZZZZZZ	106850	8.07	138723	8.90	62570	12.12	62507	14.67	58836	5.77
MC25132-1	105987	8.07	137347	8.90	62288	12.12	62263	14.67	59416	5.77
MC25152-1	103909	8.07	137036	8.90	62239	12.12	61938	14.67	56815	5.78
MC25152-2	103953	8.07	135806	8.90	61139	12.12	60142	14.67	52072	5.78
MC25152-3	104223	8.07	139762	8.89	69806	12.12	71693	14.67	48833	5.75
MC25152-4	109583	8.07	142508	8.90	65098	12.12	64673	14.67	49541	5.77
MC25152-6	108605	8.07	142773	8.90	64818	12.12	65550	14.67	49940	5.77
ZZZZZZ	106349	8.07	139660	8.90	63870	12.12	63822	14.67	43291	5.77
MC25132-1MS	108290	8.07	141199	8.90	68818	12.12	69059	14.67	44074	5.74
MC25132-1MSD	106464	8.07	140997	8.90	68354	12.12	68134	14.67	38716	5.75

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: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSL3637-CC3634	Injection Date:	10/22/13
Lab File ID:	L79252.D	Injection Time:	10:55
Instrument ID:	GCMSL	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	104338	8.07	138249	8.90	67395	12.12	68064	14.67	36730	5.75
Upper Limit [a]	208676	8.57	276498	9.40	134790	12.62	136128	15.17	73460	6.25
Lower Limit [b]	52169	7.57	69125	8.40	33698	11.62	34032	14.17	18365	5.25
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSL3637-BS	102414	8.07	134843	8.90	65313	12.12	65689	14.67	47515	5.75
MSL3637-BSD	104775	8.07	138405	8.90	66236	12.12	66632	14.67	51276	5.74
MSL3637-MB	102660	8.07	136491	8.90	60701	12.12	60131	14.67	53566	5.78
MC25152-4	104057	8.07	137050	8.90	63037	12.12	63297	14.67	56067	5.78
MC25152-6	78523	8.07	140222	8.90	65314	12.12	64689	14.67	57790	5.77
ZZZZZZ	106569	8.07	140009	8.90	63391	12.12	65191	14.67	53405	5.77
MC25152-3	106452	8.07	141355	8.90	63958	12.12	64607	14.67	48100	5.77
GP16752-LB1	104696	8.07	136194	8.90	62360	12.13	62538	14.67	55086	5.77
GP16752-LS1	106680	8.07	141331	8.90	68261	12.12	68599	14.67	49981	5.74
ZZZZZZ	104035	8.07	135436	8.90	61701	12.13	61899	14.67	55419	5.78
ZZZZZZ	102196	8.07	136190	8.90	62799	12.13	61939	14.67	56201	5.78
ZZZZZZ	103017	8.07	135175	8.90	62539	12.13	61831	14.67	45933	5.78
ZZZZZZ	105708	8.07	138407	8.90	62366	12.13	61728	14.67	48204	5.78
ZZZZZZ	102381	8.07	135339	8.90	61403	12.13	60414	14.67	43158	5.78
ZZZZZZ	102212	8.07	135375	8.90	61656	12.13	59416	14.67	42192	5.78
ZZZZZZ	102657	8.07	136045	8.90	60978	12.13	60913	14.67	38920	5.79
ZZZZZZ	102708	8.07	135521	8.90	60579	12.12	60677	14.67	40390	5.77
ZZZZZZ	102568	8.07	137409	8.90	62211	12.13	60323	14.67	35978	5.78
MC25152-4MS	105750	8.07	141264	8.90	68079	12.12	68194	14.67	36081	5.75
MC25152-4MSD	104367	8.07	137690	8.90	67190	12.12	66721	14.67	36911	5.75

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

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

Volatile Surrogate Recovery Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260B Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC25152-1	L79216.D	93.0	99.0	101.0
MC25152-2	L79217.D	92.0	100.0	104.0
MC25152-3	L79260.D	92.0	99.0	103.0
MC25152-3	L79218.D	90.0	101.0	104.0
MC25152-4	L79219.D	91.0	99.0	105.0
MC25152-4	L79257.D	91.0	99.0	102.0
MC25152-5	L79208.D	93.0	101.0	100.0
MC25152-6	L79258.D	127.0	100.0	107.0
MC25152-6	L79220.D	90.0	100.0	106.0
MC25152-7	L79207.D	94.0	99.0	104.0
MC25132-1MS	L79222.D	93.0	101.0	101.0
MC25132-1MSD	L79223.D	93.0	99.0	104.0
MC25152-4MS	L79273.D	94.0	99.0	103.0
MC25152-4MSD	L79274.D	94.0	101.0	104.0
MSL3635-BS	L79200.D	93.0	100.0	101.0
MSL3635-BSD	L79201.D	94.0	100.0	101.0
MSL3635-MB	L79203.D	93.0	99.0	102.0
MSL3637-BS	L79253.D	92.0	101.0	102.0
MSL3637-BSD	L79254.D	93.0	100.0	101.0
MSL3637-MB	L79256.D	93.0	99.0	105.0

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

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35250-MB	W14949.D	1	10/22/13	KR	10/14/13	OP35250	MSW674

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

MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chlorouaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	0.73	5.0	0.39	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.50	2.0	0.49	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	

Method Blank Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35250-MB	W14949.D	1	10/22/13	KR	10/14/13	OP35250	MSW674

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

MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6

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

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	35%	15-110%
4165-62-2	Phenol-d5	23%	15-110%
118-79-6	2,4,6-Tribromophenol	75%	15-110%
4165-60-0	Nitrobenzene-d5	56%	30-130%
321-60-8	2-Fluorobiphenyl	59%	30-130%
1718-51-0	Terphenyl-d14	99%	30-130%

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

Method Blank Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35324-MB	X00322.D	1	10/24/13	KR	10/18/13	OP35324	MSX17

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

MC25152-1

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

Method Blank Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35324-MB	X00322.D	1	10/24/13	KR	10/18/13	OP35324	MSX17

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

MC25152-1

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

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	43%	15-110%
4165-62-2	Phenol-d5	30%	15-110%
118-79-6	2,4,6-Tribromophenol	70%	15-110%
4165-60-0	Nitrobenzene-d5	76%	30-130%
321-60-8	2-Fluorobiphenyl	69%	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: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35251-MB	W14852.D	1	10/16/13	KR	10/14/13	OP35251	MSW670

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

MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ng/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	61%	30-130%
321-60-8	2-Fluorobiphenyl	53%	30-130%
1718-51-0	Terphenyl-d14	100%	30-130%

Method Blank Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35325-MB	I86586.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223

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

MC25152-1

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.032	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	ug/l	
85-01-8	Phenanthrene	ND	0.050	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	46%	15-110%
4165-62-2	Phenol-d5	31%	15-110%
118-79-6	2,4,6-Tribromophenol	88%	15-110%
4165-60-0	Nitrobenzene-d5	80%	30-130%
321-60-8	2-Fluorobiphenyl	71%	30-130%
1718-51-0	Terphenyl-d14	95%	30-130%

Blank Spike Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35250-BS	W14950.D	1	10/22/13	KR	10/14/13	OP35250	MSW674

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

MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	22.8	46	30-130
95-57-8	2-Chlorophenol	50	40.0	80	30-130
59-50-7	4-Chloro-3-methyl phenol	50	39.5	79	30-130
120-83-2	2,4-Dichlorophenol	50	46.9	94	30-130
105-67-9	2,4-Dimethylphenol	50	41.5	83	30-130
51-28-5	2,4-Dinitrophenol	50	50.8	102	30-130
534-52-1	4,6-Dinitro-o-cresol	50	62.6	125	30-130
95-48-7	2-Methylphenol	50	34.9	70	30-130
	3&4-Methylphenol	100	64.8	65	30-130
88-75-5	2-Nitrophenol	50	46.5	93	30-130
100-02-7	4-Nitrophenol	50	17.0	34	30-130
87-86-5	Pentachlorophenol	50	50.1	100	30-130
108-95-2	Phenol	50	18.3	37	30-130
95-95-4	2,4,5-Trichlorophenol	50	49.0	98	30-130
88-06-2	2,4,6-Trichlorophenol	50	49.8	100	30-130
62-53-3	Aniline	50	26.4	53	40-140
101-55-3	4-Bromophenyl phenyl ether	50	49.0	98	40-140
85-68-7	Butyl benzyl phthalate	50	50.1	100	40-140
100-51-6	Benzyl Alcohol	50	32.1	64	40-140
91-58-7	2-Chloronaphthalene	50	38.2	76	40-140
106-47-8	4-Chloroaniline	50	33.4	67	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	42.1	84	40-140
111-44-4	bis(2-Chloroethyl)ether	50	36.8	74	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	37.6	75	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	39.8	80	40-140
122-66-7	1,2-Dipheuylhydrazine	50	41.0	82	40-140
121-14-2	2,4-Dinitrotoluene	50	41.9	84	40-140
606-20-2	2,6-Dinitrotoluene	50	40.9	82	40-140
91-94-1	3,3'-Dichlorobenzidine	50	39.7	79	40-140
132-64-9	Dibenzofuran	50	36.9	74	40-140
84-74-2	Di-n-butyl phthalate	50	42.6	85	40-140
117-84-0	Di-n-octyl phthalate	50	55.9	112	40-140
84-66-2	Diethyl phthalate	50	39.1	78	40-140
131-11-3	Dimethyl phthalate	50	33.8	68	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	52.3	105	40-140
118-74-1	Hexachlorobenzene	50	49.5	99	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35250-BS	W14950.D	1	10/22/13	KR	10/14/13	OP35250	MSW674

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

MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	21.0	42	40-140
67-72-1	Hexachloroethane	50	21.7	43	40-140
78-59-1	Isophorone	50	35.3	71	40-140
88-74-4	2-Nitroaniline	50	42.0	84	40-140
99-09-2	3-Nitroaniline	50	38.1	76	40-140
100-01-6	4-Nitroaniline	50	35.0	70	40-140
98-95-3	Nitrobenzene	50	35.4	71	40-140
62-75-9	n-Nitrosodimethylamine	50	21.5	43	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	35.0	70	40-140
86-30-6	N-Nitrosodiphenylamine	50	92.3	92	40-140
110-86-1	Pyridine	50	18.8	38* a	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	47%	15-110%
4165-62-2	Phenol-d5	30%	15-110%
118-79-6	2,4,6-Tribromophenol	101%	15-110%
4165-60-0	Nitrobenzene-d5	73%	30-130%
321-60-8	2-Fluorobiphenyl	71%	30-130%
1718-51-0	Terphenyl-d14	101%	30-130%

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

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35324-BS	X00323.D	1	10/24/13	KR	10/18/13	OP35324	MSX17

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

MC25152-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	17.3	35	30-130
95-57-8	2-Chlorophenol	50	37.6	75	30-130
59-50-7	4-Chloro-3-methyl phenol	50	38.7	77	30-130
120-83-2	2,4-Dichlorophenol	50	40.8	82	30-130
105-67-9	2,4-Dimethylphenol	50	25.1	50	30-130
51-28-5	2,4-Dinitrophenol	50	38.6	77	30-130
534-52-1	4,6-Dinitro-o-cresol	50	46.0	92	30-130
95-48-7	2-Methylphenol	50	33.2	66	30-130
	3&4-Methylphenol	100	64.2	64	30-130
88-75-5	2-Nitrophenol	50	40.4	81	30-130
100-02-7	4-Nitrophenol	50	18.5	37	30-130
87-86-5	Pentachlorophenol	50	39.1	78	30-130
108-95-2	Phenol	50	17.6	35	30-130
95-95-4	2,4,5-Trichlorophenol	50	41.3	83	30-130
88-06-2	2,4,6-Trichlorophenol	50	41.6	83	30-130
62-53-3	Aniline	50	33.7	67	40-140
101-55-3	4-Bromophenyl phenyl ether	50	44.3	89	40-140
85-68-7	Butyl benzyl phthalate	50	46.1	92	40-140
100-51-6	Benzyl Alcohol	50	31.7	63	40-140
91-58-7	2-Chloronaphthalene	50	40.0	80	40-140
106-47-8	4-Chloroaniline	50	39.0	78	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	39.7	79	40-140
111-44-4	bis(2-Chloroethyl)ether	50	40.3	81	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	45.1	90	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	40.9	82	40-140
122-66-7	1,2-Diphenylhydrazine	50	39.7	79	40-140
121-14-2	2,4-Dinitrotoluene	50	44.1	88	40-140
606-20-2	2,6-Dinitrotoluene	50	41.2	82	40-140
91-94-1	3,3'-Dichlorobenzidine	50	45.0	90	40-140
132-64-9	Dibenzofuran	50	39.4	79	40-140
84-74-2	Di-n-butyl phthalate	50	43.5	87	40-140
117-84-0	Di-n-octyl phthalate	50	47.0	94	40-140
84-66-2	Diethyl phthalate	50	42.4	85	40-140
131-11-3	Dimethyl phthalate	50	34.4	69	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	49.0	98	40-140
118-74-1	Hexachlorobenzene	50	43.4	87	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35324-BS	X00323.D	1	10/24/13	KR	10/18/13	OP35324	MSX17

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

MC25152-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	20.5	41	40-140
67-72-1	Hexachloroethane	50	25.7	51	40-140
78-59-1	Isophorone	50	41.0	82	40-140
88-74-4	2-Nitroaniline	50	42.2	84	40-140
99-09-2	3-Nitroaniline	50	41.7	83	40-140
100-01-6	4-Nitroaniline	50	42.9	86	40-140
98-95-3	Nitrobenzene	50	40.1	80	40-140
62-75-9	n-Nitrosodimethylamine	50	26.1	52	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	43.9	88	40-140
86-30-6	N-Nitrosodiphenylamine	50	41.5	83	40-140
110-86-1	Pyridine	50	21.9	44	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	53%	15-110%
4165-62-2	Phenol-d5	36%	15-110%
118-79-6	2,4,6-Tribromophenol	92%	15-110%
4165-60-0	Nitrobenzene-d5	87%	30-130%
321-60-8	2-Fluorobiphenyl	82%	30-130%
1718-51-0	Terphenyl-d14	103%	30-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35251-BS	W14853.D	1	10/16/13	KR	10/14/13	OP35251	MSW670

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

MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	33.0	66	40-140
208-96-8	Acenaphthylene	50	32.3	65	40-140
120-12-7	Anthracene	50	38.5	77	40-140
56-55-3	Benzo(a)anthracene	50	46.9	94	40-140
50-32-8	Benzo(a)pyrene	50	41.8	84	40-140
205-99-2	Benzo(b)fluoranthene	50	50.8	102	40-140
191-24-2	Benzo(g,h,i)perylene	50	44.6	89	40-140
207-08-9	Benzo(k)fluoranthene	50	47.9	96	40-140
218-01-9	Chrysene	50	35.5	71	40-140
53-70-3	Dibenzo(a,h)anthracene	50	44.8	90	40-140
206-44-0	Fluoranthene	50	43.4	87	40-140
86-73-7	Fluorene	50	38.6	77	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	45.9	92	40-140
90-12-0	1-Methylnaphthalene	50	30.6	61	40-140
91-57-6	2-Methylnaphthalene	50	30.5	61	40-140
85-01-8	Phenanthrene	50	36.9	74	40-140
129-00-0	Pyrene	50	40.7	81	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	75%	30-130%
321-60-8	2-Fluorobiphenyl	64%	30-130%
1718-51-0	Terphenyl-d14	103%	30-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35325-BS	I86587.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223

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

MC25152-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	39.1	78	40-140
208-96-8	Acenaphthylene	50	32.2	64	40-140
120-12-7	Anthracene	50	41.0	82	40-140
56-55-3	Benzo(a)anthracene	50	47.3	95	40-140
50-32-8	Benzo(a)pyrene	50	46.0	92	40-140
205-99-2	Benzo(b)fluoranthene	50	44.3	89	40-140
191-24-2	Benzo(g,h,i)perylene	50	52.7	105	40-140
207-08-9	Benzo(k)fluoranthene	50	49.5	99	40-140
218-01-9	Chrysene	50	43.6	87	40-140
53-70-3	Dibenzo(a,h)anthracene	50	53.9	108	40-140
206-44-0	Fluoranthene	50	42.9	86	40-140
86-73-7	Fluorene	50	42.0	84	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	53.9	108	40-140
90-12-0	1-Methylnaphthalene	50	36.6	73	40-140
91-57-6	2-Methylnaphthalene	50	34.7	69	40-140
85-01-8	Phenanthrene	50	44.5	89	40-140
129-00-0	Pyrene	50	41.5	83	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	54%	15-110%
4165-62-2	Phenol-d5	36%	15-110%
118-79-6	2,4,6-Tribromophenol	109%	15-110%
4165-60-0	Nitrobenzene-d5	93%	30-130%
321-60-8	2-Fluorobiphenyl	82%	30-130%
1718-51-0	Terphenyl-d14	105%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35250-MS	W14951.D	1	10/22/13	KR	10/14/13	OP35250	MSW674
OP35250-MSD	W14952.D	1	10/22/13	KR	10/14/13	OP35250	MSW674
MC25199-1	W14953.D	1	10/22/13	KR	10/14/13	OP35250	MSW674

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

MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6

7.3.1

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CAS No.	Compound	MC25199-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		56.2	29.0	52	28.1	51	3	30-130/20
95-57-8	2-Chlorophenol	ND		56.2	44.3	79	39.5	71	11	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		56.2	45.2	80	43.4	78	4	30-130/20
120-83-2	2,4-Dichlorophenol	ND		56.2	50.8	90	47.1	85	8	30-130/20
105-67-9	2,4-Dimethylphenol	ND		56.2	45.4	81	41.8	75	8	30-130/20
51-28-5	2,4-Dinitrophenol	ND		56.2	63.4	113	58.3	105	8	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		56.2	73.5	131* [a]	69.5	125	6	30-130/20
95-48-7	2-Methylphenol	ND		56.2	39.0	69	35.0	63	11	30-130/20
	3&4-Methylphenol	ND		112	72.2	64	65.9	59	9	30-130/20
88-75-5	2-Nitrophenol	ND		56.2	50.5	90	46.9	84	7	30-130/20
100-02-7	4-Nitrophenol	ND		56.2	21.4	38	20.2	36	6	30-130/20
87-86-5	Pentachlorophenol	ND		56.2	53.4	95	48.8	88	9	30-130/20
108-95-2	Phenol	ND		56.2	20.7	37	18.6	33	11	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		56.2	58.0	103	55.4	100	5	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		56.2	58.9	105	55.1	99	7	30-130/20
62-53-3	Aniline	ND		56.2	27.2	48	24.5	44	10	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		56.2	55.5	99	51.5	93	7	40-140/20
85-68-7	Butyl benzyl phthalate	ND		56.2	56.0	100	51.4	93	9	40-140/20
100-51-6	Benzyl Alcohol	ND		56.2	32.9	59	29.3	53	12	40-140/20
91-58-7	2-Chloronaphthalene	ND		56.2	44.6	79	40.3	73	10	40-140/20
106-47-8	4-Chloroaniline	ND		56.2	34.4	61	32.2	58	7	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		56.2	44.7	80	41.0	74	9	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		56.2	39.0	69	34.7	62	12	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		56.2	39.7	71	34.9	63	13	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		56.2	45.8	82	41.3	74	10	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		56.2	46.3	82	42.2	76	9	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		56.2	48.3	86	44.9	81	7	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		56.2	46.2	82	43.7	79	6	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		56.2	43.8	78	42.3	76	3	40-140/20
132-64-9	Dibenzofuran	ND		56.2	42.5	76	39.0	70	9	40-140/20
84-74-2	Di-n-butyl phthalate	ND		56.2	47.8	85	43.6	78	9	40-140/20
117-84-0	Di-n-octyl phthalate	ND		56.2	62.7	112	58.1	105	8	40-140/20
84-66-2	Diethyl phthalate	ND		56.2	44.8	80	43.2	78	4	40-140/20
131-11-3	Dimethyl phthalate	ND		56.2	39.4	70	39.6	71	1	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		56.2	76.4	136	53.5	96	35* [b]	40-140/20
118-74-1	Hexachlorobenzene	ND		56.2	54.8	98	50.8	91	8	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35250-MS	W14951.D	1	10/22/13	KR	10/14/13	OP35250	MSW674
OP35250-MSD	W14952.D	1	10/22/13	KR	10/14/13	OP35250	MSW674
MC25199-1	W14953.D	1	10/22/13	KR	10/14/13	OP35250	MSW674

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

MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6

CAS No.	Compound	MC25199-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		56.2	26.7	48	24.0	43	11	40-140/20
67-72-1	Hexachloroethane	ND		56.2	28.0	50	25.1	45	11	40-140/20
78-59-1	Isophorone	ND		56.2	38.5	69	34.3	62	12	40-140/20
88-74-4	2-Nitroaniline	ND		56.2	49.2	88	46.4	84	6	40-140/20
99-09-2	3-Nitroaniline	ND		56.2	43.7	78	40.9	74	7	40-140/20
100-01-6	4-Nitroaniline	ND		56.2	39.9	71	38.6	69	3	40-140/20
98-95-3	Nitrobenzene	ND		56.2	37.3	66	33.9	61	10	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		56.2	24.9	44	21.9	39* [a]	13	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		56.2	37.6	67	34.1	61	10	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		56.2	103	91	95.8	86	7	40-140/20
110-86-1	Pyridine	ND		56.2	21.0	37* [a]	18.0	32* [a]	15	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25199-1	Limits
367-12-4	2-Fluorophenol	45%	43%	37%	15-110%
4165-62-2	Phenol-d5	30%	28%	24%	15-110%
118-79-6	2,4,6-Tribromophenol	104%	97%	70%	15-110%
4165-60-0	Nitrobenzene-d5	67%	63%	55%	30-130%
321-60-8	2-Fluorobiphenyl	72%	67%	56%	30-130%
1718-51-0	Terphenyl-d14	103%	96%	89%	30-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35324-MS	X00324.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
OP35324-MSD	X00325.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
MC25100-13	X00329.D	1	10/24/13	KR	10/18/13	OP35324	MSX17

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

MC25152-1

CAS No.	Compound	MC25100-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	18.2	36	18.9	38	4	30-130/20
95-57-8	2-Chlorophenol	ND		50	38.3	77	38.2	76	0	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	40.2	80	40.7	81	1	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	41.8	84	41.8	84	0	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	31.1	62	28.4	57	9	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	40.0	80	41.4	83	3	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	47.2	94	49.6	99	5	30-130/20
95-48-7	2-Methylphenol	ND		50	34.1	68	34.0	68	0	30-130/20
	3&4-Methylphenol	ND		100	66.2	66	65.2	65	2	30-130/20
88-75-5	2-Nitrophenol	ND		50	42.0	84	41.6	83	1	30-130/20
100-02-7	4-Nitrophenol	ND		50	18.8	38	20.0	40	6	30-130/20
87-86-5	Pentachlorophenol	ND		50	40.4	81	41.2	82	2	30-130/20
108-95-2	Phenol	ND		50	18.1	36	18.1	36	0	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	43.0	86	42.5	85	1	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	42.3	85	43.5	87	3	30-130/20
62-53-3	Aniline	ND		50	34.4	69	32.4	65	6	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	43.9	88	43.6	87	1	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	46.8	94	46.4	93	1	40-140/20
100-51-6	Benzyl Alcohol	ND		50	31.6	63	31.0	62	2	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	39.2	78	39.3	79	0	40-140/20
106-47-8	4-Chloroaniline	ND		50	39.8	80	39.0	78	2	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	40.6	81	39.5	79	3	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	40.6	81	39.6	79	2	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	45.6	91	44.8	90	2	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	40.7	81	41.1	82	1	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	39.3	79	39.9	80	2	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	44.5	89	44.6	89	0	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	41.9	84	42.1	84	0	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	48.3	97	48.5	97	0	40-140/20
132-64-9	Dibenzofuran	ND		50	39.2	78	39.1	78	0	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	44.1	88	44.5	89	1	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	48.3	97	48.0	96	1	40-140/20
84-66-2	Diethyl phthalate	ND		50	43.1	86	42.3	85	2	40-140/20
131-11-3	Dimethyl phthalate	ND		50	36.7	73	34.8	70	5	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	49.8	100	49.4	99	1	40-140/20
118-74-1	Hexachlorobenzene	ND		50	42.8	86	43.1	86	1	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35324-MS	X00324.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
OP35324-MSD	X00325.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
MC25100-13	X00329.D	1	10/24/13	KR	10/18/13	OP35324	MSX17

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

MC25152-1

CAS No.	Compound	MC25100-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	20.6	41	21.0	42	2	40-140/20
67-72-1	Hexachloroethane	ND		50	25.8	52	25.3	51	2	40-140/20
78-59-1	Isophorone	ND		50	41.9	84	41.5	83	1	40-140/20
88-74-4	2-Nitroaniline	ND		50	42.6	85	42.6	85	0	40-140/20
99-09-2	3-Nitroaniline	ND		50	41.1	82	41.6	83	1	40-140/20
100-01-6	4-Nitroaniline	ND		50	43.5	87	43.8	88	1	40-140/20
98-95-3	Nitrobenzene	ND		50	41.3	83	40.6	81	2	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	26.0	52	25.5	51	2	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	43.7	87	43.0	86	2	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	41.4	83	42.0	84	1	40-140/20
110-86-1	Pyridine	ND		50	22.4	45	20.9	42	7	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25100-13	Limits
367-12-4	2-Fluorophenol	52%	51%	52%	15-110%
4165-62-2	Phenol-d5	35%	35%	35%	15-110%
118-79-6	2,4,6-Trihromophenol	89%	90%	87%	15-110%
4165-60-0	Nitrobenzene-d5	87%	85%	90%	30-130%
321-60-8	2-Fluorobiphenyl	79%	73%	79%	30-130%
1718-51-0	Terphenyl-d14	102%	98%	105%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35251-MS	W14854.D	1	10/16/13	KR	10/14/13	OP35251	MSW670
OP35251-MSD	W14855.D	1	10/16/13	KR	10/14/13	OP35251	MSW670
MC24900-23	W14856.D	1	10/16/13	KR	10/14/13	OP35251	MSW670

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

MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6

CAS No.	Compound	MC24900-23 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		56.2	37.0	66	33.8	61	9	40-140/20
208-96-8	Acenaphthylene	ND		56.2	36.1	64	33.1	60	9	40-140/20
120-12-7	Anthracene	ND		56.2	42.8	76	40.2	72	6	40-140/20
56-55-3	Benzo(a)anthracene	ND		56.2	52.4	93	48.3	87	8	40-140/20
50-32-8	Benzo(a)pyrene	ND		56.2	47.4	84	43.7	79	8	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		56.2	56.3	100	54.3	98	4	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		56.2	49.7	88	44.6	80	11	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		56.2	55.3	98	50.6	91	9	40-140/20
218-01-9	Chrysene	ND		56.2	39.9	71	36.8	66	8	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		56.2	50.1	89	45.0	81	11	40-140/20
206-44-0	Fluoranthene	ND		56.2	48.9	87	44.8	81	9	40-140/20
86-73-7	Fluorene	ND		56.2	43.1	77	39.8	72	8	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		56.2	51.5	92	46.2	83	11	40-140/20
90-12-0	1-Methylnaphthalene	ND		56.2	35.2	63	31.9	57	10	40-140/20
91-57-6	2-Methylnaphthalene	ND		56.2	35.2	63	32.1	58	9	40-140/20
85-01-8	Phenanthrene	ND		56.2	41.2	73	38.5	69	7	40-140/20
129-00-0	Pyrene	ND		56.2	45.6	81	42.4	76	7	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC24900-23	Limits
367-12-4	2-Fluorophenol			39%	15-110%
4165-62-2	Phenol-d5			26%	15-110%
118-79-6	2,4,6-Tribromophenol			75%	15-110%
4165-60-0	Nitrobenzene-d5	70%	65%	58%	30-130%
321-60-8	2-Fluorobiphenyl	64%	59%	50%	30-130%
1718-51-0	Terphenyl-d14	105%	98%	93%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35325-MS	I86588.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223
OP35325-MSD	I86589.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223
MC25100-14	I86590.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223

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

MC25152-1

CAS No.	Compound	MC25100-14 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	39.1	78	38.7	77	1	40-140/20
208-96-8	Acenaphthylene	ND		50	32.6	65	32.0	64	2	40-140/20
120-12-7	Anthracene	ND		50	41.3	83	41.1	82	0	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	48.1	96	47.4	95	1	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	46.7	93	45.9	92	2	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	49.5	99	48.3	97	2	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	52.9	106	52.7	105	0	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	46.5	93	45.2	90	3	40-140/20
218-01-9	Chrysene	ND		50	44.5	89	43.9	88	1	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	54.3	109	53.9	108	1	40-140/20
206-44-0	Flnoranthene	ND		50	43.3	87	43.4	87	0	40-140/20
86-73-7	Fluorene	ND		50	42.4	85	41.6	83	2	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	54.4	109	54.1	108	1	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	36.7	73	36.4	73	1	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	34.7	69	34.2	68	1	40-140/20
85-01-8	Phenanthrene	ND		50	44.1	88	44.4	89	1	40-140/20
129-00-0	Pyrene	ND		50	42.3	85	41.8	84	1	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25100-14	Limits
367-12-4	2-Fluorophenol	53%	52%	52%	15-110%
4165-62-2	Phenol-d5	35%	35%	35%	15-110%
118-79-6	2,4,6-Tribromophenol	106%	106%	101%	15-110%
4165-60-0	Nitrobenzene-d5	90%	89%	93%	30-130%
321-60-8	2-Fluorobiphenyl	79%	72%	83%	30-130%
1718-51-0	Terphenyl-d14	106%	103%	108%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3223-CC3155	Injection Date:	10/23/13
Lab File ID:	I86585.D	Injection Time:	10:17
Instrument ID:	GCMSI	Method:	SW846 8270C 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	247426	4.06	704374	5.05	415711	6.49	703617	7.84	617269	10.62	1053680	12.09
Upper Limit [a]	494852	4.56	1408748	5.55	831422	6.99	1407234	8.34	1234538	11.12	2107360	12.59
Lower Limit [b]	123713	3.56	352187	4.55	207856	5.99	351809	7.34	308635	10.12	526840	11.59

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
OP35325-MB	167780	4.06	483466	5.05	278676	6.49	477398	7.84	430142	10.62	734691	12.09
OP35325-BS	161755	4.06	457481	5.05	266795	6.49	453211	7.84	392418	10.62	684862	12.09
OP35325-MS	162204	4.06	463789	5.05	269360	6.49	462970	7.84	398445	10.62	687327	12.09
OP35325-MSD	168288	4.06	482900	5.05	279553	6.49	471918	7.84	405133	10.62	706104	12.09
MC25100-14	153794	4.06	441580	5.05	253786	6.49	435716	7.83	372397	10.62	644057	12.09
ZZZZZZ	170386	4.06	486721	5.05	280097	6.49	472498	7.83	409948	10.62	724339	12.09
ZZZZZZ	157562	4.06	454466	5.05	261468	6.49	445091	7.83	385131	10.62	660790	12.09
ZZZZZZ	164924	4.06	474705	5.05	265405	6.49	442549	7.84	378030	10.62	675725	12.09
ZZZZZZ	158221	4.06	461091	5.05	264584	6.49	446069	7.83	389861	10.62	691779	12.09
ZZZZZZ	158669	4.06	458921	5.05	267628	6.49	445096	7.83	385019	10.62	673243	12.09
ZZZZZZ	148590	4.06	422407	5.05	248910	6.49	415497	7.83	370108	10.62	644405	12.09
ZZZZZZ	175097	4.06	501900	5.05	290981	6.49	490477	7.84	432123	10.62	743387	12.09
ZZZZZZ	146970	4.06	424712	5.05	243799	6.49	422053	7.84	368435	10.62	636181	12.10
MC25152-1 [c]	147497	4.06	426058	5.05	247031	6.49	417655	7.83	369437	10.61	635930	12.09
OP35376-MB	191363	4.06	556442	5.05	321227	6.49	537264	7.84	452073	10.62	744015	12.09
OP35378-MB	191363	4.06	556442	5.05	321227	6.49	537264	7.84	452073	10.62	744015	12.09
OP35378-BS	200697	4.06	570312	5.05	330820	6.49	559764	7.84	459020	10.62	764535	12.09
OP35378-MS	193322	4.06	546482	5.05	307231	6.49	498518	7.84	385718	10.62	566415	12.10
OP35378-MSD	189171	4.06	545579	5.05	306596	6.49	490948	7.84	397114	10.62	547156	12.10
MC25506-12	177249	4.06	510719	5.05	288617	6.49	465578	7.84	380208	10.62	527643	12.10
ZZZZZZ	190832	4.06	546673	5.05	306431	6.49	484315	7.84	381914	10.62	604839	12.10
ZZZZZZ	162010	4.06	472814	5.05	270884	6.49	446316	7.84	364043	10.62	648900	12.09
ZZZZZZ	157963	4.06	461937	5.05	264973	6.49	437572	7.84	364833	10.62	636442	12.09
ZZZZZZ	160455	4.06	468436	5.05	265685	6.49	440630	7.84	369124	10.62	647340	12.09
ZZZZZZ	148216	4.06	430312	5.05	255642	6.49	441076	7.84	412089	10.62	681710	12.09
ZZZZZZ	177280	4.06	513715	5.05	300893	6.49	516755	7.84	466449	10.62	795995	12.10

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

Semivolatile Internal Standard Area Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3223-CC3155	Injection Date:	10/23/13
Lab File ID:	I86585.D	Injection Time:	10:17
Instrument ID:	GCMSI	Method:	SW846 8270C 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

(h) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Sample re-extracted beyond recommended holding time.

Semivolatile Internal Standard Area Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSW670-CC657	Injection Date:	10/16/13
Lab File ID:	W14847.D	Injection Time:	08:59
Instrument ID:	GCMSW	Method:	SW846 8270C 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	50282	4.46	141972	5.59	76981	7.25	135110	8.63	121606	11.48	224324	13.45
Upper Limit [a]	100564	4.96	283944	6.09	153962	7.75	270220	9.13	243212	11.98	448648	13.95
Lower Limit [b]	25141	3.96	70986	5.09	38491	6.75	67555	8.13	60803	10.98	112162	12.95
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP35230-MB	45951	4.46	130857	5.60	69586	7.25	121200	8.63	107826	11.49	198479	13.45
OP35230-BS	49232	4.46	137621	5.60	74328	7.25	129493	8.63	116636	11.49	219400	13.45
ZZZZZZ	45792	4.46	128027	5.59	68411	7.25	119973	8.63	113967	11.48	208366	13.45
ZZZZZZ	51139	4.46	145684	5.60	77469	7.25	133952	8.63	120122	11.49	220053	13.45
OP35251-MB	54996	4.46	155059	5.59	83323	7.25	144570	8.63	128695	11.48	237378	13.45
OP35251-BS	53864	4.46	149939	5.60	80785	7.25	138478	8.63	122042	11.49	232306	13.45
OP35251-MS	51183	4.46	145460	5.60	78385	7.25	135472	8.63	118942	11.49	221852	13.45
OP35251-MSD	50732	4.46	141927	5.60	76696	7.25	131640	8.63	118149	11.49	214916	13.45
MC24900-23	49344	4.46	140757	5.59	75194	7.25	129967	8.63	116890	11.48	213650	13.45
ZZZZZZ	45621	4.46	128623	5.60	68159	7.25	117162	8.63	106180	11.49	195075	13.45
MC25152-1 [c]	49591	4.46	141774	5.60	76917	7.25	134152	8.63	122819	11.49	227945	13.45
MC25152-2	47836	4.46	135976	5.59	72625	7.25	126546	8.63	113368	11.49	212689	13.45
MC25152-3	45243	4.46	126918	5.60	68103	7.25	118473	8.63	107307	11.49	199301	13.45
MC25152-4	44332	4.46	125811	5.59	67324	7.25	114507	8.63	103593	11.49	197979	13.45
MC25152-5	49592	4.46	141903	5.60	75458	7.25	130779	8.63	117106	11.49	218359	13.45
MC25152-6	44010	4.46	124311	5.60	66088	7.25	114012	8.63	103032	11.49	194837	13.45
OP35230-MS	39238	4.46	112749	5.59	61414	7.25	106988	8.63	97839	11.49	178614	13.45
OP35230-MSD	45348	4.46	131079	5.60	71147	7.25	124691	8.63	115388	11.49	213617	13.45
MC25242-1	40202	4.46	117008	5.59	62909	7.25	110506	8.63	100289	11.49	183746	13.45
ZZZZZZ	41438	4.46	120969	5.59	65080	7.25	112506	8.63	103426	11.49	188562	13.45
ZZZZZZ	40266	4.46	115690	5.60	62003	7.25	109265	8.63	99924	11.49	186963	13.45
ZZZZZZ	41521	4.46	118097	5.60	63261	7.25	110132	8.63	104366	11.49	193590	13.45
ZZZZZZ	40203	4.46	114338	5.60	61344	7.25	108528	8.63	100918	11.49	188790	13.45
ZZZZZZ	42343	4.46	120410	5.60	64659	7.25	112241	8.63	105318	11.48	193131	13.45
ZZZZZZ	42760	4.46	122414	5.60	65452	7.25	113036	8.63	107158	11.49	199629	13.45
ZZZZZZ	46231	4.46	132806	5.60	71572	7.25	127601	8.63	128960	11.49	243121	13.45

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retentiou time +0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSW670-CC657	Injection Date:	10/16/13
Lab File ID:	W14847.D	Injection Time:	08:59
Instrument ID:	GCMSW	Method:	SW846 8270C 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.
(c) Confirmation run.

Semivolatile Internal Standard Area Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSW674-CC672	Injection Date:	10/22/13
Lab File ID:	W14948.D	Injection Time:	10:21
Instrument ID:	GCMSW	Method:	SW846 8270C

	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	116660	4.88	452382	6.05	294004	7.70	494632	9.10	551209	12.58	485423	16.34
Upper Limit [a]	233320	5.38	904764	6.55	588008	8.20	989264	9.60	1102418	13.08	970846	16.84
Lower Limit [b]	58330	4.38	226191	5.55	147002	7.20	247316	8.60	275605	12.08	242712	15.84
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
OP35250-MB	164376	4.88	644741	6.04	403805	7.70	680875	9.09	752873	12.57	687629	16.34
OP35250-BS	149977	4.88	566238	6.05	374956	7.70	605807	9.10	651806	12.58	565140	16.34
OP35250-MS	138812	4.88	522292	6.04	336320	7.70	556183	9.10	589318	12.57	511172	16.34
OP35250-MSD	150312	4.88	558046	6.05	359030	7.70	600350	9.10	639312	12.58	544939	16.34
MC25199-1	160984	4.88	633065	6.04	397324	7.70	661049	9.09	731497	12.56	650338	16.33
ZZZZZZ	146348	4.88	576693	6.04	365865	7.70	608689	9.09	682008	12.56	620966	16.33
ZZZZZZ	158780	4.88	607920	6.04	390949	7.70	635370	9.09	700953	12.56	630197	16.33
ZZZZZZ	142352	4.88	560145	6.04	352138	7.70	595028	9.09	657887	12.56	607668	16.32
ZZZZZZ	149937	4.88	576225	6.04	369243	7.70	617624	9.09	703132	12.56	622968	16.33
ZZZZZZ	140542	4.88	541377	6.04	345383	7.70	564564	9.09	638125	12.56	594101	16.33

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

Semivolatile Internal Standard Area Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSW675-CC672	Injection Date:	10/22/13
Lab File ID:	W14960.D	Injection Time:	17:08
Instrument ID:	GCMSW	Method:	SW846 8270C

	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	130052	4.88	501364	6.04	323352	7.70	542996	9.09	620424	12.57	547595	16.33
Upper Limit [a]	260104	5.38	1002728	6.54	646704	8.20	1085992	9.59	1240848	13.07	1095190	16.83
Lower Limit [b]	65026	4.38	250682	5.54	161676	7.20	271498	8.59	310212	12.07	273798	15.83

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
OP35322-MB	135567	4.88	520004	6.04	322354	7.70	548864	9.09	631360	12.56	548674	16.32
OP35322-BS	137541	4.88	518443	6.04	332542	7.70	555652	9.09	630760	12.56	556615	16.32
OP35322-MS	120549	4.88	452581	6.04	295838	7.70	492065	9.09	543955	12.56	485921	16.32
OP35322-MSD	118470	4.88	453506	6.04	295467	7.70	498604	9.09	567350	12.57	498327	16.32
MC25100-11	125361	4.88	487081	6.04	311559	7.70	523713	9.09	603613	12.56	554303	16.32
ZZZZZZ	134485	4.88	508579	6.04	326155	7.70	542107	9.09	591578	12.56	524362	16.32
ZZZZZZ	123582	4.88	478976	6.04	294655	7.70	470678	9.09	515941	12.56	469407	16.32
ZZZZZZ	132293	4.88	506376	6.04	313261	7.70	502917	9.09	541199	12.56	495125	16.32
ZZZZZZ	122899	4.88	475191	6.04	299478	7.70	505461	9.09	568924	12.56	508819	16.32
ZZZZZZ	130046	4.88	497062	6.04	313844	7.70	526992	9.09	583676	12.56	519838	16.32
ZZZZZZ	135859	4.88	521679	6.04	330535	7.70	557129	9.09	608979	12.56	551347	16.32
ZZZZZZ	123028	4.88	468255	6.04	300636	7.70	483725	9.09	565622	12.56	529604	16.32
ZZZZZZ	134919	4.88	513761	6.04	328991	7.70	535536	9.09	592109	12.56	533779	16.32
ZZZZZZ	142442	4.88	537530	6.04	334082	7.70	558593	9.09	616373	12.56	562273	16.32
ZZZZZZ	138457	4.88	513250	6.04	315915	7.70	516847	9.09	566638	12.56	518129	16.32
MC25152-1 [c]	143818	4.88	546311	6.04	348720	7.70	571864	9.09	627824	12.56	565765	16.32
MC25152-2	137065	4.88	529880	6.04	334445	7.70	558047	9.09	606333	12.56	541865	16.32
MC25152-3	124149	4.88	477921	6.04	309687	7.70	521386	9.09	617169	12.56	561571	16.32
MC25152-4	132522	4.88	520041	6.04	326422	7.70	531601	9.09	595914	12.56	550260	16.32
MC25152-5	135803	4.88	528536	6.04	338231	7.70	564915	9.09	625510	12.56	574884	16.32

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

Semivolatile Internal Standard Area Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSW681-CC679	Injection Date:	10/28/13
Lab File ID:	W15095.D	Injection Time:	07:55
Instrument ID:	GCMSW	Method:	SW846 8270C

	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	78076	4.27	334792	5.33	195305	6.86	329925	8.15	327579	10.78	281869	12.51
Upper Limit [a]	156152	4.77	669584	5.83	390610	7.36	659850	8.65	655158	11.28	563738	13.01
Lower Limit [b]	39038	3.77	167396	4.83	97653	6.36	164963	7.65	163790	10.28	140935	12.01

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP35414-MB	99735	4.27	427026	5.33	240036	6.86	388839	8.15	381340	10.78	336660	12.50
OP35414-BS	95921	4.27	414664	5.33	235656	6.86	386868	8.15	357386	10.78	301704	12.50
OP35414-MS	82714	4.27	319209	5.33	165125	6.86	269536	8.15	243890	10.78	193925	12.51
OP35414-MSD	84344	4.27	353843	5.33	189807	6.86	285337	8.16	217795	10.78	215559	12.52
MC25514-3	86960	4.27	385871	5.33	213893	6.86	337605	8.16	315315	10.78	269430	12.52
ZZZZZZ	75429	4.27	321486	5.33	168724	6.86	306653	8.16	248784	10.78	245914	12.52
ZZZZZZ	82040	4.27	359351	5.33	206041	6.86	316267	8.16	252177	10.78	194194	12.52
OP35315-MB	73130	4.27	319297	5.33	183531	6.87	279913	8.16	243872	10.79	205218	12.52
OP35315-BS	58824	4.27	259393	5.33	147674	6.87	226442	8.16	203066	10.79	172993	12.52
ZZZZZZ	87958	4.27	379761	5.33	210783	6.86	321930	8.16	253325	10.79	189222	12.52
OP35315-MS	60776	4.27	264515	5.33	154167	6.87	226216	8.16	188070	10.79	188003	12.52
OP35315-MSD	78247	4.27	345253	5.33	200740	6.87	318263	8.16	288423	10.79	242877	12.52
MC25100-9	69633	4.27	306193	5.33	180009	6.86	291867	8.16	274934	10.78	231850	12.52
ZZZZZZ	67919	4.27	294946	5.33	172066	6.86	277727	8.16	272942	10.78	230916	12.52
ZZZZZZ	65951	4.27	278155	5.33	160680	6.86	260110	8.16	247603	10.78	206720	12.52
ZZZZZZ	58008	4.27	242423	5.33	127391	6.86	196803	8.16	206778	10.78	174598	12.52
ZZZZZZ	55846	4.27	238457	5.33	152382	6.86	243126	8.16	215706	10.78	178434	12.52
ZZZZZZ	72697	4.27	303856	5.33	167378	6.86	244875	8.16	180511	10.78	176077	12.52
ZZZZZZ	67586	4.27	275822	5.33	146552	6.86	218131	8.16	221470	10.79	186942	12.52
ZZZZZZ	62675	4.27	272948	5.33	156032	6.86	227512	8.16	253403	10.78	208940	12.52
ZZZZZZ	70612	4.27	301779	5.33	159363	6.86	232413	8.16	197146	10.79	167613	12.52
MC25152-6	84666	4.27	365454	5.33	202497	6.86	305454	8.16	241344	10.79	189795	12.52
ZZZZZZ	68237	4.27	297938	5.33	171919	6.86	267459	8.16	234747	10.79	202430	12.52
ZZZZZZ	63956	4.27	263167	5.33	145827	6.86	235607	8.16	214199	10.79	176149	12.52
ZZZZZZ	75396	4.27	334553	5.33	190434	6.86	302461	8.16	286715	10.78	245638	12.52
ZZZZZZ	62918	4.27	269072	5.33	143642	6.87	214430	8.16	181355	10.79	151133	12.52
ZZZZZZ	58593	4.27	237990	5.34	131996	6.86	181350	8.16	189960	10.78	150772	12.52

IS 1 = 1,4-Dichlorobenzeue-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: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSW681-CC679	Injection Date:	10/28/13
Lab File ID:	W15095.D	Injection Time:	07:55
Instrument ID:	GCMSW	Method:	SW846 8270C

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

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

Semivolatile Internal Standard Area Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSX17-CC16	Injection Date:	10/24/13
Lab File ID:	X00321.D	Injection Time:	13:28
Instrument ID:	GCMSX	Method:	SW846 8270C

	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	393756	4.20	1524945	5.27	849346	6.80	1340988	8.10	1356348	10.72	1193495	12.45
Upper Limit [a]	787512	4.70	3049890	5.77	1698692	7.30	2681976	8.60	2712696	11.22	2386990	12.95
Lower Limit [b]	196878	3.70	762473	4.77	424673	6.30	670494	7.60	678174	10.22	596748	11.95
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP35324-MB	348913	4.20	1358155	5.27	749224	6.80	1172854	8.09	1187179	10.72	1050288	12.44
OP35324-BS	406317	4.20	1599074	5.27	868936	6.80	1358242	8.10	1278790	10.72	1128567	12.44
OP35324-MS	401903	4.20	1557031	5.27	853069	6.80	1345094	8.10	1267706	10.72	1107341	12.44
OP35324-MSD	421007	4.20	1624530	5.27	888947	6.80	1401614	8.10	1353844	10.72	1199999	12.45
ZZZZZZ	446823	4.20	1767372	5.27	966254	6.80	1478787	8.09	1343244	10.72	1123098	12.45
ZZZZZZ	496346	4.20	1904055	5.27	1002341	6.80	1477971	8.09	1236888	10.72	1034027	12.44
ZZZZZZ	528688	4.20	2058068	5.26	1086046	6.80	1622282	8.10	1390298	10.72	1155053	12.44
MC25100-13	397362	4.20	1548666	5.27	850481	6.80	1293957	8.09	1199590	10.72	1051508	12.44
ZZZZZZ	438167	4.20	1711459	5.27	924725	6.80	1402515	8.09	1348725	10.72	1222090	12.45
ZZZZZZ	431009	4.20	1656210	5.27	891757	6.80	1317056	8.09	1168045	10.72	1029944	12.45
ZZZZZZ	414462	4.20	1619286	5.27	863742	6.80	1300070	8.10	1223065	10.72	1140668	12.45
ZZZZZZ	437353	4.20	1676484	5.27	895759	6.80	1341394	8.10	1235275	10.72	1128999	12.45
ZZZZZZ	432173	4.20	1667549	5.27	888628	6.80	1316119	8.09	1228887	10.72	1131980	12.44
ZZZZZZ	376004	4.20	1445367	5.27	798850	6.80	1205202	8.09	1185593	10.72	1063755	12.44
ZZZZZZ	460963	4.20	1784667	5.27	973824	6.80	1503880	8.10	1480813	10.72	1341507	12.44
ZZZZZZ	372778	4.20	1446387	5.27	816204	6.80	1283083	8.10	1309926	10.72	1156271	12.45
MC25152-I [c]	362458	4.20	1428509	5.27	777414	6.80	1210220	8.09	1156121	10.72	1035478	12.44
OP35308-MB	434711	4.20	1703231	5.26	918426	6.80	1391947	8.09	1250673	10.72	1066141	12.45
OP35308-BS	473701	4.20	1856393	5.27	1002154	6.80	1537818	8.10	1360049	10.72	1186073	12.44
OP35308-MS	450021	4.20	1760378	5.27	953567	6.80	1438765	8.10	1315475	10.72	1166472	12.44
OP35308-MSD	479528	4.20	1837081	5.27	975307	6.80	1467420	8.10	1263190	10.72	1121829	12.45
MC25232-1	510744	4.20	1936060	5.27	1032922	6.80	1502363	8.10	1290647	10.72	1104662	12.44
OP35329-MB	501508	4.20	1936856	5.27	1019268	6.80	1505917	8.09	1261029	10.72	1056438	12.45
OP35329-BS	538073	4.20	2067596	5.27	1095731	6.80	1645962	8.10	1414176	10.72	1252007	12.45
OP35329-MS	491939	4.20	1898872	5.27	1016364	6.80	1536040	8.10	1329285	10.72	1180174	12.45
OP35329-MSD	507409	4.20	1965490	5.27	1047447	6.80	1571557	8.10	1400640	10.72	1209211	12.45
MC25232-22	486229	4.20	1900528	5.27	994626	6.80	1493802	8.09	1314000	10.72	1107392	12.44
ZZZZZZ	444646	4.20	1710823	5.27	931487	6.80	1354265	8.09	1235865	10.72	1089021	12.45
ZZZZZZ	402652	4.20	1615542	5.27	877987	6.80	1260889	8.09	1145243	10.72	989457	12.44
ZZZZZZ	435355	4.20	1694200	5.27	862071	6.80	1349550	8.09	1184876	10.72	1016563	12.45
ZZZZZZ	430834	4.20	1657595	5.26	934887	6.80	1398491	8.09	1174399	10.72	985198	12.45

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10

Semivolatile Internal Standard Area Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSX17-CC16	Injection Date:	10/24/13
Lab File ID:	X00321.D	Injection Time:	13:28
Instrument ID:	GCMSX	Method:	SW846 8270C

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Sample re-extracted beyond recommended holding time.

Semivolatile Surrogate Recovery Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC25152-1	W14979.D	2.0* [a]	8.0* [a]	77.0	7.0* [a]	38.0	93.0
MC25152-1	X00338.D	47.0	32.0	92.0	90.0	89.0	104.0
MC25152-2	W14980.D	32.0	22.0	67.0	53.0	54.0	93.0
MC25152-3	W14981.D	33.0	28.0	82.0	59.0	61.0	90.0
MC25152-4	W14982.D	33.0	24.0	86.0	63.0	64.0	93.0
MC25152-5	W14983.D	33.0	21.0	80.0	52.0	52.0	94.0
MC25152-6	W15117.D	54.0	57.0	85.0	53.0	64.0	90.0
OP35250-BS	W14950.D	47.0	30.0	101.0	73.0	71.0	101.0
OP35250-MB	W14949.D	35.0	23.0	75.0	56.0	59.0	99.0
OP35250-MS	W14951.D	45.0	30.0	104.0	67.0	72.0	103.0
OP35250-MSD	W14952.D	43.0	28.0	97.0	63.0	67.0	96.0
OP35324-BS	X00323.D	53.0	36.0	92.0	87.0	82.0	103.0
OP35324-MB	X00322.D	43.0	30.0	70.0	76.0	69.0	93.0
OP35324-MS	X00324.D	52.0	35.0	89.0	87.0	79.0	102.0
OP35324-MSD	X00325.D	51.0	35.0	90.0	85.0	73.0	98.0

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

(a) Outside control limits due to possible matrix interference. Sample results confirmed by re-extraction/reanalysis.

Semivolatile Surrogate Recovery Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270C BY SIM Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC25152-1	I86599.D	93.0	90.0	109.0
MC25152-1	W14858.D	7.0* [a]	34.0	94.0
MC25152-2	W14859.D	57.0	49.0	96.0
MC25152-3	W14860.D	62.0	56.0	96.0
MC25152-4	W14861.D	66.0	57.0	96.0
MC25152-5	W14862.D	55.0	47.0	99.0
MC25152-6	W14863.D	70.0	55.0	98.0
OP35251-BS	W14853.D	75.0	64.0	103.0
OP35251-MB	W14852.D	61.0	53.0	100.0
OP35251-MS	W14854.D	70.0	64.0	105.0
OP35251-MSD	W14855.D	65.0	59.0	98.0
OP35325-BS	I86587.D	93.0	82.0	105.0
OP35325-MB	I86586.D	80.0	71.0	95.0
OP35325-MS	I86588.D	90.0	79.0	106.0
OP35325-MSD	I86589.D	89.0	72.0	103.0

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

(a) Outside control limits due to possible matrix interference. Sample results confirmed by re-extraction/reanalysis.

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: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35198-MB	YZ84634.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333

The QC reported here applies to the following samples: Method: SW846 8011

MC25152-1, MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6, MC25152-8

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	121%	36-173%
460-00-4	Bromofluorobenzene (S)	109%	36-173%

Blank Spike Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35198-BS	YZ84635.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333

The QC reported here applies to the following samples: Method: SW846 8011

MC25152-1, MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6, MC25152-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.089	125	60-140
106-93-4	1,2-Dibromoethane	0.071	0.079	111	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	140%	36-173%
460-00-4	Bromofluorobenzene (S)	128%	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35198-MS	YZ84636.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333
OP35198-MSD	YZ84637.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333
MC25107-8	YZ84646.D	1	10/11/13	CZ	10/10/13	OP35198	GYZ7333

The QC reported here applies to the following samples: Method: SW846 8011

MC25152-1, MC25152-2, MC25152-3, MC25152-4, MC25152-5, MC25152-6, MC25152-8

CAS No.	Compound	MC25107-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.0696	0.088	126	0.074	106	17	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.0696	0.076	109	0.068	98	11	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC25107-8	Limits
460-00-4	Bromofluorobenzene (S)	154%	134%	117%	36-173%
460-00-4	Bromofluorobenzene (S)	139%	120%	107%	36-173%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011 Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC25152-1	YZ84648.D	169.0	158.0
MC25152-2	YZ84650.D	151.0	141.0
MC25152-3	YZ84651.D	213.0* [c]	194.0* [c]
MC25152-4	YZ84652.D	231.0* [c]	212.0* [c]
MC25152-5	YZ84653.D	135.0	125.0
MC25152-6	YZ84654.D	128.0	117.0
MC25152-8	YZ84655.D	167.0	154.0
OP35198-BS	YZ84635.D	140.0	128.0
OP35198-MB	YZ84634.D	121.0	109.0
OP35198-MS	YZ84636.D	154.0	139.0
OP35198-MSD	YZ84637.D	134.0	120.0

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1
(c) Outside control limits due to possible matrix interference.

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7333-CC7331	Injection Date:	10/11/13
Lab File ID:	YZ84627.D	Injection Time:	02:01
Instrument ID:	GCYZ	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	2.97	2.90

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	YZ84628.D	10/11/13	02:29	2.97	2.90
ZZZZZZ	YZ84629.D	10/11/13	02:56	2.97	2.90
ZZZZZZ	YZ84630.D	10/11/13	03:23	2.98	2.90
ZZZZZZ	YZ84631.D	10/11/13	03:50	2.98	2.90
ZZZZZZ	YZ84632.D	10/11/13	04:16	2.98	2.90
ZZZZZZ	YZ84633.D	10/11/13	04:43	2.98	2.90
OP35198-MB	YZ84634.D	10/11/13	05:10	2.98	2.90
OP35198-BS	YZ84635.D	10/11/13	05:37	2.98	2.90
OP35198-MS	YZ84636.D	10/11/13	06:02	2.98	2.90
OP35198-MSD	YZ84637.D	10/11/13	06:28	2.98	2.90

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7333-CC7331	Injection Date:	10/11/13
Lab File ID:	YZ84638.D	Injection Time:	06:53
Instrument ID:	GCYZ	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	2.98	2.90

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	YZ84639.D	10/11/13	07:18	2.98	2.90
ZZZZZZ	YZ84640.D	10/11/13	07:43	2.98	2.90
ZZZZZZ	YZ84641.D	10/11/13	08:08	2.98	2.90
ZZZZZZ	YZ84642.D	10/11/13	08:34	2.98	2.90
ZZZZZZ	YZ84643.D	10/11/13	08:59	2.97	2.90
ZZZZZZ	YZ84644.D	10/11/13	09:25	2.98	2.90
ZZZZZZ	YZ84645.D	10/11/13	09:52	2.97	2.90
MC25107-8	YZ84646.D	10/11/13	10:19	2.98	2.90
ZZZZZZ	YZ84647.D	10/11/13	10:45	2.98	2.90
MC25152-1	YZ84648.D	10/11/13	11:11	2.98	2.90

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC25152
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7333-CC7331	Injection Date:	10/11/13
Lab File ID:	YZ84649.D	Injection Time:	11:36
Instrument ID:	GCYZ	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	2.98	2.90

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC25152-2	YZ84650.D	10/11/13	12:02	2.97	2.90
MC25152-3	YZ84651.D	10/11/13	12:27	2.97	2.90
MC25152-4	YZ84652.D	10/11/13	12:52	2.98	2.90
MC25152-5	YZ84653.D	10/11/13	13:17	2.98	2.90
MC25152-6	YZ84654.D	10/11/13	13:43	2.97	2.90
MC25152-8	YZ84655.D	10/11/13	14:08	2.98	2.90
OP35176-BS	YZ84656.D	10/11/13	14:33	2.98	2.90
OP35176-MS	YZ84657.D	10/11/13	14:58	2.98	2.90
OP35176-MSD	YZ84658.D	10/11/13	15:23	2.98	2.90
GYZ7333-ECC733	YZ84659.D	10/11/13	15:48	2.98	2.90

Surrogate Compounds

SI = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

Roxana Groundwater Quarterly – 3rd Quarter 2013 Data Review

Laboratory SDG: MC25198

Data Reviewer: Elizabeth Kunkel

Peer Reviewer: Steve Gragert

Date Reviewed: 11/13/2013

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

Sample Identification	Sample Identification
MW13-ROX-100913	ROST3-MW-ROX-100913
ROST4PZC-ROX-100913	MW24-ROX-100913
MW22-ROX-100913	MW22-ROX-100913-Dup
TB-ROX-100913-HCL	TB-ROX-100913-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 that VOC and SVOC LCS recoveries are outside evaluation criteria. SVOC acid fraction surrogate recoveries were outside evaluation criteria in sample ROST3-MW-ROX-100913. Sample ROST3-MW-ROX-100913 was re-extracted outside holding time criteria. Although not indicated in the laboratory case narrative, acetone was detected in the trip blank. These issues are addressed further in the appropriate sections below.

The cooler receipt form indicated that one of two coolers 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?

No, sample ROST3-MW-ROX-100913 was re-extracted 12 days outside of extraction holding time criteria (7 days) due to low recoveries of acid fraction surrogates in the original analysis. The re-extracted/re-analysis confirmation run indicates matrix interference. Data was reported and qualified from the original analysis (section 6.0 of this data review). No further qualification of data was required.

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
TB-ROX-100913-HCL	VOCs	Acetone	6.1 µg/L

Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not required qualification. No qualification of data was required.

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSU758-BS	VOCs	Acrolein	**131**	70-130
MSU758-BS	VOCs	Chloromethane	**139**	70-130
OP35267-BS	SVOCs	4,6-Dinitro-o-cresol	**147**	30-130
OP35267-BS	SVOCs	Hexachlorocyclopentadiene	**36**	40-140
OP35267-BS	SVOCs	Hexachloroethane	**39**	40-140

Analytical data that required qualification based on LCS data are included in the table below.

Sample ID	Parameter	Analyte	Qualification
MW13-ROX-100913	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW13-ROX-100913	SVOCs	Hexachloroethane	**UJ**
ROST3-MW-ROX-100913	SVOCs	Hexachlorocyclopentadiene	**UJ**
ROST3-MW-ROX-100913	SVOCs	Hexachloroethane	**UJ**
ROST4PZC-ROX-100913	SVOCs	Hexachlorocyclopentadiene	**UJ**
ROST4PZC-ROX-100913	SVOCs	Hexachloroethane	**UJ**
MW24-ROX-100913	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW24-ROX-100913	SVOCs	Hexachloroethane	**UJ**
MW22-ROX-100913	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW22-ROX-100913	SVOCs	Hexachloroethane	**UJ**
MW22-ROX-100913-Dup	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW22-ROX-100913-Dup	SVOCs	Hexachloroethane	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
ROST3-MW-ROX-100913-Run#1	SVOCs	2-Fluorophenol	**2**	15-110
ROST3-MW-ROX-100913-Run#2	SVOCs	2-Fluorophenol	**8**	15-110
ROST3-MW-ROX-100913-Run#1	SVOCs	Phenol-d_5	**2**	15-110
ROST3-MW-ROX-100913-Run#2	SVOCs	Phenol-d_5	**9**	15-110
ROST3-MW-ROX-100913-Run#1	SVOCs	2,4,6-Tribromophenol	**11**	15-110

Analytical data that required qualification based on surrogate data are included in the table below.

Sample ID	Parameter	Analyte	Qualification
ROST3-MW-ROX-100913	SVOCs	Benzoic acid	**UJ**
ROST3-MW-ROX-100913	SVOCs	2-Chlorophenol	**UJ**
ROST3-MW-ROX-100913	SVOCs	4-Chloro-3-methyl phenol	**UJ**
ROST3-MW-ROX-100913	SVOCs	2,4-Dichlorophenol	**UJ**
ROST3-MW-ROX-100913	SVOCs	2,4-Dimethylphenol	**UJ**
ROST3-MW-ROX-100913	SVOCs	2,4-Dinitrophenol	**UJ**
ROST3-MW-ROX-100913	SVOCs	4,6-Dinitro-o-cresol	**UJ**
ROST3-MW-ROX-100913	SVOCs	2-Methylphenol	**UJ**
ROST3-MW-ROX-100913	SVOCs	3&4-Methylphenol	**UJ**
ROST3-MW-ROX-100913	SVOCs	2-Nitrophenol	**UJ**
ROST3-MW-ROX-100913	SVOCs	4-Nitrophenol	**UJ**
ROST3-MW-ROX-100913	SVOCs	Pentachlorophenol	**UJ**
ROST3-MW-ROX-100913	SVOCs	Phenol	**UJ**
ROST3-MW-ROX-100913	SVOCs	2,4,5-Trichlorophenol	**UJ**
ROST3-MW-ROX-100913	SVOCs	2,4,6-Trichlorophenol	**UJ**

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

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

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
MW22-ROX-100913	MW22-ROX-100913-Dup

Were field duplicates within evaluation criteria?

Yes

11.0 Sample Dilutions

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

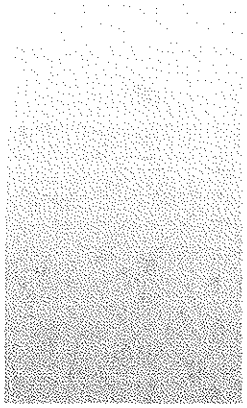
Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

No

New England ACCUTEST LABORATORIES





Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC25198

Sampling Date: 10/09/13

Report to:

URS Corporation

elizabeth.kunkel@URS.com

ATTN: Elizabeth Kunkel

Total number of pages in report: 113

Reviewed on 11/13/2013

ACCREDITED IN ACCORDANCE WITH nelac

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

Reza 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: MC25198

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC25198-1	10/09/13	09:30	LRBL	10/10/13	AQ	Ground Water	MW13-ROX-100913
MC25198-2	10/09/13	11:00	LRBL	10/10/13	AQ	Ground Water	ROST3-MW-ROX-100913
MC25198-3	10/09/13	11:40	LRBL	10/10/13	AQ	Ground Water	ROST4PZC-ROX-100913
MC25198-4	10/09/13	13:45	LRBL	10/10/13	AQ	Ground Water	MW24-ROX-100913
MC25198-5	10/09/13	14:20	LRBL	10/10/13	AQ	Ground Water	MW22-ROX-100913
MC25198-6	10/09/13	14:20	LRBL	10/10/13	AQ	Ground Water	MW22-ROX-100913-DUP
MC25198-7	10/09/13	00:00	LRBL	10/10/13	AQ	Ground Water	TB-ROX-100913-HCL
MC25198-8	10/09/13	00:00	LRBL	10/10/13	AQ	Ground Water	TB-ROX-100913-ST

ACCUTEST LABORATORIES

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SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC25198
Site:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central	**Report Date**	11/7/2013 11:14:52 AM

8 Sample(s) were collected on 10/09/2013 and were received at Accutest on 10/10/2013 properly preserved, at 2.1 Deg. C and intact. These Samples received an Accutest job number of MC25198. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

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

Volatiles by GCMS By Method SW846 8260B

Matrix AQ	Batch ID: MSU758

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25225-1MS, MC25225-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for Chloromethane are outside control limits. Blank Spike meets program technical requirements.
- MC25225-1MS/MSD Recovery(s) for 1,1,2,2-Tetrachloroethane, 2-Chloroethyl vinyl ether, Acrolein, p-Isopropyltoluene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Initial calibration verification standard MSU756-ICV756 for chloromethane, acrolein, 2-chloroethyl vinyl ether exceeded 30% Difference (response biased high). Associated samples are non-detect for these compounds. .
- All samples analyzed by method SW846 8260C.

Matrix AQ	Batch ID: MSU759

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC25237-1MS, MC25237-1MSD were used as the QC samples indicated.
- MC25237-1MS/MSD Recovery(s) for 2-Chloroethyl vinyl ether, Styrene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- All samples analyzed by method SW846 8260C.

Extractables by GCMS By Method SW846 8270C

Matrix AQ	Batch ID: OP35267

- 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) MC25100-1MS, MC25100-1MSD were used as the QC samples indicated.
- Blank Spike Recovery(s) for 4,6-Dinitro-o-cresol, Hexachlorocyclopentadiene, Hexachloroethane are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2,4-Dinitrophenol, 4,6-Dinitro-o-cresol, Pentachlorophenol are outside control limits. Blank Spike meets program technical requirements
- Matrix Spike Duplicate Recovery(s) for 2,4,5-Trichlorophenol, 2,4,6-Trichlorophenol, 4,6-Dinitro-o-cresol are outside control limits. Blank Spike meets program technical requirements
- RPD(s) for MSD for Benzoic Acid, Dimethyl phthalate are outside control limits for sample OP35267-MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- MC25198-1 for 2,4,6-Tribromophenol: Outside control limits. Associated target analytes are non-detect.
- MC25198-2 for 2-Fluorophenol, Phenol-d5, 2,4,6-Tribromophenol: Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.
- Matrix Spike Duplicate Recovery(s) for Benzoic Acid are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.

Matrix AQ	Batch ID: OP35455

- MC25198-2 was re-extracted outside of holding time.
- MC25198-2: Confirmation run.
- MC25198-2 for 2-Fluorophenol, Phenol-d5: Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix AQ	Batch ID: OP35268

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25100-2MS, MC25100-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Volatiles by GC By Method SW846 8011

Matrix AQ	Batch ID: OP35264

- 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) MC25242-1MS, MC25242-1MSD 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(MC25198).

Summary of Hits

Job Number: MC25198
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Collected: 10/09/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC25198-1	MW13-ROX-100913					
Methyl Tert Butyl Ether		7.2	1.0	0.43	ug/l	SW846 8260B
bis(2-Ethylhexyl)phthalate		0.68 J	2.1	0.50	ug/l	SW846 8270C
Acenaphthene		0.098 J	0.10	0.071	ug/l	SW846 8270C BY SIM
Acenaphthylene		0.071 J	0.10	0.051	ug/l	SW846 8270C BY SIM
Benzo(a)anthracene		0.022 J	0.052	0.020	ug/l	SW846 8270C BY SIM
Chrysene		0.034 J	0.10	0.025	ug/l	SW846 8270C BY SIM
MC25198-2	ROST3-MW-ROX-100913					
Benzene		3.3	0.50	0.45	ug/l	SW846 8260C
2-Butanone (MEK)		16.4	5.0	1.6	ug/l	SW846 8260C
n-Butylbenzene		0.73 J	5.0	0.54	ug/l	SW846 8260C
Chloroethane		3.4	2.0	0.84	ug/l	SW846 8260C
Ethylbenzene		18.2	1.0	0.38	ug/l	SW846 8260C
Isopropylbenzene		1.7 J	5.0	0.64	ug/l	SW846 8260C
Naphthalene		4.5 J	5.0	0.79	ug/l	SW846 8260C
n-Propylbenzene		2.9 J	5.0	0.59	ug/l	SW846 8260C
Toluene		1.8	1.0	0.46	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		16.8	5.0	0.47	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		3.5 J	5.0	1.1	ug/l	SW846 8260C
m,p-Xylene		42.2	1.0	0.70	ug/l	SW846 8260C
o-Xylene		12.3	1.0	0.41	ug/l	SW846 8260C
Xylene (total)		54.6	1.0	0.41	ug/l	SW846 8260C
Acenaphthene		0.10 J	0.11	0.075	ug/l	SW846 8270C BY SIM
Fluorene		0.12	0.11	0.11	ug/l	SW846 8270C BY SIM
1-Methylnaphthalene		2.4	0.22	0.054	ug/l	SW846 8270C BY SIM
2-Methylnaphthalene		2.6	0.22	0.081	ug/l	SW846 8270C BY SIM
Phenanthrene		0.14	0.054	0.014	ug/l	SW846 8270C BY SIM
Pyrene		0.044 J	0.11	0.042	ug/l	SW846 8270C BY SIM
MC25198-3	ROST4PZC-ROX-100913					
Benzene		0.66	0.50	0.45	ug/l	SW846 8260B
Ethylbenzene		6.4	1.0	0.38	ug/l	SW846 8260B
Isopropylbenzene		0.66 J	5.0	0.64	ug/l	SW846 8260B
Naphthalene		5.4	5.0	0.79	ug/l	SW846 8260B
n-Propylbenzene		1.2 J	5.0	0.59	ug/l	SW846 8260B
Toluene		1.3	1.0	0.46	ug/l	SW846 8260B
m,p-Xylene		10.1	1.0	0.70	ug/l	SW846 8260B
o-Xylene		5.4	1.0	0.41	ug/l	SW846 8260B
Xylene (total)		15.5	1.0	0.41	ug/l	SW846 8260B
Acenaphthene		0.12	0.11	0.073	ug/l	SW846 8270C BY SIM
1-Methylnaphthalene		2.0	0.21	0.053	ug/l	SW846 8270C BY SIM

Summary of Hits

Job Number: MC25198
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Collected: 10/09/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
2-Methylnaphthalene		0.95	0.21	0.079	ug/l	SW846 8270C BY SIM
Phenanthrene		0.20	0.053	0.013	ug/l	SW846 8270C BY SIM
MC25198-4	MW24-ROX-100913					
No hits reported in this sample.						
MC25198-5	MW22-ROX-100913					
Benzene		1330	25	23	ug/l	SW846 8260C
n-Butylbenzene		28.6	5.0	0.54	ug/l	SW846 8260C
sec-Butylbenzene		12.0	5.0	0.58	ug/l	SW846 8260C
tert-Butylbenzene		16.7	5.0	0.87	ug/l	SW846 8260C
Ethylbenzene		3790	50	19	ug/l	SW846 8260C
Isopropylbenzene		137	5.0	0.64	ug/l	SW846 8260C
p-Isopropyltoluene		10	5.0	0.55	ug/l	SW846 8260C
4-Methyl-2-pentanone (MIBK)		10.1	5.0	1.3	ug/l	SW846 8260C
Naphthalene		470	250	39	ug/l	SW846 8260C
n-Propylbenzene		244	5.0	0.59	ug/l	SW846 8260C
Toluene		6020	50	23	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		1370	250	23	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		357	5.0	1.1	ug/l	SW846 8260C
m,p-Xylene		7460	50	35	ug/l	SW846 8260C
o-Xylene		3480	50	20	ug/l	SW846 8260C
Xylene (total)		10900	50	20	ug/l	SW846 8260C
2,4-Dimethylphenol		86.3	11	1.2	ug/l	SW846 8270C
2-Methylphenol		15.2	11	1.4	ug/l	SW846 8270C
3&4-Methylphenol		31.9	11	2.2	ug/l	SW846 8270C
Acenaphthene		0.19	0.11	0.074	ug/l	SW846 8270C BY SIM
Fluorene		0.19	0.11	0.11	ug/l	SW846 8270C BY SIM
1-Methylnaphthalene		27.6	0.22	0.054	ug/l	SW846 8270C BY SIM
2-Methylnaphthalene		46.8	0.22	0.080	ug/l	SW846 8270C BY SIM
Phenanthrene		0.19	0.054	0.014	ug/l	SW846 8270C BY SIM
MC25198-6	MW22-ROX-100913-DUP					
Benzene		1390	25	23	ug/l	SW846 8260C
n-Butylbenzene		27.6	5.0	0.54	ug/l	SW846 8260C
sec-Butylbenzene		11.8	5.0	0.58	ug/l	SW846 8260C
tert-Butylbenzene		16.3	5.0	0.87	ug/l	SW846 8260C
Chloroethane		1.8 J	2.0	0.84	ug/l	SW846 8260C
Ethylbenzene		3970	50	19	ug/l	SW846 8260C
Isopropylbenzene		136	5.0	0.64	ug/l	SW846 8260C
p-Isopropyltoluene		9.5	5.0	0.55	ug/l	SW846 8260C
4-Methyl-2-pentanone (MIBK)		8.4	5.0	1.3	ug/l	SW846 8260C

Summary of Hits

Job Number: MC25198
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Collected: 10/09/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Naphthalene		445	250	39	ug/l	SW846 8260C
n-Propylbenzene		243	5.0	0.59	ug/l	SW846 8260C
Toluene		6320	50	23	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		1430	250	23	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		343	5.0	1.1	ug/l	SW846 8260C
m,p-Xylene		7750	50	35	ug/l	SW846 8260C
o-Xylene		3650	50	20	ug/l	SW846 8260C
Xylene (total)		11400	50	20	ug/l	SW846 8260C
2,4-Dimethylphenol		82.6	11	1.2	ug/l	SW846 8270C
2-Methylphenol		13.9	11	1.4	ug/l	SW846 8270C
3&4-Methylphenol		29.6	11	2.2	ug/l	SW846 8270C
Acenaphthene		0.18	0.11	0.074	ug/l	SW846 8270C BY SIM
Fluorene		0.20	0.11	0.11	ug/l	SW846 8270C BY SIM
1-Methylnaphthalene		26.5	0.22	0.054	ug/l	SW846 8270C BY SIM
2-Methylnaphthalene		45.1	0.22	0.080	ug/l	SW846 8270C BY SIM
Phenanthrene		0.16	0.054	0.014	ug/l	SW846 8270C BY SIM
MC25198-7	TB-ROX-100913-HCL					
Acetone		6.1 J	10	2.8	ug/l	SW846 8260B
MC25198-8	TB-ROX-100913-ST					

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW13-ROX-100913		
Lab Sample ID:	MC25198-1	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U15275.D	1	10/21/13	GK	n/a	n/a	MSU758
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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

Report of Analysis

Client Sample ID:	MW13-ROX-100913		
Lab Sample ID:	MC25198-1	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	7.2	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-peutanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethaue	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	MW13-ROX-100913		
Lab Sample ID:	MC25198-1	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 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	110%		70-130%
460-00-4	4-Bromofluorobenzene	124%		70-130%

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

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-100913		
Lab Sample ID:	MC25198-1	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R34496.D	1	10/24/13	KR	10/15/13	OP35267	MSR1257
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.2	0.40	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.51	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.34	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.52	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.60	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.2	0.53	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.59	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.33	ug/l	
62-53-3	Aniline	ND	10	0.66	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.2	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.2	0.88	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.59	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.2	0.95	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.2	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.2	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.2	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.2	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.2	0.67	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.70	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.66	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.2	0.52	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.2	0.40	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.2	0.45	ug/l	

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

Report of Analysis

Client Sample ID:	MW13-ROX-100913		
Lab Sample ID:	MC25198-1	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.2	0.52	ug/l	
131-11-3	Dimethyl phthalate	ND	5.2	0.52	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.68	2.1	0.50	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.2	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.6	ug/l	
67-72-1	Hexachloroethane	ND	5.2	0.45	ug/l	
78-59-1	Isophorone	ND	5.2	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.29	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.52	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.5	ug/l	
98-95-3	Nitrobenzene	ND	5.2	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.2	0.52	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.2	0.83	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.2	0.56	ug/l	
110-86-1	Pyridine	ND	10	0.53	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	57%		15-110%
4165-62-2	Phenol-d5	45%		15-110%
118-79-6	2,4,6-Tribromophenol	112% [a]		15-110%
4165-60-0	Nitrobenzene-d5	94%		30-130%
321-60-8	2-Fluorobiphenyl	89%		30-130%
1718-51-0	Terphenyl-d14	109%		30-130%

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

(a) Outside control limits. Associated target analytes are non-detect.

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

Report of Analysis

Client Sample ID:	MW13-ROX-100913		
Lab Sample ID:	MC25198-1	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86470.D	1	10/17/13	KR	10/15/13	OP35268	MSI3217
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	0.098	0.10	0.071	ug/l	J
208-96-8	Acenaphthylene	0.071	0.10	0.051	ug/l	J
120-12-7	Anthracene	ND	0.10	0.095	ug/l	
56-55-3	Benzo(a)anthracene	0.022	0.052	0.020	ug/l	J
50-32-8	Benzo(a)pyrene	ND	0.10	0.030	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.052	0.033	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.028	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.040	ug/l	
218-01-9	Chrysene	0.034	0.10	0.025	ug/l	J
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.033	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.042	ug/l	
86-73-7	Fluorene	ND	0.10	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.032	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.21	0.051	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.076	ug/l	
85-01-8	Phenanthrene	ND	0.052	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.040	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	86%		30-130%
321-60-8	2-Fluorobiphenyl	77%		30-130%
1718-51-0	Terphenyl-d14	96%		30-130%

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

Report of Analysis

Client Sample ID:	MW13-ROX-100913		
Lab Sample ID:	MC25198-1	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK30956.D	1	10/16/13	NK	10/15/13	OP35264	GBK1020
Run #2							

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

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	76%		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:	ROST3-MW-ROX-100913		
Lab Sample ID:	MC25198-2	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U15276.D	1	10/21/13	GK	n/a	n/a	MSU758
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	3.3	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	~~16.4~~ U	~~5.0~~ 10	1.6	ug/l	U
104-51-8	n-Butylbenzene	0.73	5.0	0.54	ug/l	J
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	3.4	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

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J = Indicates an estimated value
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	ROST3-MW-ROX-100913		
Lab Sample ID:	MC25198-2	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	18.2	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	1.7	5.0	0.64	ug/l	J
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	4.5	5.0	0.79	ug/l	J
103-65-1	n-Propylbenzene	2.9	5.0	0.59	ug/l	J
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	1.8	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	16.8	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	3.5	5.0	1.1	ug/l	J
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	42.2	1.0	0.70	ng/l	
95-47-6	o-Xylene	12.3	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	54.6	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	ROST3-MW-ROX-100913		
Lab Sample ID:	MC25198-2	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		70-130%
2037-26-5	Toluene-D8	105%		70-130%
460-00-4	4-Bromofluorobenzene	106%		70-130%

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

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

Report of Analysis

Client Sample ID:	ROST3-MW-ROX-100913		
Lab Sample ID:	MC25198-2	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R34308.D	1	10/17/13	KR	10/15/13	OP35267	MSR1249
Run #2 [a]	F70031.D	1	10/31/13	WK	10/28/13	OP35455	MSF3129

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2	950 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.4	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.4	0.42	ug/l	UJ
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	UJ
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	UJ
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	UJ
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	UJ
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	UJ
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	UJ
	3&4-Methylphenol	ND	11	2.2	ug/l	UJ
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	UJ
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	UJ
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	UJ
108-95-2	Phenol	ND	5.4	0.56	ug/l	UJ
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	UJ
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	UJ
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.93	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.71	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.70	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

ND = Not detected MDL - Method Detection Limit
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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:	ROST3-MW-ROX-100913		
Lab Sample ID:	MC25198-2	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.53	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.48	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.88	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.59	ug/l	
110-86-1	Pyridine	ND	11	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	2% b	8% b	15-110%
4165-62-2	Phenol-d5	2% b	9% b	15-110%
118-79-6	2,4,6-Tribromophenol	11% b	42%	15-110%
4165-60-0	Nitrobenzene-d5	90%	48%	30-130%
321-60-8	2-Fluorobiphenyl	91%	43%	30-130%
1718-51-0	Terphenyl-d14	103%	66%	30-130%

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

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

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

Report of Analysis

Client Sample ID:	ROST3-MW-ROX-100913		
Lab Sample ID:	MC25198-2	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86471.D	1	10/17/13	KR	10/15/13	OP35268	MSI3217
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	0.10	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	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	0.12	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	2.4	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	2.6	0.22	0.081	ug/l	
85-01-8	Phenanthrene	0.14	0.054	0.014	ug/l	
129-00-0	Pyrene	0.044	0.11	0.042	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	97%		30-130%
321-60-8	2-Fluorobiphenyl	83%		30-130%
1718-51-0	Terphenyl-d14	98%		30-130%

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

Report of Analysis

Client Sample ID:	ROST3-MW-ROX-100913		
Lab Sample ID:	MC25198-2	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK30957.D	1	10/16/13	NK	10/15/13	OP35264	GBK1020
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	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	114%		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:	ROST4PZC-ROX-100913		
Lab Sample ID:	MC25198-3	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U15277.D	1	10/21/13	GK	n/a	n/a	MSU758
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	0.66	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

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

Report of Analysis

Client Sample ID:	ROST4PZC-ROX-100913		
Lab Sample ID:	MC25198-3	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	6.4	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	0.66	5.0	0.64	ug/l	J
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	5.4	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	1.2	5.0	0.59	ug/l	J
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	1.3	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	10.1	1.0	0.70	ug/l	
95-47-6	o-Xylene	5.4	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	15.5	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	ROST4PZC-ROX-100913		
Lab Sample ID:	MC25198-3	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 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	107%		70-130%
460-00-4	4-Bromofluorobenzene	108%		70-130%

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

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

Report of Analysis

Client Sample ID:	ROST4PZC-ROX-100913		
Lab Sample ID:	MC25198-3	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R34309.D	1	10/17/13	KR	10/15/13	OP35267	MSR1249
Run #2							

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

ABN Special List

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

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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:	ROST4PZC-ROX-100913		
Lab Sample ID:	MC25198-3	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.3	0.53	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.53	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.52	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.3	0.47	ug/l	UJ
78-59-1	Isophoroue	ND	5.3	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.53	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.6	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	0.53	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.86	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.58	ug/l	
110-86-1	Pyridine	ND	11	0.55	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	59%		15-110%
4165-62-2	Phenol-d5	41%		15-110%
118-79-6	2,4,6-Tribromophenol	101%		15-110%
4165-60-0	Nitrobenzene-d5	94%		30-130%
321-60-8	2-Fluorobiphenyl	97%		30-130%
1718-51-0	Terphenyl-d14	110%		30-130%

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

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

Report of Analysis

Client Sample ID:	ROST4PZC-ROX-100913		
Lab Sample ID:	MC25198-3	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86472.D	1	10/17/13	KR	10/15/13	OP35268	MSI3217
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	0.12	0.11	0.073	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.053	ug/l	
120-12-7	Anthracene	ND	0.11	0.098	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.053	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.053	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.041	ug/l	
218-01-9	Chrysene	ND	0.11	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.034	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.043	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	2.0	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	0.95	0.21	0.079	ug/l	
85-01-8	Phenanthrene	0.20	0.053	0.013	ug/l	
129-00-0	Pyrene	ND	0.11	0.041	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	97%		30-130%
321-60-8	2-Fluorobiphenyl	86%		30-130%
1718-51-0	Terphenyl-d14	100%		30-130%

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

Report of Analysis

Client Sample ID:	ROST4PZC-ROX-100913		
Lab Sample ID:	MC25198-3	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK30958.D	1	10/16/13	NK	10/15/13	OP35264	GBK1020
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	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	88%		36-173%
460-00-4	Bromofluorobenzene (S)	65%		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-100913		
Lab Sample ID:	MC25198-4	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U15278.D	1	10/21/13	GK	n/a	n/a	MSU758
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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

Report of Analysis

Client Sample ID:	MW24-ROX-100913		
Lab Sample ID:	MC25198-4	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzeoe	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Metbyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	MW24-ROX-100913		
Lab Sample ID:	MC25198-4	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 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	110%		70-130%
460-00-4	4-Bromofluorobenzene	108%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW24-ROX-100913		
Lab Sample ID:	MC25198-4	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R34497.D	1	10/24/13	KR	10/15/13	OP35267	MSR1257
Run #2							

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

ABN Special List

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

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

Report of Analysis

Client Sample ID:	MW24-ROX-100913		
Lab Sample ID:	MC25198-4	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.3	0.53	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.53	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.51	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.6	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.3	0.46	ug/l	UJ
78-59-1	Isophorone	ND	5.3	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.29	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.53	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.6	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	0.53	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.85	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.57	ug/l	
110-86-1	Pyridine	ND	11	0.54	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	53%		15-110%
4165-62-2	Phenol-d5	37%		15-110%
118-79-6	2,4,6-Tribromophenol	95%		15-110%
4165-60-0	Nitrobenzene-d5	95%		30-130%
321-60-8	2-Fluorobiphenyl	95%		30-130%
1718-51-0	Terphenyl-d14	104%		30-130%

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

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

Report of Analysis

Client Sample ID:	MW24-ROX-100913		
Lab Sample ID:	MC25198-4	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86498.D	1	10/18/13	KR	10/15/13	OP35268	MSI3218
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-Metbylnaphthalene	ND	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.078	ug/l	
85-01-8	Pbenanthrene	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	93%		30-130%
321-60-8	2-Fluorobiphenyl	84%		30-130%
1718-51-0	Terphenyl-d14	100%		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-100913		
Lab Sample ID:	MC25198-4	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK30959.D	1	10/16/13	NK	10/15/13	OP35264	GBK1020
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	119%		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:	MW22-ROX-100913		
Lab Sample ID:	MC25198-5	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U15279.D	1	10/21/13	GK	n/a	n/a	MSU758
Run #2	U15305.D	50	10/22/13	GK	n/a	n/a	MSU759

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

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	1330 [a]	25	23	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	28.6	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	12.0	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	16.7	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroetbene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

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

Report of Analysis

Client Sample ID:	MW22-ROX-100913		
Lab Sample ID:	MC25198-5	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	3790 [a]	50	19	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	137	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	10	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	10.1	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	470 [a]	250	39	ug/l	
103-65-1	n-Propylbenzene	244	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	6020 [a]	50	23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ng/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	1370 [a]	250	23	ug/l	
108-67-8	1,3,5-Trimethylbenzene	357	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	7460 [a]	50	35	ug/l	
95-47-6	o-Xylene	3480 [a]	50	20	ug/l	
1330-20-7	Xylene (total)	10900 [a]	50	20	ug/l	

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

Report of Analysis

Client Sample ID:	MW22-ROX-100913		
Lab Sample ID:	MC25198-5	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 Soutb Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%	111%	70-130%
2037-26-5	Toluene-D8	115%	111%	70-130%
460-00-4	4-Bromofluorobenzene	107%	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
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-100913		
Lab Sample ID:	MC25198-5	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R34311.D	1	10/17/13	KR	10/15/13	OP35267	MSR1249
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	86.3	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	15.2	11	1.4	ug/l	
	3&4-Methylphenol	31.9	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.4	0.55	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.92	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.99	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.70	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.69	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

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

Report of Analysis

Client Sample ID:	MW22-ROX-100913		
Lab Sample ID:	MC25198-5	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.53	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	ω
67-72-1	Hexachloroethane	ND	5.4	0.47	ug/l	ω
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.87	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.58	ug/l	
110-86-1	Pyridine	ND	11	0.55	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	96%		15-110%
4165-62-2	Phenol-d5	46%		15-110%
118-79-6	2,4,6-Tribromophenol	101%		15-110%
4165-60-0	Nitrobenzene-d5	89%		30-130%
321-60-8	2-Fluorobiphenyl	88%		30-130%
1718-51-0	Terphenyl-d14	104%		30-130%

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

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

Report of Analysis

Client Sample ID:	MW22-ROX-100913		
Lab Sample ID:	MC25198-5	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86499.D	1	10/18/13	KR	10/15/13	OP35268	MSI3218
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	0.19	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	0.19	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	27.6	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	46.8	0.22	0.080	ug/l	
85-01-8	Phenanthrene	0.19	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	87%		30-130%
321-60-8	2-Fluorobiphenyl	76%		30-130%
1718-51-0	Terphenyl-d14	100%		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-100913		
Lab Sample ID:	MC25198-5	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK30960.D	1	10/16/13	NK	10/15/13	OP35264	GBK1020
Run #2							

	Initial Volume	Final Volume
Run #1	35.8 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	100%		36-173%
460-00-4	Bromofluorobenzene (S)	68%		36-173%

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

Report of Analysis

Client Sample ID:	MW22-ROX-100913-DUP		
Lab Sample ID:	MC25198-6	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U15280.D	1	10/21/13	GK	n/a	n/a	MSU758
Run #2	U15306.D	50	10/22/13	GK	n/a	n/a	MSU759

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

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	1390 [a]	25	23	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethaue	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	27.6	5.0	0.54	ug/l	
135-98-8	sec-Butylbeuzene	11.8	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	16.3	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	1.8	2.0	0.84	ug/l	J
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

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

Report of Analysis

Client Sample ID:	MW22-ROX-100913-DUP		
Lab Sample ID:	MC25198-6	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	3970 [a]	50	19	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	136	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	9.5	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	8.4	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	445 [a]	250	39	ug/l	
103-65-1	n-Propylbenzene	243	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	6320 [a]	50	23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	1430 [a]	250	23	ug/l	
108-67-8	1,3,5-Trimethylbenzene	343	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	7750 [a]	50	35	ug/l	
95-47-6	o-Xylene	3650 [a]	50	20	ug/l	
1330-20-7	Xylene (total)	11400 [a]	50	20	ug/l	

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

Report of Analysis

Client Sample ID:	MW22-ROX-100913-DUP		
Lab Sample ID:	MC25198-6	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%	112%	70-130%
2037-26-5	Toluene-D8	112%	113%	70-130%
460-00-4	4-Bromofluorobenzene	119%	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:	MW22-ROX-100913-DUP		
Lab Sample ID:	MC25198-6	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R34312.D	1	10/17/13	KR	10/15/13	OP35267	MSR1249
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	82.6	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	13.9	11	1.4	ug/l	
	3&4-Methylphenol	29.6	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.4	0.55	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ng/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.92	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.99	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.21	ug/l	
122-66-7	1,2-Dipbenylhydrazine	ND	5.4	0.70	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.69	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

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

Report of Analysis

Client Sample ID:	MW22-ROX-100913-DUP		
Lab Sample ID:	MC25198-6	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.53	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.4	0.47	ug/l	UJ
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.87	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.58	ug/l	
110-86-1	Pyridine	ND	11	0.55	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	90%		15-110%
4165-62-2	Phenol-d5	42%		15-110%
118-79-6	2,4,6-Tribromophenol	100%		15-110%
4165-60-0	Nitrobenzene-d5	84%		30-130%
321-60-8	2-Fluorobiphenyl	83%		30-130%
1718-51-0	Terphenyl-d14	98%		30-130%

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

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-100913-DUP		
Lab Sample ID:	MC25198-6	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86500.D	1	10/18/13	KR	10/15/13	OP35268	MSI3218
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	0.18	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	0.20	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	26.5	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	45.1	0.22	0.080	ug/l	
85-01-8	Phenanthrene	0.16	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	83%		30-130%
321-60-8	2-Fluorobiphenyl	73%		30-130%
1718-51-0	Terphenyl-d14	94%		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-100913-DUP		
Lab Sample ID:	MC25198-6	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK30961.D	1	10/16/13	NK	10/15/13	OP35264	GBK1020
Run #2							

	Initial Volume	Final Volume
Run #1	35.7 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	84%		36-173%
460-00-4	Bromofluorobenzene (S)	60%		36-173%

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

Report of Analysis

Client Sample ID:	TB-ROX-100913-HCL		
Lab Sample ID:	MC25198-7	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U15301.D	1	10/22/13	GK	n/a	n/a	MSU759
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	6.1	10	2.8	ug/l	J
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ng/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

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

Report of Analysis

Client Sample ID:	TB-ROX-100913-HCL		
Lab Sample ID:	MC25198-7	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	TB-ROX-100913-HCL		
Lab Sample ID:	MC25198-7	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 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	109%		70-130%
460-00-4	4-Bromofluorobenzene	105%		70-130%

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

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

Report of Analysis

Client Sample ID:	TB-ROX-100913-ST		
Lab Sample ID:	MC25198-8	Date Sampled:	10/09/13
Matrix:	AQ - Ground Water	Date Received:	10/10/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK30962.D	1	10/16/13	NK	10/15/13	OP35264	GBK1020
Run #2							

	Initial Volume	Final Volume
Run #1	35.1 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	113%		36-173%
460-00-4	Bromofluorobenzene (S)	81%		36-173%

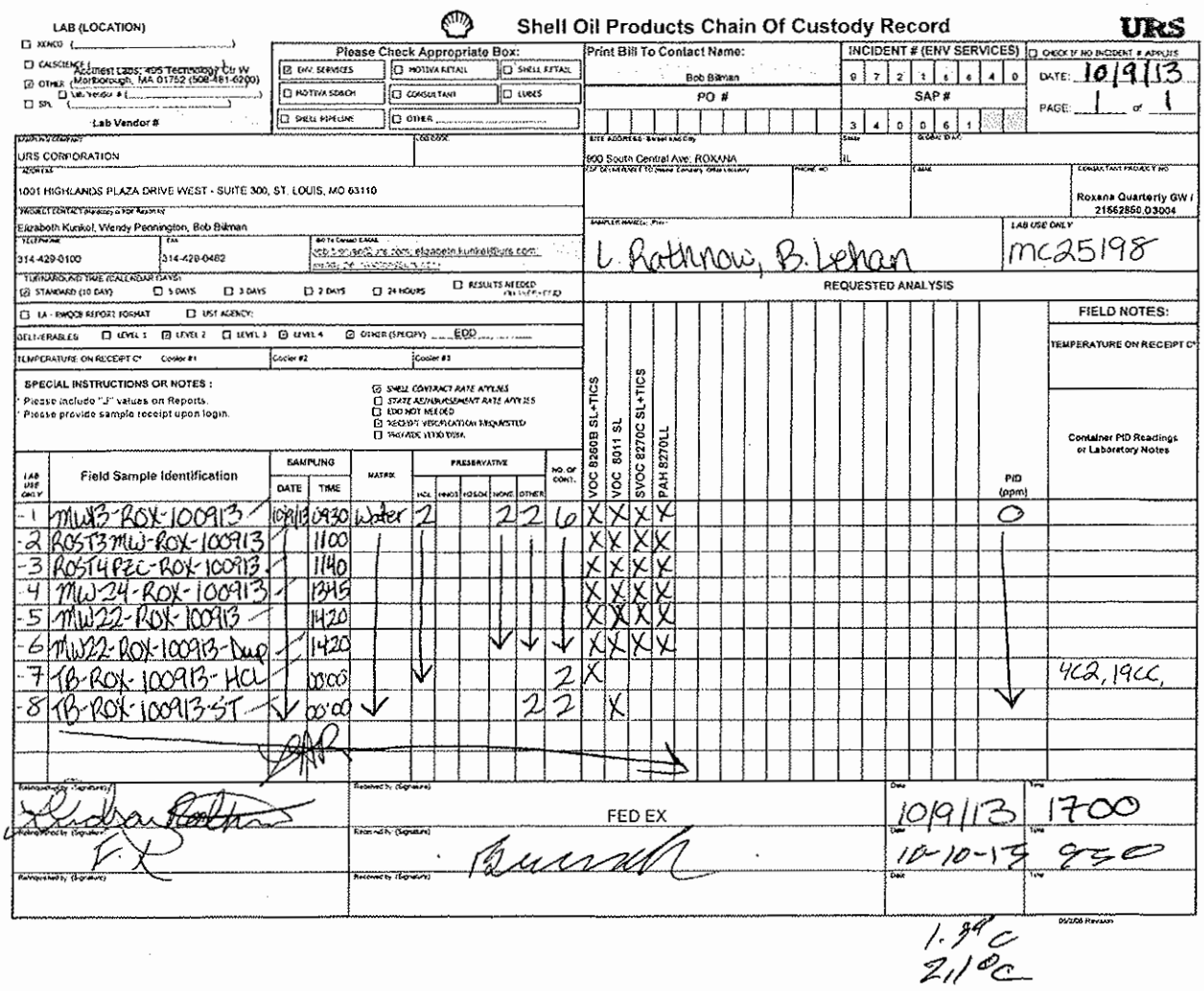
ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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



LAB (LOCATION)
☐ XENCO (_____)
☐ CALSCIENCE (_____)
☑ OTHER Accutest Labs; 495 Technology Ctr W Marlborough, MA 01752 (508-481-6200)
☐ SPL (_____)
Lab Vendor #: _____

Shell Oil Products Chain Of Custody Record

URS

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

Print Bill To Contact Name: Bob Bikman
PO #:
INCIDENT # (ENV SERVICES): 0 7 2 1 6 4 0
SAP #: 3 4 0 0 6 1
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 10/9/13
PAGE: 1 of 1

COMPANY (Shipping): URS CORPORATION
ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110
PROJECT CONTACT (Reports) or FOR Reports: Elizabeth Kunkel, Wendy Pennington, Bob Bikman
TELEPHONE: 314-429-0100
FAX: 314-429-0462
BILL To Contact E-MAIL: bob.bikman@urs.com, elizabeth.kunkel@urs.com
SITE ADDRESS: 600 South Central Ave, ROXANA
STATE: IL
CONSULTANT PROJECT NO: Roxana Quarterly GW / 21562850.03004
SAMPLER NAME(S): L. Rathnow, B. Lehan
LAB USE ONLY: MC25198

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON (MM/DD/YY)
☐ 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
☐ TRUMAX LEVEL IV

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE: HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	FIELD NOTES / Container PID Readings or Laboratory Notes
-1	MW3-ROX-100913	10/9/13	0930	Water	2			2	2	6	X	X	X	X	0	
-2	ROST3MW-ROX-100913		1100							1	X	X	X	X		
-3	ROST4PZC-ROX-100913		1140								X	X	X	X		
-4	MW24-ROX-100913		1345								X	X	X	X		
-5	MW22-ROX-100913		1420								X	X	X	X		
-6	MW22-ROX-100913-Dup		1420								X	X	X	X		
-7	TB-ROX-100913-HCL		0000							2	X					4C2, 19CC,
-8	TB-ROX-100913-ST		0000						2	2		X				

Relinquished by (Signature): L. Rathnow — Received by (Signature): FED EX — Date: 10/9/13 — Time: 1700
Relinquished by (Signature): F.X — Received by (Signature): [signature] — Date: 10-10-13 — Time: 950
Relinquished by (Signature): — Received by (Signature): — Date: — Time:

05/2006 Revision

1.9°C
2.1°C

5.1
5

MC25198: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC25198 Client: URS Immediate Client Services Action Required: No

Date / Time Received: 10/10/2013 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

MC25198: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC25198

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC25198-1 Collected: 09-OCT-13 09:30 By: LRBL Received: 10-OCT-13 By: MW13-ROX-100913						
MC25198-1	SW846 8011	16-OCT-13 04:03	NK	15-OCT-13	PA	V8011SL
MC25198-1	SW846 8270C BY SIM	17-OCT-13 15:17	KR	15-OCT-13	MEW	B8270SIMSL
MC25198-1	SW846 8260B	21-OCT-13 15:50	GK			V8260SL+
MC25198-1	SW846 8270C	24-OCT-13 18:21	KR	15-OCT-13	MEW	AB8270SL+
MC25198-2 Collected: 09-OCT-13 11:00 By: LRBL Received: 10-OCT-13 By: ROST3-MW-ROX-100913						
MC25198-2	SW846 8011	16-OCT-13 04:28	NK	15-OCT-13	PA	V8011SL
MC25198-2	SW846 8270C BY SIM	17-OCT-13 15:41	KR	15-OCT-13	MEW	B8270SIMSL
MC25198-2	SW846 8270C	17-OCT-13 19:55	KR	15-OCT-13	MEW	AB8270SL+
MC25198-2	SW846 8260C	21-OCT-13 16:18	GK			V8260SL+
MC25198-2	SW846 8270C	31-OCT-13 19:01	WK	28-OCT-13	AJ	AB8270SL+
MC25198-3 Collected: 09-OCT-13 11:40 By: LRBL Received: 10-OCT-13 By: ROST4PZC-ROX-100913						
MC25198-3	SW846 8011	16-OCT-13 04:52	NK	15-OCT-13	PA	V8011SL
MC25198-3	SW846 8270C BY SIM	17-OCT-13 16:04	KR	15-OCT-13	MEW	B8270SIMSL
MC25198-3	SW846 8270C	17-OCT-13 20:25	KR	15-OCT-13	MEW	AB8270SL+
MC25198-3	SW846 8260B	21-OCT-13 16:46	GK			V8260SL+
MC25198-4 Collected: 09-OCT-13 13:45 By: LRBL Received: 10-OCT-13 By: MW24-ROX-100913						
MC25198-4	SW846 8011	16-OCT-13 05:16	NK	15-OCT-13	PA	V8011SL
MC25198-4	SW846 8270C BY SIM	18-OCT-13 02:56	KR	15-OCT-13	MEW	B8270SIMSL
MC25198-4	SW846 8260B	21-OCT-13 17:14	GK			V8260SL+
MC25198-4	SW846 8270C	24-OCT-13 18:50	KR	15-OCT-13	MEW	AB8270SL+
MC25198-5 Collected: 09-OCT-13 14:20 By: LRBL Received: 10-OCT-13 By: MW22-ROX-100913						
MC25198-5	SW846 8011	16-OCT-13 05:41	NK	15-OCT-13	PA	V8011SL
MC25198-5	SW846 8270C	17-OCT-13 21:27	KR	15-OCT-13	MEW	AB8270SL+
MC25198-5	SW846 8270C BY SIM	18-OCT-13 03:23	KR	15-OCT-13	MEW	B8270SIMSL
MC25198-5	SW846 8260C	21-OCT-13 17:41	GK			V8260SL+

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC25198

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC25198-5	SW846 8260C	22-OCT-13 16:13	GK			V8260SL+
MC25198-6 Collected: 09-OCT-13 14:20 By: LRBL Received: 10-OCT-13 By: MW22-ROX-100913-DUP						
MC25198-6	SW846 8011	16-OCT-13 06:04	NK	15-OCT-13	PA	V8011SL
MC25198-6	SW846 8270C	17-OCT-13 21:59	KR	15-OCT-13	MEW	AB8270SL+
MC25198-6	SW846 8270C BY SIM	18-OCT-13 03:48	KR	15-OCT-13	MEW	B8270SIMSL
MC25198-6	SW846 8260C	21-OCT-13 18:09	GK			V8260SL+
MC25198-6	SW846 8260C	22-OCT-13 16:41	GK			V8260SL+
MC25198-7 Collected: 09-OCT-13 00:00 By: LRBL Received: 10-OCT-13 By: TB-ROX-100913-HCL						
MC25198-7	SW846 8260B	22-OCT-13 14:23	GK			V8260SL+
MC25198-8 Collected: 09-OCT-13 00:00 By: LRBL Received: 10-OCT-13 By: TB-ROX-100913-ST						
MC25198-8	SW846 8011	16-OCT-13 06:27	NK	15-OCT-13	PA	V8011SL

Accutest Internal Chain of Custody

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Received: 10/10/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC25198-1.1	Walk In Ref #22	Thomas Abruzzise	10/15/13 14:30	Retrieve from Storage
MC25198-1.4	VOC Ref #4	Gary Krasinski	10/21/13 10:52	Retrieve from Storage
MC25198-1.4	Gary Krasinski	GCMSU	10/21/13 10:53	Load on Instrument
MC25198-1.4	GCMSU	Gary Krasinski	10/22/13 09:40	Unload from Instrument
MC25198-1.4	Gary Krasinski	VOC Ref #4	10/22/13 09:40	Return to Storage
MC25198-1.5	VOC Ref #4	Michael Rolo	10/15/13 07:17	Retrieve from Storage
MC25198-1.5	Michael Rolo		10/16/13 07:19	Depleted
MC25198-2.1	Walk In Ref #22	Thomas Abruzzise	10/15/13 14:30	Retrieve from Storage
MC25198-2.2	Walk In Ref #22	Thomas Abruzzise	10/28/13 17:56	Retrieve from Storage
MC25198-2.3	VOC Ref #4	Gary Krasinski	10/21/13 10:52	Retrieve from Storage
MC25198-2.3	Gary Krasinski	GCMSU	10/21/13 10:53	Load on Instrument
MC25198-2.3	GCMSU	Gary Krasinski	10/22/13 09:40	Unload from Instrument
MC25198-2.3	Gary Krasinski	VOC Ref #4	10/22/13 09:40	Return to Storage
MC25198-2.5	VOC Ref #4	Michael Rolo	10/15/13 07:17	Retrieve from Storage
MC25198-2.5	Michael Rolo		10/16/13 07:19	Depleted
MC25198-3.2	Walk In Ref #22	Thomas Abruzzise	10/15/13 14:30	Retrieve from Storage
MC25198-3.3	VOC Ref #4	Gary Krasinski	10/21/13 10:52	Retrieve from Storage
MC25198-3.3	Gary Krasinski	GCMSU	10/21/13 10:53	Load on Instrument
MC25198-3.3	GCMSU	Gary Krasinski	10/22/13 09:40	Unload from Instrnment
MC25198-3.3	Gary Krasinski	VOC Ref #4	10/22/13 09:40	Return to Storage
MC25198-3.5	VOC Ref #4	Michael Rolo	10/15/13 07:17	Retrieve from Storage
MC25198-3.5	Michael Rolo		10/16/13 07:19	Depleted
MC25198-4.1	Walk In Ref #22	Thomas Abruzzise	10/15/13 14:30	Retrieve from Storage
MC25198-4.4	VOC Ref #4	Gary Krasinski	10/21/13 10:52	Retrieve from Storage
MC25198-4.4	Gary Krasinski	GCMSU	10/21/13 10:53	Load on Instrument
MC25198-4.4	GCMSU	Gary Krasinski	10/22/13 09:40	Unload from Instrnment
MC25198-4.4	Gary Krasinski	VOC Ref #4	10/22/13 09:40	Return to Storage
MC25198-4.6	VOC Ref #4	Michael Rolo	10/15/13 07:17	Retrieve from Storage
MC25198-4.6	Michael Rolo		10/16/13 07:19	Depleted
MC25198-5.1	Walk In Ref #22	Thomas Abruzzise	10/15/13 14:30	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Received: 10/10/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC25198-5.3	VOC Ref #4	Gary Krasinski	10/21/13 10:52	Retrieve from Storage
MC25198-5.3	Gary Krasinski	GCMSU	10/21/13 10:53	Load on Instrument
MC25198-5.3	GCMSU	Gary Krasinski	10/22/13 09:40	Unload from Instrument
MC25198-5.3	Gary Krasinski	VOC Ref #4	10/22/13 09:40	Return to Storage
MC25198-5.4	VOC Ref #4	Gary Krasinski	10/22/13 11:35	Retrieve from Storage
MC25198-5.4	Gary Krasinski	VOC Ref #4	10/23/13 11:28	Return to Storage
MC25198-5.6	VOC Ref #4	Michael Rolo	10/15/13 07:17	Retrieve from Storage
MC25198-5.6	Michael Rolo		10/16/13 07:19	Depleted
MC25198-6.1	Walk In Ref #22	Thomas Abruzzise	10/24/13 15:15	Retrieve from Storage
MC25198-6.2	Walk In Ref #22	Thomas Abruzzise	10/15/13 14:30	Retrieve from Storage
MC25198-6.3	VOC Ref #4	Gary Krasinski	10/21/13 10:52	Retrieve from Storage
MC25198-6.3	Gary Krasinski	GCMSU	10/21/13 10:53	Load on Instrument
MC25198-6.3	GCMSU	Gary Krasinski	10/22/13 09:40	Unload from Instrument
MC25198-6.3	Gary Krasinski	VOC Ref #4	10/22/13 09:40	Return to Storage
MC25198-6.4	VOC Ref #4	Gary Krasinski	10/22/13 11:35	Retrieve from Storage
MC25198-6.4	Gary Krasinski	VOC Ref #4	10/23/13 11:28	Return to Storage
MC25198-6.6	VOC Ref #4	Michael Rolo	10/15/13 07:17	Retrieve from Storage
MC25198-6.6	Michael Rolo		10/16/13 07:19	Depleted
MC25198-7.1	VOC Ref #4	Gary Krasinski	10/21/13 10:52	Retrieve from Storage
MC25198-7.1	Gary Krasinski	GCMSU	10/21/13 10:53	Load on Instrument
MC25198-7.1	GCMSU	Gary Krasinski	10/22/13 09:40	Unload from Instrument
MC25198-7.1	Gary Krasinski	VOC Ref #4	10/22/13 09:40	Retnrn to Storage
MC25198-7.2	VOC Ref #4	Gary Krasinski	10/22/13 11:35	Retrieve from Storage
MC25198-7.2	Gary Krasinski	VOC Ref #4	10/23/13 11:28	Return to Storage
MC25198-8.1	VOC Ref #4	Michael Rolo	10/15/13 07:17	Retrieve from Storage
MC25198-8.1	Michael Rolo		10/16/13 07:19	Depleted

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: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU758-MB	U15264.D	1	10/21/13	GK	n/a	n/a	MSU758

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

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6

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

Method Blank Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU758-MB	U15264.D	1	10/21/13	GK	n/a	n/a	MSU758

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

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6

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

6.1.1

Method Blank Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU758-MB	U15264.D	1	10/21/13	GK	n/a	n/a	MSU758

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

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	107%	70-130%
2037-26-5	Toluene-D8	112%	70-130%
460-00-4	4-Bromofluorobenzene	107%	70-130%

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

6.1.1

Method Blank Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU759-MB	U15294.D	1	10/22/13	GK	n/a	n/a	MSU759

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

MC25198-5, MC25198-6, MC25198-7

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

Method Blank Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU759-MB	U15294.D	1	10/22/13	GK	n/a	n/a	MSU759

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

MC25198-5, MC25198-6, MC25198-7

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

Method Blank Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU759-MB	U15294.D	1	10/22/13	GK	n/a	n/a	MSU759

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

MC25198-5, MC25198-6, MC25198-7

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	108%	70-130%
2037-26-5	Toluene-D8	109%	70-130%
460-00-4	4-Bromofluorobenzene	107%	70-130%

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

6.1.2

Blank Spike Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU758-BS	U15261.D	1	10/21/13	GK	n/a	n/a	MSU758

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

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	56.0	112	70-130
107-02-8	Acrolein	250	328	131* [a]	70-130
107-13-1	Acrylonitrile	50	52.8	106	70-130
71-43-2	Benzene	50	57.1	114	70-130
108-86-1	Bromobenzene	50	57.5	115	70-130
74-97-5	Bromochloromethane	50	57.3	115	70-130
75-27-4	Bromodichloromethane	50	54.1	108	70-130
75-25-2	Bromoform	50	49.4	99	70-130
74-83-9	Bromomethane	50	60.6	121	70-130
78-93-3	2-Butanone (MEK)	50	53.3	107	70-130
104-51-8	n-Butylbenzene	50	56.4	113	70-130
135-98-8	sec-Butylbenzene	50	55.9	112	70-130
98-06-6	tert-Butylbenzene	50	54.0	108	70-130
75-15-0	Carbon disulfide	50	60.8	122	70-130
56-23-5	Carbon tetrachloride	50	56.5	113	70-130
108-90-7	Chlorobenzene	50	53.2	106	70-130
75-00-3	Chloroethane	50	59.8	120	70-130
110-75-8	2-Chloroethyl vinyl ether	50	61.3	123	70-130
67-66-3	Chloroform	50	52.1	104	70-130
74-87-3	Chloromethane	50	69.7	139* [a]	70-130
95-49-8	o-Chlorotoluene	50	52.4	105	70-130
106-43-4	p-Chlorotoluene	50	54.7	109	70-130
124-48-1	Dibromochloromethane	50	50.3	101	70-130
95-50-1	1,2-Dichlorobenzene	50	53.7	107	70-130
541-73-1	1,3-Dichlorobenzene	50	54.6	109	70-130
106-46-7	1,4-Dichlorobenzene	50	56.4	113	70-130
75-71-8	Dichlorodifluoromethane	50	63.5	127	70-130
75-34-3	1,1-Dichloroethane	50	57.5	115	70-130
107-06-2	1,2-Dichloroethane	50	53.2	106	70-130
75-35-4	1,1-Dichloroethene	50	58.4	117	70-130
156-59-2	cis-1,2-Dichloroethene	50	54.3	109	70-130
156-60-5	trans-1,2-Dichloroethene	50	58.1	116	70-130
78-87-5	1,2-Dichloropropane	50	54.5	109	70-130
142-28-9	1,3-Dichloropropane	50	53.4	107	70-130
594-20-7	2,2-Dichloropropane	50	63.5	127	70-130
563-58-6	1,1-Dichloropropene	50	57.0	114	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenne, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU758-BS	U15261.D	1	10/21/13	GK	n/a	n/a	MSU758

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

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	48.8	98	70-130
10061-02-6	trans-1,3-Dichloropropene	50	53.0	106	70-130
123-91-1	1,4-Dioxane	250	254	102	70-130
97-63-2	Ethyl methacrylate	50	48.2	96	77-137
100-41-4	Ethylbenzene	50	53.6	107	70-130
87-68-3	Hexachlorobutadiene	50	53.4	107	70-130
591-78-6	2-Hexanone	50	52.0	104	70-130
98-82-8	Isopropylbenzene	50	56.8	114	70-130
99-87-6	p-Isopropyltoluene	50	57.8	116	70-130
1634-04-4	Methyl Tert Butyl Ether	50	51.5	103	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	50.6	101	70-130
74-95-3	Methylene bromide	50	54.9	110	70-130
75-09-2	Methylene chloride	50	55.9	112	70-130
91-20-3	Naphthalene	50	47.8	96	70-130
103-65-1	n-Propylbenzene	50	53.5	107	70-130
100-42-5	Styrene	50	55.2	110	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	55.4	111	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	55.1	110	70-130
127-18-4	Tetrachloroethene	50	55.3	111	70-130
108-88-3	Toluene	50	54.7	109	70-130
87-61-6	1,2,3-Trichlorobenzene	50	49.8	100	70-130
120-82-1	1,2,4-Trichlorobenzene	50	52.9	106	70-130
71-55-6	1,1,1-Trichloroethane	50	57.3	115	70-130
79-00-5	1,1,2-Trichloroethane	50	52.4	105	70-130
79-01-6	Trichloroethene	50	55.0	110	70-130
75-69-4	Trichlorofluoromethane	50	55.6	111	70-130
96-18-4	1,2,3-Trichloropropane	50	51.5	103	70-130
95-63-6	1,2,4-Trimethylbenzene	50	54.0	108	70-130
108-67-8	1,3,5-Trimethylbenzene	50	55.4	111	70-130
108-05-4	Vinyl Acetate	50	54.8	110	70-130
75-01-4	Vinyl chloride	50	51.7	103	70-130
	m,p-Xylene	100	105	105	70-130
95-47-6	o-Xylene	50	53.0	106	70-130
1330-20-7	Xylene (total)	150	158	105	70-130

* = Ontside of Control Liunits.

6.2.1

Blank Spike Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU758-BS	U15261.D	1	10/21/13	GK	n/a	n/a	MSU758

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

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	116%	70-130%
2037-26-5	Toluene-D8	111%	70-130%
460-00-4	4-Bromofluorobenzene	106%	70-130%

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

6.2.1

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU759-BS	U15292.D	1	10/22/13	GK	n/a	n/a	MSU759

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

MC25198-5, MC25198-6, MC25198-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	61.2	122	70-130
107-02-8	Acrolein	250	325	130	70-130
107-13-1	Acrylonitrile	50	54.0	108	70-130
71-43-2	Benzene	50	56.2	112	70-130
108-86-1	Bromobenzene	50	54.5	109	70-130
74-97-5	Bromochloromethane	50	57.0	114	70-130
75-27-4	Bromodichloromethane	50	54.8	110	70-130
75-25-2	Bromoform	50	51.3	103	70-130
74-83-9	Bromomethane	50	56.6	113	70-130
78-93-3	2-Butanone (MEK)	50	60.7	121	70-130
104-51-8	n-Butylbenzene	50	53.3	107	70-130
135-98-8	sec-Butylbenzene	50	53.5	107	70-130
98-06-6	tert-Butylbenzene	50	51.9	104	70-130
75-15-0	Carbon disulfide	50	57.0	114	70-130
56-23-5	Carbon tetrachloride	50	56.1	112	70-130
108-90-7	Chlorobenzene	50	52.1	104	70-130
75-00-3	Chloroethane	50	55.3	111	70-130
110-75-8	2-Chloroethyl vinyl ether	50	63.3	127	70-130
67-66-3	Chloroform	50	52.7	105	70-130
74-87-3	Chloromethane	50	63.0	126	70-130
95-49-8	o-Chlorotoluene	50	50.1	100	70-130
106-43-4	p-Chlorotoluene	50	50.9	102	70-130
124-48-1	Dibromochloromethane	50	52.1	104	70-130
95-50-1	1,2-Dichlorobenzene	50	51.0	102	70-130
541-73-1	1,3-Dichlorobenzene	50	52.5	105	70-130
106-46-7	1,4-Dichlorobenzene	50	53.9	108	70-130
75-71-8	Dichlorodifluoromethane	50	53.3	107	70-130
75-34-3	1,1-Dichloroethane	50	55.8	112	70-130
107-06-2	1,2-Dichloroethane	50	52.9	106	70-130
75-35-4	1,1-Dichloroethene	50	56.5	113	70-130
156-59-2	cis-1,2-Dichloroethene	50	54.0	108	70-130
156-60-5	trans-1,2-Dichloroethene	50	56.1	112	70-130
78-87-5	1,2-Dichloropropane	50	54.5	109	70-130
142-28-9	1,3-Dichloropropane	50	53.9	108	70-130
594-20-7	2,2-Dichloropropane	50	58.3	117	70-130
563-58-6	1,1-Dichloropropene	50	57.2	114	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU759-BS	U15292.D	1	10/22/13	GK	n/a	n/a	MSU759

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

MC25198-5, MC25198-6, MC25198-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	49.0	98	70-130
10061-02-6	trans-1,3-Dichloropropene	50	52.8	106	70-130
123-91-1	1,4-Dioxane	250	268	107	70-130
97-63-2	Ethyl methacrylate	50	50.0	100	77-137
100-41-4	Ethylbenzene	50	52.7	105	70-130
87-68-3	Hexachlorobutadiene	50	51.2	102	70-130
591-78-6	2-Hexanone	50	53.2	106	70-130
98-82-8	Isopropylbeuzene	50	53.7	107	70-130
99-87-6	p-Isopropyltoluene	50	55.2	110	70-130
1634-04-4	Methyl Tert Butyl Ether	50	51.9	104	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	50.1	100	70-130
74-95-3	Methylene bromide	50	55.6	111	70-130
75-09-2	Methylene chloride	50	54.0	108	70-130
91-20-3	Naphthalene	50	48.4	97	70-130
103-65-1	n-Propylbenzene	50	50.6	101	70-130
100-42-5	Styrene	50	54.2	108	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	55.9	112	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	51.2	102	70-130
127-18-4	Tetrachloroethene	50	53.5	107	70-130
108-88-3	Toluene	50	53.1	106	70-130
87-61-6	1,2,3-Trichlorobenzene	50	50.5	101	70-130
120-82-1	1,2,4-Trichlorobenzene	50	51.4	103	70-130
71-55-6	1,1,1-Trichloroethane	50	55.3	111	70-130
79-00-5	1,1,2-Trichloroethane	50	52.8	106	70-130
79-01-6	Trichloroethene	50	55.2	110	70-130
75-69-4	Trichlorofluoromethane	50	50.2	100	70-130
96-18-4	1,2,3-Trichloropropane	50	51.2	102	70-130
95-63-6	1,2,4-Trimethylbenzene	50	51.1	102	70-130
108-67-8	1,3,5-Trimethylbenzene	50	52.2	104	70-130
108-05-4	Vinyl Acetate	50	55.1	110	70-130
75-01-4	Vinyl chloride	50	46.1	92	70-130
	m,p-Xylene	100	103	103	70-130
95-47-6	o-Xylene	50	52.7	105	70-130
1330-20-7	Xylene (total)	150	156	104	70-130

* = Outside of Control Limits.

6.2.2

Blank Spike Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU759-BS	U15292.D	1	10/22/13	GK	n/a	n/a	MSU759

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

MC25198-5, MC25198-6, MC25198-7

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	110%	70-130%
2037-26-5	Toluene-D8	112%	70-130%
460-00-4	4-Bromofluorobenzene	105%	70-130%

6.2.2

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25225-1MS	U15273.D	1	10/21/13	GK	n/a	n/a	MSU758
MC25225-1MSD	U15274.D	1	10/21/13	GK	n/a	n/a	MSU758
MC25225-1	U15270.D	1	10/21/13	GK	n/a	n/a	MSU758

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

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6

CAS No.	Compound	MC25225-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	42.0	84	39.5	79	6	70-130/30
107-02-8	Acrolein	ND		250	349	140* [a]	358	143* [a]	3	70-130/30
107-13-1	Acrylonitrile	ND		50	58.9	118	58.0	116	2	70-130/30
71-43-2	Benzene	ND		50	57.0	114	56.6	113	1	70-130/30
108-86-1	Bromobenzene	ND		50	56.1	112	55.2	110	2	70-130/30
74-97-5	Bromochloromethane	ND		50	55.8	112	56.3	113	1	70-130/30
75-27-4	Bromodichloromethane	ND		50	51.6	103	53.0	106	3	70-130/30
75-25-2	Bromoform	ND		50	49.3	99	50.3	101	2	70-130/30
74-83-9	Bromomethane	ND		50	58.1	116	57.7	115	1	70-130/30
78-93-3	2-Butanone (MEK)	ND		50	46.6	93	47.0	94	1	70-130/30
104-51-8	n-Butylbenzene	ND		50	54.3	109	53.2	106	2	70-130/30
135-98-8	sec-Butylbenzene	ND		50	53.9	108	53.6	107	1	70-130/30
98-06-6	tert-Butylbenzene	ND		50	52.4	105	52.2	104	0	70-130/30
75-15-0	Carbon disulfide	ND		50	51.2	102	48.0	96	6	70-130/30
56-23-5	Carbon tetrachloride	ND		50	56.3	113	55.4	111	2	70-130/30
108-90-7	Chlorobenzene	ND		50	51.8	104	51.8	104	0	70-130/30
75-00-3	Chloroethane	ND		50	59.1	118	53.9	108	9	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		50	1.6	3* [a]	ND	0* [a]	200* [b]	70-130/30
67-66-3	Chloroform	ND		50	50.1	100	50.5	101	1	70-130/30
74-87-3	Chloromethane	ND		50	60.6	121	61.4	123	1	70-130/30
95-49-8	o-Chlorotoluene	ND		50	51.3	103	51.5	103	0	70-130/30
106-43-4	p-Chlorotoluene	ND		50	52.8	106	52.7	105	0	70-130/30
124-48-1	Dibromochloromethane	ND		50	50.4	101	51.2	102	2	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		50	52.5	105	51.9	104	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		50	53.2	106	54.1	108	2	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		50	54.8	110	55.1	110	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND		50	62.1	124	58.9	118	5	70-130/30
75-34-3	1,1-Dichloroethane	ND		50	56.3	113	55.7	111	1	70-130/30
107-06-2	1,2-Dichloroethane	ND		50	53.6	107	54.3	109	1	70-130/30
75-35-4	1,1-Dichloroethene	ND		50	56.4	113	57.2	114	1	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50	54.8	110	53.0	106	3	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50	55.6	111	54.9	110	1	70-130/30
78-87-5	1,2-Dichloropropane	ND		50	54.6	109	55.0	110	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	55.3	111	55.8	112	1	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	56.4	113	54.3	109	4	70-130/30
563-58-6	1,1-Dichloropropene	ND		50	57.8	116	56.4	113	2	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25225-1MS	U15273.D	1	10/21/13	GK	n/a	n/a	MSU758
MC25225-1MSD	U15274.D	1	10/21/13	GK	n/a	n/a	MSU758
MC25225-1	U15270.D	1	10/21/13	GK	n/a	n/a	MSU758

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

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6

CAS No.	Compound	MC25225-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		50	47.6	95	48.8	98	2	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		50	52.2	104	52.1	104	0	70-130/30
123-91-1	1,4-Dioxane	ND		250	270	108	295	118	9	70-130/30
97-63-2	Ethyl methacrylate	ND		50	52.7	105	52.8	106	0	72-139/30
100-41-4	Ethylbenzene	ND		50	51.9	104	52.2	104	1	70-130/30
87-68-3	Hexachlorobutadiene	ND		50	52.2	104	53.4	107	2	70-130/30
591-78-6	2-Hexanone	ND		50	43.1	86	45.5	91	5	70-130/30
98-82-8	Isopropylbenzene	ND		50	55.2	110	54.4	109	1	70-130/30
99-87-6	p-Isopropyltoluene	ND		50	55.6	111	55.5	111	0	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		50	53.8	108	53.6	107	0	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	54.3	109	55.6	111	2	70-130/30
74-95-3	Methylene bromide	ND		50	56.1	112	57.3	115	2	70-130/30
75-09-2	Methylene chloride	ND		50	54.1	108	53.1	106	2	70-130/30
91-20-3	Naphthalene	ND		50	53.1	106	54.9	110	3	70-130/30
103-65-1	n-Propylbenzene	ND		50	52.0	104	51.6	103	1	70-130/30
100-42-5	Styrene	ND		50	52.1	104	52.5	105	1	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	55.8	112	54.9	110	2	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	62.8	126	64.7	129	3	70-130/30
127-18-4	Tetrachloroethene	ND		50	54.6	109	54.4	109	0	70-130/30
108-88-3	Toluene	ND		50	54.1	108	53.4	107	1	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	51.2	102	53.1	106	4	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	53.3	107	53.0	106	1	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		50	57.7	115	56.1	112	3	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50	54.6	109	54.9	110	1	70-130/30
79-01-6	Trichloroethene	ND		50	53.8	108	51.6	103	4	70-130/30
75-69-4	Trichlorofluoromethane	ND		50	51.9	104	49.6	99	5	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		50	53.5	107	54.1	108	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		50	52.0	104	51.5	103	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		50	52.6	105	52.5	105	0	70-130/30
108-05-4	Vinyl Acetate	ND		50	61.6	123	61.1	122	1	70-130/30
75-01-4	Vinyl chloride	ND		50	47.8	96	46.2	92	3	70-130/30
	m,p-Xylene	ND		100	102	102	101	101	1	70-130/30
95-47-6	o-Xylene	ND		50	52.0	104	51.7	103	1	70-130/30
1330-20-7	Xylene (total)	ND		150	154	103	153	102	1	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25225-1MS	U15273.D	1	10/21/13	GK	n/a	n/a	MSU758
MC25225-1MSD	U15274.D	1	10/21/13	GK	n/a	n/a	MSU758
MC25225-1	U15270.D	1	10/21/13	GK	n/a	n/a	MSU758

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

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6

CAS No.	Surrogate Recoveries	MS	MSD	MC25225-1	Limits
1868-53-7	Dibromofluoromethane	115%	113%	117%	70-130%
2037-26-5	Toluene-D8	111%	112%	109%	70-130%
460-00-4	4-Bromofluorobenzene	106%	107%	105%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25237-1MS	U15303.D	1	10/22/13	GK	n/a	n/a	MSU759
MC25237-1MSD	U15304.D	1	10/22/13	GK	n/a	n/a	MSU759
MC25237-1	U15302.D	1	10/22/13	GK	n/a	n/a	MSU759

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

MC25198-5, MC25198-6, MC25198-7

CAS No.	Compound	MC25237-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	41.9	84	41.6	83	1	70-130/30
107-02-8	Acrolein	ND		250	285	114	289	116	1	70-130/30
107-13-1	Acrylonitrile	ND		50	53.2	106	54.4	109	2	70-130/30
71-43-2	Benzene	ND		50	57.1	114	57.5	115	1	70-130/30
108-86-1	Bromobenzene	ND		50	54.5	109	55.7	111	2	70-130/30
74-97-5	Bromochloromethane	ND		50	56.3	113	56.2	112	0	70-130/30
75-27-4	Bromodichloromethane	ND		50	53.7	107	53.7	107	0	70-130/30
75-25-2	Bromoform	ND		50	45.9	92	45.4	91	1	70-130/30
74-83-9	Bromomethane	ND		50	55.0	110	56.6	113	3	70-130/30
78-93-3	2-Butanone (MEK)	ND		50	47.7	95	51.5	103	8	70-130/30
104-51-8	n-Butylbenzene	ND		50	52.5	105	54.0	108	3	70-130/30
135-98-8	sec-Butylbenzene	1.3		50	53.7	105	55.3	108	3	70-130/30
98-06-6	tert-Butylbenzene	1.2		50	53.2	104	55.5	109	4	70-130/30
75-15-0	Carbon disulfide	ND		50	47.9	96	49.5	99	3	70-130/30
56-23-5	Carbon tetrachloride	ND		50	55.9	112	57.3	115	2	70-130/30
108-90-7	Chlorobenzene	ND		50	53.3	107	52.9	106	1	70-130/30
75-00-3	Chloroethane	ND		50	56.7	113	56.5	113	0	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		50	ND	0* [a]	ND	0* [a]	nc	70-130/30
67-66-3	Chloroform	ND		50	50.5	101	51.4	103	2	70-130/30
74-87-3	Chloromethane	ND		50	61.8	124	63.7	127	3	70-130/30
95-49-8	o-Chlorotoluene	ND		50	50.8	102	52.1	104	3	70-130/30
106-43-4	p-Chlorotoluene	ND		50	51.0	102	52.0	104	2	70-130/30
124-48-1	Dibromochloromethane	ND		50	48.4	97	48.4	97	0	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		50	53.0	106	54.0	108	2	70-130/30
541-73-1	1,3-Dichlorohenzene	ND		50	52.9	106	54.5	109	3	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		50	54.8	110	55.9	112	2	70-130/30
75-71-8	Dichlorodifluoromethane	ND		50	55.8	112	58.9	118	5	70-130/30
75-34-3	1,1-Dichloroethane	ND		50	54.5	109	57.5	115	5	70-130/30
107-06-2	1,2-Dichloroethane	ND		50	53.4	107	53.5	107	0	70-130/30
75-35-4	1,1-Dichloroethene	ND		50	55.1	110	58.4	117	6	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50	53.5	107	53.5	107	0	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50	55.0	110	56.8	114	3	70-130/30
78-87-5	1,2-Dichloropropane	ND		50	55.6	111	54.8	110	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	55.6	111	53.4	107	4	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	52.2	104	54.6	109	4	70-130/30
563-58-6	1,1-Dichloropropene	ND		50	55.3	111	57.6	115	4	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25237-1MS	U15303.D	1	10/22/13	GK	n/a	n/a	MSU759
MC25237-1MSD	U15304.D	1	10/22/13	GK	n/a	n/a	MSU759
MC25237-1	U15302.D	1	10/22/13	GK	n/a	n/a	MSU759

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

MC25198-5, MC25198-6, MC25198-7

CAS No.	Compound	MC25237-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		50	47.3	95	46.4	93	2	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		50	49.8	100	50.4	101	1	70-130/30
123-91-1	1,4-Dioxane	ND		250	262	105	245	98	7	70-130/30
97-63-2	Ethyl methacrylate	ND		50	47.7	95	47.9	96	0	72-139/30
100-41-4	Ethylbenzene	ND		50	50.7	101	50.9	102	0	70-130/30
87-68-3	Hexachlorobutadiene	ND		50	54.7	109	55.7	111	2	70-130/30
591-78-6	2-Hexanone	ND		50	46.5	93	46.4	93	0	70-130/30
98-82-8	Isopropylbenzene	1.1		50	54.4	107	56.1	110	3	70-130/30
99-87-6	p-Isopropyltoluene	1.1		50	52.3	102	53.1	104	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		50	52.0	104	52.6	105	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	55.8	112	55.7	111	0	70-130/30
74-95-3	Methylene bromide	ND		50	57.2	114	56.2	112	2	70-130/30
75-09-2	Methylene chloride	ND		50	53.7	107	54.2	108	1	70-130/30
91-20-3	Naphthalene	ND		50	55.7	111	56.3	113	1	70-130/30
103-65-1	n-Propylbenzene	ND		50	50.5	101	51.6	103	2	70-130/30
100-42-5	Styrene	ND		50	27.7	55* [a]	27.5	55* [a]	1	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	57.1	114	57.0	114	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	65.2	130	65.2	130	0	70-130/30
127-18-4	Tetrachloroethene	ND		50	56.1	112	56.3	113	0	70-130/30
108-88-3	Toluene	ND		50	52.0	104	52.2	104	0	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	53.3	107	54.2	108	2	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	54.5	109	55.0	110	1	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		50	54.3	109	58.0	116	7	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50	54.7	109	54.9	110	0	70-130/30
79-01-6	Trichloroethene	ND		50	53.6	107	51.4	103	4	70-130/30
75-69-4	Trichlorofluoromethane	ND		50	48.3	97	50.0	100	3	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		50	52.1	104	52.9	106	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	0.88		50	41.2	81	43.0	84	4	70-130/30
108-67-8	1,3,5-Trimethylbenzene	1.1		50	37.6	73	39.2	76	4	70-130/30
108-05-4	Vinyl Acetate	ND		50	56.8	114	57.1	114	1	70-130/30
75-01-4	Vinyl chloride	ND		50	45.3	91	47.2	94	4	70-130/30
	m,p-Xylene	ND		100	90.3	90	90.8	91	1	70-130/30
95-47-6	o-Xylene	ND		50	46.2	92	46.3	93	0	70-130/30
1330-20-7	Xylene (total)	0.53		150	136	90	137	91	1	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25237-1MS	U15303.D	1	10/22/13	GK	n/a	n/a	MSU759
MC25237-1MSD	U15304.D	1	10/22/13	GK	n/a	n/a	MSU759
MC25237-1	U15302.D	1	10/22/13	GK	n/a	n/a	MSU759

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

MC25198-5, MC25198-6, MC25198-7

CAS No.	Surrogate Recoveries	MS	MSD	MC25237-1	Limits
1868-53-7	Dibromofluoromethane	114%	114%	117%	70-130%
2037-26-5	Toluene-D8	109%	108%	107%	70-130%
460-00-4	4-Bromofluorobenzene	105%	106%	107%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

6.3.2

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSU758-CC756	Injection Date:	10/21/13
Lab File ID:	U15260.D	Injection Time:	08:55
Instrument ID:	GCMSU	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	128332	8.98	199307	9.85	102473	13.12	99394	15.69	48197	6.53
Upper Limit [a]	256664	9.48	398614	10.35	204946	13.62	198788	16.19	96394	7.03
Lower Limit [b]	64166	8.48	99654	9.35	51237	12.62	49697	15.19	24099	6.03
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSU758-BS	126385	8.97	197455	9.85	100776	13.12	96168	15.69	50232	6.54
MSU758-MB	121842	8.98	192092	9.85	97549	13.12	95291	15.69	54900	6.55
ZZZZZZ	112505	8.98	174436	9.85	88519	13.12	86541	15.69	43130	6.55
ZZZZZZ	123748	8.97	191004	9.85	98468	13.12	94926	15.69	49900	6.55
ZZZZZZ	125352	8.98	191956	9.85	97894	13.12	95169	15.69	52187	6.54
ZZZZZZ	124401	8.98	195310	9.85	96589	13.12	93376	15.69	55445	6.54
ZZZZZZ	123323	8.98	189137	9.85	95839	13.12	93542	15.69	56416	6.54
MC25225-1	121651	8.98	192231	9.85	97177	13.12	94547	15.69	59440	6.55
ZZZZZZ	127278	8.97	198607	9.85	101044	13.12	94877	15.69	61581	6.55
ZZZZZZ	122656	8.98	188090	9.85	97989	13.12	93621	15.69	62917	6.55
MC25225-1MS	123927	8.97	194920	9.85	100170	13.12	95997	15.68	64302	6.54
MC25225-1MSD	125896	8.97	194779	9.85	99324	13.12	95341	15.68	66883	6.55
MC25198-1	124719	8.98	190412	9.85	97512	13.12	92314	15.69	72957	6.55
MC25198-2	127021	8.98	194172	9.85	99283	13.12	95404	15.69	68982	6.55
MC25198-3	123758	8.97	190276	9.85	95577	13.12	92188	15.69	67468	6.55
MC25198-4	121628	8.97	192075	9.85	97203	13.12	91812	15.69	66916	6.55
MC25198-5	128169	8.97	194526	9.85	109532	13.12	107065	15.69	81580	6.56
MC25198-6	136997	8.97	212291	9.85	115612	13.12	111852	15.69	82848	6.56
ZZZZZZ	136247	8.98	209257	9.85	105156	13.12	102172	15.69	63423	6.55
ZZZZZZ	132533	8.98	206001	9.85	102884	13.12	100888	15.69	63768	6.55
ZZZZZZ	128671	8.98	197738	9.85	99457	13.12	96637	15.69	61458	6.55
ZZZZZZ	125483	8.98	196166	9.85	98363	13.12	96134	15.69	58959	6.54
ZZZZZZ	127379	8.98	198152	9.85	99651	13.12	96261	15.69	62613	6.55

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

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

6.4.1

Volatile Internal Standard Area Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSU759-CC756	Injection Date:	10/22/13
Lab File ID:	U15291.D	Injection Time:	09:40
Instrument ID:	GCMSU	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	128244	8.98	201043	9.85	101164	13.12	97701	15.69	53132	6.54
Upper Limit [a]	256488	9.48	402086	10.35	202328	13.62	195402	16.19	106264	7.04
Lower Limit [b]	64122	8.48	100522	9.35	50582	12.62	48851	15.19	26566	6.04
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSU759-BS	129618	8.98	202338	9.85	102722	13.12	101360	15.68	58420	6.55
MSU759-MB	122815	8.98	191507	9.85	94939	13.12	93478	15.69	55986	6.55
ZZZZZZ	121909	8.98	187701	9.85	95159	13.12	93352	15.69	48193	6.55
ZZZZZZ	126190	8.98	191979	9.85	96456	13.12	93794	15.69	52165	6.54
ZZZZZZ	126288	8.98	193143	9.85	97576	13.12	95224	15.69	56784	6.55
ZZZZZZ	126972	8.98	194930	9.85	97617	13.12	96046	15.69	58291	6.55
ZZZZZZ	123577	8.98	191800	9.85	97551	13.12	94636	15.69	58828	6.55
ZZZZZZ	124027	8.98	190229	9.85	95391	13.12	92170	15.69	59909	6.55
MC25198-7	120741	8.98	189006	9.85	93686	13.12	92362	15.69	62055	6.55
MC25237-1	120561	8.98	186317	9.85	93909	13.12	90234	15.69	60318	6.54
MC25237-1MS	126576	8.98	192899	9.85	97565	13.12	94846	15.68	62996	6.55
MC25237-1MSD	127222	8.97	197716	9.85	101010	13.12	96419	15.68	62430	6.54
MC25198-5	129733	8.98	198547	9.85	100780	13.12	98504	15.69	65412	6.55
MC25198-6	125784	8.98	191798	9.85	97789	13.12	95432	15.69	64433	6.55
ZZZZZZ	126282	8.98	194898	9.85	99206	13.12	96897	15.69	62841	6.55
ZZZZZZ	123381	8.98	188048	9.85	94495	13.12	94188	15.69	57834	6.54
ZZZZZZ	124861	8.98	193817	9.85	96270	13.12	94501	15.69	58806	6.55
ZZZZZZ	120565	8.98	186805	9.85	94839	13.12	90857	15.69	55677	6.55
ZZZZZZ	118413	8.98	180898	9.85	90673	13.12	89755	15.69	53857	6.55
ZZZZZZ	120414	8.98	187944	9.85	94382	13.12	95198	15.69	63799	6.55
ZZZZZZ	132239	8.97	201708	9.85	104781	13.12	102985	15.69	77490	6.55
ZZZZZZ	133970	8.98	208163	9.85	104474	13.12	105232	15.69	58533	6.55
ZZZZZZ	141946	8.97	214265	9.85	115125	13.12	113691	15.69	102559	6.56

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

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

6.4.2

Volatile Surrogate Recovery Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260B Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC25198-1	U15275.D	115.0	110.0	124.0
MC25198-2	U15276.D	114.0	105.0	106.0
MC25198-3	U15277.D	118.0	107.0	108.0
MC25198-4	U15278.D	115.0	110.0	108.0
MC25198-5	U15305.D	111.0	111.0	106.0
MC25198-5	U15279.D	109.0	115.0	107.0
MC25198-6	U15306.D	112.0	113.0	108.0
MC25198-6	U15280.D	109.0	112.0	119.0
MC25198-7	U15301.D	115.0	109.0	105.0
MC25225-1MS	U15273.D	115.0	111.0	106.0
MC25225-1MSD	U15274.D	113.0	112.0	107.0
MC25237-1MS	U15303.D	114.0	109.0	105.0
MC25237-1MSD	U15304.D	114.0	108.0	106.0
MSU758-BS	U15261.D	116.0	111.0	106.0
MSU758-MB	U15264.D	107.0	112.0	107.0
MSU759-BS	U15292.D	110.0	112.0	105.0
MSU759-MB	U15294.D	108.0	109.0	107.0

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

6.5.1

6

Volatile Surrogate Recovery Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC25198-1	U15275.D	115.0	110.0	124.0
MC25198-2	U15276.D	114.0	105.0	106.0
MC25198-3	U15277.D	118.0	107.0	108.0
MC25198-4	U15278.D	115.0	110.0	108.0
MC25198-5	U15305.D	111.0	111.0	106.0
MC25198-5	U15279.D	109.0	115.0	107.0
MC25198-6	U15306.D	112.0	113.0	108.0
MC25198-6	U15280.D	109.0	112.0	119.0
MC25198-7	U15301.D	115.0	109.0	105.0
MC25225-1MS	U15273.D	115.0	111.0	106.0
MC25225-1MSD	U15274.D	113.0	112.0	107.0
MC25237-1MS	U15303.D	114.0	109.0	105.0
MC25237-1MSD	U15304.D	114.0	108.0	106.0
MSU758-BS	U15261.D	116.0	111.0	106.0
MSU758-MB	U15264.D	107.0	112.0	107.0
MSU759-BS	U15292.D	110.0	112.0	105.0
MSU759-MB	U15294.D	108.0	109.0	107.0

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

6.5.2

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: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35267-MB	R34241.D	1	10/16/13	KR	10/15/13	OP35267	MSR1246

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

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6

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

Method Blank Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35267-MB	R34241.D	1	10/16/13	KR	10/15/13	OP35267	MSR1246

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

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6

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

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	50%	15-110%
4165-62-2	Phenol-d5	32%	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	77%	30-130%
1718-51-0	Terphenyl-d14	101%	30-130%

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

Method Blank Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35268-MB	I86453.D	1	10/17/13	KR	10/15/13	OP35268	MSI3217

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

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.032	ng/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	Phenanthreue	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	29%	15-110%
118-79-6	2,4,6-Tribromophenol	82%	15-110%
4165-60-0	Nitrobenzene-d5	81%	30-130%
321-60-8	2-Fluorobiphenyl	70%	30-130%
1718-51-0	Terphenyl-d14	96%	30-130%

Blank Spike Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35267-BS	R34242.D	1	10/16/13	KR	10/15/13	OP35267	MSR1246

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

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	21.5	43	30-130
95-57-8	2-Chlorophenol	50	46.2	92	30-130
59-50-7	4-Chloro-3-methyl phenol	50	57.6	115	30-130
120-83-2	2,4-Dichlorophenol	50	54.1	108	30-130
105-67-9	2,4-Dimethylphenol	50	51.4	103	30-130
51-28-5	2,4-Dinitrophenol	50	64.1	128	30-130
534-52-1	4,6-Dinitro-o-cresol	50	73.3	147* [a]	30-130
95-48-7	2-Methylphenol	50	42.4	85	30-130
	3&4-Methylphenol	100	81.9	82	30-130
88-75-5	2-Nitrophenol	50	52.3	105	30-130
100-02-7	4-Nitrophenol	50	21.6	43	30-130
87-86-5	Pentachlorophenol	50	62.3	125	30-130
108-95-2	Phenol	50	22.0	44	30-130
95-95-4	2,4,5-Trichlorophenol	50	64.1	128	30-130
88-06-2	2,4,6-Trichlorophenol	50	62.1	124	30-130
62-53-3	Aniline	50	34.1	68	40-140
101-55-3	4-Bromophenyl phenyl ether	50	53.0	106	40-140
85-68-7	Butyl benzyl phthalate	50	57.4	115	40-140
100-51-6	Benzyl Alcohol	50	26.7	53	40-140
91-58-7	2-Chloronaphthalene	50	44.9	90	40-140
106-47-8	4-Chloroaniline	50	43.2	86	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	44.7	89	40-140
111-44-4	bis(2-Chloroethyl)ether	50	43.7	87	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	47.6	95	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	51.3	103	40-140
122-66-7	1,2-Diphenylhydrazine	50	47.9	96	40-140
121-14-2	2,4-Dinitrotoluene	50	59.9	120	40-140
606-20-2	2,6-Dinitrotoluene	50	53.1	106	40-140
91-94-1	3,3'-Dichlorobenzidine	50	60.0	120	40-140
132-64-9	Dibenzofuran	50	48.1	96	40-140
84-74-2	Di-n-butyl phthalate	50	53.5	107	40-140
117-84-0	Di-n-octyl phthalate	50	59.5	119	40-140
84-66-2	Diethyl phthalate	50	49.0	98	40-140
131-11-3	Dimethyl phthalate	50	30.5	61	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	65.8	132	40-140
118-74-1	Hexachlorobenzene	50	56.6	113	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35267-BS	R34242.D	1	10/16/13	KR	10/15/13	OP35267	MSR1246

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

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	17.9	36* a	40-140
67-72-1	Hexachloroethane	50	19.4	39* a	40-140
78-59-1	Isophorone	50	48.1	96	40-140
88-74-4	2-Nitroaniline	50	55.2	110	40-140
99-09-2	3-Nitroaniline	50	53.2	106	40-140
100-01-6	4-Nitroaniline	50	57.4	115	40-140
98-95-3	Nitrobenzene	50	44.5	89	40-140
62-75-9	n-Nitrosodimethylamine	50	27.1	54	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	46.7	93	40-140
86-30-6	N-Nitrosodiphenylamine	50	51.4	103	40-140
110-86-1	Pyridine	50	21.2	42	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	46%	15-110%
4165-62-2	Phenol-d5	32%	15-110%
118-79-6	2,4,6-Tribromophenol	97%	15-110%
4165-60-0	Nitrobenzene-d5	85%	30-130%
321-60-8	2-Fluorobiphenyl	84%	30-130%
1718-51-0	Terphenyl-d14	110%	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: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35268-BS	I86454.D	1	10/17/13	KR	10/15/13	OP35268	MSI3217

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

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	41.2	82	40-140
208-96-8	Acenaphthylene	50	35.1	70	40-140
120-12-7	Anthracene	50	45.2	90	40-140
56-55-3	Benzo(a)anthracene	50	52.9	106	40-140
50-32-8	Benzo(a)pyrene	50	50.9	102	40-140
205-99-2	Benzo(b)fluoranthene	50	53.3	107	40-140
191-24-2	Benzo(g,h,i)perylene	50	57.7	115	40-140
207-08-9	Benzo(k)fluoranthene	50	51.4	103	40-140
218-01-9	Chrysene	50	48.4	97	40-140
53-70-3	Dibenzo(a,h)anthracene	50	59.3	119	40-140
206-44-0	Fluoranthene	50	46.9	94	40-140
86-73-7	Fluorene	50	46.1	92	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	59.3	119	40-140
90-12-0	1-Methylnaphthalene	50	35.0	70	40-140
91-57-6	2-Methylnaphthalene	50	32.6	65	40-140
85-01-8	Phenanthrene	50	49.1	98	40-140
129-00-0	Pyrene	50	45.5	91	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	44%	15-110%
4165-62-2	Phenol-d5	30%	15-110%
118-79-6	2,4,6-Tribromophenol	103%	15-110%
4165-60-0	Nitrobenzene-d5	81%	30-130%
321-60-8	2-Fluorobiphenyl	73%	30-130%
1718-51-0	Terphenyl-d14	103%	30-130%

* = Outside of Control Limits.

7.2.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35267-MS	R34293.D	1	10/17/13	KR	10/15/13	OP35267	MSR1248
OP35267-MSD	R34294.D	1	10/17/13	KR	10/15/13	OP35267	MSR1248
MC25100-1	R34295.D	1	10/17/13	KR	10/15/13	OP35267	MSR1248

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

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6

7.3.1

7

CAS No.	Compound	MC25100-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	22.8	46	9.9	20* [a]	79* [b]	30-130/20
95-57-8	2-Chlorophenol	ND		50	53.0	106	57.3	115	8	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	57.5	115	59.2	118	3	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	57.6	115	60.2	120	4	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	52.1	104	57.3	115	10	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	67.6	135* [c]	55.5	111	20	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	74.3	149* [c]	73.1	146* [c]	2	30-130/20
95-48-7	2-Methylphenol	ND		50	47.6	95	52.2	104	9	30-130/20
	3&4-Methylphenol	ND		100	91.8	92	97.3	97	6	30-130/20
88-75-5	2-Nitrophenol	ND		50	59.4	119	60.7	121	2	30-130/20
100-02-7	4-Nitrophenol	ND		50	22.3	45	21.2	42	5	30-130/20
87-86-5	Pentachlorophenol	ND		50	65.8	132* [c]	65.1	130	1	30-130/20
108-95-2	Phenol	ND		50	24.4	49	25.5	51	4	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	63.2	126	66.6	133* [c]	5	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	63.1	126	65.4	131* [c]	4	30-130/20
62-53-3	Aniline	ND		50	38.3	77	39.6	79	3	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	51.3	103	50.8	102	1	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	56.3	113	57.5	115	2	40-140/20
100-51-6	Benzyl Alcohol	ND		50	37.3	75	37.0	74	1	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	45.6	91	48.3	97	6	40-140/20
106-47-8	4-Chloroaniline	ND		50	45.8	92	47.0	94	3	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	47.3	95	49.7	99	5	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	48.3	97	50.5	101	4	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	53.4	107	57.1	114	7	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	48.8	98	50.6	101	4	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	47.9	96	47.9	96	0	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	55.6	111	56.5	113	2	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	48.7	97	50.4	101	3	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	57.7	115	56.5	113	2	40-140/20
132-64-9	Dibenzofuran	ND		50	46.3	93	48.6	97	5	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	52.0	104	51.8	104	0	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	60.2	120	59.5	119	1	40-140/20
84-66-2	Diethyl phthalate	ND		50	44.7	89	49.5	99	10	40-140/20
131-11-3	Dimethyl phthalate	ND		50	27.8	56	36.9	74	28* [b]	40-140/20
117-81-7	bis(2-Etbylhexyl)phthalate	ND		50	61.3	123	62.6	125	2	40-140/20
118-74-1	Hexachlorobenzene	ND		50	51.1	102	50.0	100	2	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35267-MS	R34293.D	1	10/17/13	KR	10/15/13	OP35267	MSR1248
OP35267-MSD	R34294.D	1	10/17/13	KR	10/15/13	OP35267	MSR1248
MC25100-1	R34295.D	1	10/17/13	KR	10/15/13	OP35267	MSR1248

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

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6

CAS No.	Compound	MC25100-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	22.2	44	23.1	46	4	40-140/20
67-72-1	Hexachloroethane	ND		50	22.3	45	25.0	50	11	40-140/20
78-59-1	Isophorone	ND		50	48.9	98	50.6	101	3	40-140/20
88-74-4	2-Nitroaniline	ND		50	53.3	107	51.9	104	3	40-140/20
99-09-2	3-Nitroaniline	ND		50	50.7	101	51.0	102	1	40-140/20
100-01-6	4-Nitroaniline	ND		50	53.3	107	53.5	107	0	40-140/20
98-95-3	Nitrobenzene	ND		50	47.6	95	48.2	96	1	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	31.2	62	33.4	67	7	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	49.8	100	52.4	105	5	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	50.6	101	51.0	102	1	40-140/20
110-86-1	Pyridine	ND		50	27.2	54	27.7	55	2	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25100-1	Limits
367-12-4	2-Fluorophenol	56%	58%	52%	15-110%
4165-62-2	Phenol-d5	37%	40%	34%	15-110%
118-79-6	2,4,6-Tribromophenol	103%	100%	93%	15-110%
4165-60-0	Nitrobenzene-d5	90%	94%	82%	30-130%
321-60-8	2-Fluorobiphenyl	86%	88%	76%	30-130%
1718-51-0	Terphenyl-d14	112%	108%	101%	30-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample non-homogeneity.
(c) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35268-MS	I86455.D	1	10/17/13	KR	10/15/13	OP35268	MSI3217
OP35268-MSD	I86456.D	1	10/17/13	KR	10/15/13	OP35268	MSI3217
MC25100-2	I86457.D	1	10/17/13	KR	10/15/13	OP35268	MSI3217

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

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6

CAS No.	Compound	MC25100-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	40.4	81	41.5	83	3	40-140/20
208-96-8	Acenaphthylene	ND		50	34.8	70	35.8	72	3	40-140/20
120-12-7	Anthracene	ND		50	43.5	87	43.4	87	0	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	50.3	101	50.6	101	1	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	48.5	97	49.3	99	2	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	51.2	102	52.5	105	3	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	55.7	111	56.2	112	1	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	48.7	97	48.0	96	1	40-140/20
218-01-9	Chrysene	ND		50	46.4	93	46.8	94	1	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	57.0	114	57.5	115	1	40-140/20
206-44-0	Fluoranthene	ND		50	45.2	90	45.9	92	2	40-140/20
86-73-7	Fluorene	ND		50	44.2	88	44.8	90	1	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	56.9	114	57.5	115	1	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	37.1	74	38.5	77	4	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	34.6	69	36.1	72	4	40-140/20
85-01-8	Phenanthrene	ND		50	46.8	94	47.1	94	1	40-140/20
129-00-0	Pyrene	ND		50	43.5	87	44.1	88	1	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25100-2	Limits
367-12-4	2-Fluorophenol	51%	54%	47%	15-110%
4165-62-2	Phenol-d5	35%	36%	31%	15-110%
118-79-6	2,4,6-Tribromophenol	104%	103%	87%	15-110%
4165-60-0	Nitrobenzene-d5	91%	94%	82%	30-130%
321-60-8	2-Flnorobiphenyl	78%	79%	69%	30-130%
1718-51-0	Terphenyl-d14	102%	102%	94%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3129-CC3124	Injection Date:	10/31/13
Lab File ID:	F70007.D	Injection Time:	09:09
Instrument ID:	GCMSF	Method:	SW846 8270C

	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	197081	4.48	713995	5.54	497084	7.07	927264	8.36	1145093	11.05	1011442	12.80
Upper Limit [a]	394162	4.98	1427990	6.04	994168	7.57	1854528	8.86	2290186	11.55	2022884	13.30
Lower Limit [b]	98541	3.98	356998	5.04	248542	6.57	463632	7.86	572547	10.55	505721	12.30
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP35485-MB	164648	4.48	608510	5.53	400720	7.07	744067	8.36	902958	11.04	790048	12.79
OP35485-BS	165761	4.48	603541	5.54	411532	7.07	770067	8.36	939966	11.04	820394	12.80
OP35455-MB	155662	4.48	557902	5.53	369831	7.07	693610	8.36	842089	11.04	761083	12.80
OP35455-BS	155192	4.48	556599	5.54	380720	7.07	711597	8.36	847573	11.04	748463	12.80
OP35455-MS	145496	4.48	539267	5.54	351768	7.07	671082	8.36	810650	11.04	713131	12.80
OP35455-MSD	159944	4.48	577291	5.54	378421	7.07	722455	8.36	835268	11.04	734059	12.80
MC25493-18	144244	4.48	534626	5.54	349808	7.07	643112	8.36	777154	11.04	709871	12.80
ZZZZZZ	160836	4.48	595831	5.54	390288	7.07	709608	8.36	855827	11.04	792893	12.80
ZZZZZZ	162943	4.48	601151	5.53	408349	7.07	772200	8.36	934393	11.04	838922	12.80
ZZZZZZ	155861	4.48	578593	5.54	386696	7.07	728885	8.36	895763	11.04	769552	12.80
ZZZZZZ	148174	4.48	540543	5.54	356447	7.07	655420	8.36	784626	11.04	727549	12.80
ZZZZZZ	156375	4.48	566149	5.54	373093	7.07	707341	8.36	843868	11.04	747116	12.80
ZZZZZZ	159395	4.48	565104	5.54	376427	7.07	720956	8.36	875408	11.04	785270	12.80
ZZZZZZ	154848	4.48	571104	5.54	385890	7.07	713483	8.36	878964	11.04	796029	12.80
ZZZZZZ	156632	4.48	574768	5.54	383480	7.07	711610	8.36	882091	11.04	768421	12.80
ZZZZZZ	150039	4.48	552901	5.54	364203	7.07	680815	8.36	808111	11.04	733061	12.80
ZZZZZZ	152311	4.48	557155	5.54	378434	7.07	692396	8.36	835687	11.04	750381	12.80
ZZZZZZ	147045	4.48	541779	5.54	362814	7.07	674021	8.36	817405	11.04	725846	12.80
ZZZZZZ	168117	4.48	611208	5.54	418777	7.07	764227	8.36	921320	11.04	798343	12.80
ZZZZZZ	165128	4.48	613034	5.54	412279	7.07	774372	8.36	937934	11.04	836622	12.80
ZZZZZZ	167924	4.48	609537	5.54	410392	7.07	742934	8.36	882969	11.04	796358	12.80
ZZZZZZ	157209	4.48	571206	5.54	387080	7.07	712277	8.36	849556	11.04	776441	12.80
MC25198-2 [c]	150104	4.48	556029	5.54	372820	7.07	685548	8.36	871776	11.04	771226	12.80
ZZZZZZ	163658	4.48	589143	5.54	404612	7.07	725908	8.36	885774	11.04	793613	12.80
ZZZZZZ	161394	4.48	579708	5.54	373969	7.07	713324	8.36	852713	11.05	796227	12.80

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

Semivolatile Internal Standard Area Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3129-CC3124	Injection Date:	10/31/13
Lab File ID:	F70007.D	Injection Time:	09:09
Instrument ID:	GCMSF	Method:	SW846 8270C

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

(c) Confirmation run.

Semivolatile Internal Standard Area Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3217-CC3155	Injection Date:	10/17/13
Lab File ID:	I86452.D	Injection Time:	08:10
Instrument ID:	GCMSI	Method:	SW846 8270C 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	182346	4.08	540976	5.07	324121	6.51	563114	7.85	506596	10.64	861164	12.11
Upper Limit [a]	364692	4.58	1081952	5.57	648242	7.01	1126228	8.35	1013192	11.14	1722328	12.61
Lower Limit [b]	91173	3.58	270488	4.57	162061	6.01	281557	7.35	253298	10.14	430582	11.61
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
OP35268-MB	145037	4.08	425820	5.07	250599	6.51	432692	7.85	386104	10.63	658454	12.11
OP35268-BS	147302	4.08	436001	5.07	260281	6.51	456073	7.86	404366	10.64	696680	12.12
OP35268-MS	140041	4.08	412613	5.07	246993	6.51	431470	7.85	381909	10.64	657550	12.12
OP35268-MSD	143371	4.08	423098	5.07	248784	6.51	429906	7.85	369727	10.64	631997	12.12
MC25100-2	146055	4.08	429160	5.07	249675	6.51	432121	7.85	380990	10.64	651535	12.11
ZZZZZZ	162754	4.08	479166	5.07	278610	6.51	474664	7.85	398023	10.64	656031	12.11
ZZZZZZ	170236	4.08	498743	5.07	287901	6.51	484034	7.85	406815	10.64	673131	12.12
ZZZZZZ	166457	4.08	491529	5.07	284409	6.51	473531	7.85	394526	10.64	645506	12.12
ZZZZZZ	168865	4.08	497127	5.07	288747	6.51	484515	7.85	402102	10.64	673443	12.11
ZZZZZZ	169198	4.08	503582	5.07	291532	6.51	498967	7.85	416737	10.63	690655	12.11
ZZZZZZ	170784	4.08	511560	5.07	297518	6.51	505839	7.85	421896	10.64	697403	12.11
ZZZZZZ	172260	4.08	510096	5.07	295916	6.51	504753	7.85	416384	10.64	692525	12.12
ZZZZZZ	160303	4.08	474472	5.07	277351	6.51	473873	7.85	414878	10.64	718609	12.12
ZZZZZZ	161046	4.08	478856	5.07	280862	6.51	482676	7.85	411957	10.64	697273	12.12
ZZZZZZ	171682	4.08	504818	5.06	288062	6.51	480128	7.85	387114	10.64	648818	12.12
ZZZZZZ	164706	4.08	492666	5.07	283339	6.51	472486	7.85	383950	10.64	638113	12.12
ZZZZZZ	142247	4.08	424074	5.07	247218	6.51	420846	7.85	372261	10.63	631682	12.11
MC25198-1	140509	4.08	417736	5.07	241926	6.51	407782	7.85	353705	10.64	601426	12.12
MC25198-2	144415	4.08	423845	5.07	250644	6.51	430822	7.85	382751	10.63	661453	12.12
MC25198-3	141462	4.08	418045	5.07	244887	6.51	417546	7.85	376605	10.64	639695	12.12

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

Semivolatile Internal Standard Area Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3218-CC3155	Injection Date:	10/17/13
Lab File ID:	I86475.D	Injection Time:	17:14
Instrument ID:	GCMSI	Method:	SW846 8270C 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	186539	4.08	553236	5.07	327771	6.51	572418	7.85	513909	10.64	873289	12.12
Upper Limit [a]	373078	4.58	1106472	5.57	655542	7.01	1144836	8.35	1027818	11.14	1746578	12.62
Lower Limit [b]	93270	3.58	276618	4.57	163886	6.01	286209	7.35	256955	10.14	436645	11.62
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
OP35287-MB	171252	4.08	508401	5.07	303024	6.51	515608	7.85	469061	10.64	787389	12.12
OP35287-BS	178417	4.08	527329	5.07	310779	6.51	538482	7.86	460349	10.64	751898	12.12
OP35287-BSD	160356	4.08	481078	5.07	288664	6.51	496281	7.85	439169	10.64	736923	12.12
OP35287-MS	172743	4.08	511836	5.07	302954	6.51	519687	7.86	452019	10.64	758451	12.12
OP35287-MSD	164541	4.08	480426	5.07	284291	6.51	483193	7.86	410805	10.64	684461	12.12
MC25237-1	171575	4.08	505779	5.07	300701	6.51	517061	7.85	457462	10.64	762887	12.12
ZZZZZZ	157861	4.08	468565	5.07	281521	6.51	482906	7.85	430578	10.64	735209	12.12
ZZZZZZ	159655	4.08	477515	5.07	282839	6.51	491205	7.85	441935	10.64	746315	12.12
ZZZZZZ	166139	4.08	493659	5.07	293538	6.51	497903	7.85	454364	10.64	760524	12.12
ZZZZZZ	157111	4.08	468747	5.07	278530	6.51	480938	7.85	434643	10.64	731777	12.12
ZZZZZZ	147374	4.08	434347	5.07	260211	6.51	452132	7.85	412041	10.64	686868	12.12
ZZZZZZ	147040	4.08	447381	5.07	262383	6.51	454717	7.85	408504	10.64	662931	12.12
ZZZZZZ	148092	4.08	435286	5.07	259577	6.51	449464	7.85	394839	10.64	646022	12.12
ZZZZZZ	143453	4.08	427401	5.07	255540	6.51	447714	7.85	406328	10.64	669459	12.12
ZZZZZZ	155044	4.08	454073	5.07	272072	6.51	466607	7.85	427744	10.64	711118	12.12
ZZZZZZ	153144	4.08	449210	5.07	267112	6.51	458618	7.85	412185	10.64	669905	12.12
ZZZZZZ	153917	4.08	455693	5.07	273877	6.51	470604	7.85	427275	10.64	683730	12.12
ZZZZZZ	156177	4.08	457378	5.07	273078	6.51	469896	7.85	411033	10.64	655659	12.12
ZZZZZZ	148791	4.08	437204	5.07	261707	6.51	448436	7.85	410557	10.64	667678	12.12
ZZZZZZ	155809	4.08	460267	5.07	272622	6.51	469776	7.85	419414	10.64	686574	12.12
ZZZZZZ	149802	4.08	445240	5.07	268158	6.51	461770	7.85	420268	10.64	688312	12.12
ZZZZZZ	146370	4.08	436742	5.07	258770	6.51	443927	7.85	404157	10.64	665570	12.12
MC25198-4	163089	4.08	481081	5.07	287867	6.51	488299	7.85	437756	10.64	716088	12.12
MC25198-5	202919	4.09	623028	5.08	387708	6.52	635631	7.86	586125	10.64	954584	12.12
MC25198-6	178802	4.08	538019	5.07	333670	6.52	550429	7.86	501852	10.64	829624	12.12
ZZZZZZ	145455	4.08	426804	5.07	253044	6.51	435862	7.85	384821	10.64	640217	12.12
ZZZZZZ	160558	4.08	466102	5.07	272568	6.51	467078	7.85	409249	10.64	680141	12.12

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

Semivolatile Internal Standard Area Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3218-CC3155	Injection Date:	10/17/13
Lab File ID:	I86475.D	Injection Time:	17:14
Instrument ID:	GCMSI	Method:	SW846 8270C BY SIM

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

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

7.4.3

Semivolatile Internal Standard Area Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSR1246-CC1239	Injection Date:	10/16/13
Lab File ID:	R34236.D	Injection Time:	08:10
Instrument ID:	GCMSR	Method:	SW846 8270C

	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	73680	4.77	274809	6.09	169074	8.01	307579	9.61	335621	12.78	325752	16.33
Upper Limit [a]	147360	5.27	549618	6.59	338148	8.51	615158	10.11	671242	13.28	651504	16.83
Lower Limit [b]	36840	4.27	137405	5.59	84537	7.51	153790	9.11	167811	12.28	162876	15.83
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
OP35229-MB	59541	4.77	221466	6.09	137791	8.01	243655	9.61	266162	12.77	259982	16.32
OP35229-BS	68215	4.77	251096	6.09	154184	8.01	268879	9.61	299857	12.78	286367	16.32
ZZZZZZ	63187	4.77	229660	6.10	144570	8.01	244433	9.61	277514	12.77	262881	16.32
OP35267-MB	66855	4.77	246004	6.10	149914	8.01	257607	9.61	295163	12.77	281145	16.32
OP35267-BS	81241	4.77	294056	6.10	182970	8.01	329348	9.62	355621	12.78	341495	16.33
ZZZZZZ	61803	4.77	223065	6.10	137458	8.01	232964	9.61	262083	12.78	253197	16.32
OP35239-MB	91881	4.77	342554	6.10	214306	8.01	375088	9.61	428597	12.78	419228	16.33
OP35239-BS	78638	4.77	290788	6.10	187377	8.01	309786	9.62	372210	12.78	350905	16.33
ZZZZZZ	96465	4.77	351300	6.10	237243	8.01	404942	9.61	431107	12.78	414203	16.33
ZZZZZZ	98258	4.77	362615	6.09	224711	8.01	398206	9.61	453561	12.78	442105	16.33
ZZZZZZ	85433	4.77	308255	6.09	191226	8.01	335431	9.61	365629	12.78	341682	16.32
OP35259-MB	122978	4.77	454197	6.09	278593	8.01	485980	9.61	541306	12.78	523784	16.33
OP35259-BS	100734	4.77	369136	6.10	229529	8.01	390035	9.62	443232	12.79	421671	16.33
OP35259-BSD	102006	4.77	377306	6.10	238571	8.01	415609	9.62	459237	12.79	441702	16.33

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

Semivolatile Internal Standard Area Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSR1248-CC1239	Injection Date:	10/17/13
Lab File ID:	R34285.D	Injection Time:	08:51
Instrument ID:	GCMSR	Method:	SW846 8270C

	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	110230	4.75	406265	6.07	246522	7.98	428284	9.58	468666	12.73	464734	16.24
Upper Limit [a]	220460	5.25	812530	6.57	493044	8.48	856568	10.08	937332	13.23	929468	16.74
Lower Limit [b]	55115	4.25	203133	5.57	123261	7.48	214142	9.08	234333	12.23	232367	15.74
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
OP35173-MB	95327	4.75	350458	6.07	217381	7.98	372771	9.58	403530	12.73	386919	16.24
OP35173-BS	104341	4.75	374974	6.07	232371	7.98	397745	9.58	428716	12.74	417376	16.25
OP35173-MS	102339	4.75	373021	6.07	225838	7.98	396692	9.59	431167	12.73	419605	16.24
OP35173-MSD	93038	4.75	343607	6.07	209367	7.98	363034	9.58	395917	12.73	380830	16.25
MC24900-19	95194	4.75	349695	6.07	216406	7.98	365800	9.58	402310	12.73	384854	16.23
ZZZZZZ	92774	4.75	337121	6.07	207863	7.98	361956	9.58	389386	12.73	378973	16.24
OP35267-MS	103489	4.75	376720	6.07	235624	7.98	408240	9.58	439928	12.73	421532	16.24
OP35267-MSD	98631	4.75	362161	6.07	223153	7.98	395018	9.58	427190	12.73	412702	16.24
MC25100-1	103029	4.75	374595	6.07	224803	7.98	389528	9.58	431470	12.73	418144	16.24
ZZZZZZ	108367	4.75	393065	6.07	245793	7.98	423782	9.58	472150	12.73	441797	16.24
ZZZZZZ	107654	4.75	388351	6.07	243633	7.98	412051	9.58	456913	12.73	438034	16.24
ZZZZZZ	102470	4.75	380300	6.07	237854	7.98	407524	9.58	443120	12.73	423331	16.24
ZZZZZZ	104252	4.75	384714	6.07	238988	7.98	406649	9.58	442876	12.73	435627	16.24
ZZZZZZ	115055	4.75	414899	6.07	257129	7.98	442660	9.58	485194	12.73	461348	16.24
ZZZZZZ	112828	4.75	409083	6.07	256337	7.98	454893	9.58	480005	12.73	467343	16.24

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

Semivolatile Internal Standard Area Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSR1249-CC1239	Injection Date:	10/17/13
Lab File ID:	R34303.D	Injection Time:	17:27
Instrument ID:	GCMSR	Method:	SW846 8270C

	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	119831	4.75	438323	6.07	276363	7.98	470656	9.59	510356	12.74	486740	16.26
Upper Limit [a]	239662	5.25	876646	6.57	552726	8.48	941312	10.09	1020712	13.24	973480	16.76
Lower Limit [b]	59916	4.25	219162	5.57	138182	7.48	235328	9.09	255178	12.24	243370	15.76
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
ZZZZZZ	64593	4.75	229942	6.07	141041	7.98	240914	9.58	261860	12.73	244706	16.24
MC25198-2	61079	4.75	225402	6.07	140527	7.98	240860	9.58	270748	12.73	253747	16.24
MC25198-3	65370	4.75	237348	6.07	144879	7.98	252513	9.58	267798	12.73	258321	16.24
MC25198-5	66166	4.75	252619	6.07	153183	7.98	260874	9.58	283874	12.73	264828	16.24
MC25198-6	69656	4.75	261425	6.07	159414	7.99	265302	9.59	290831	12.73	275643	16.24
OP35160-MS	77558	4.75	282599	6.07	170155	7.98	295201	9.59	322342	12.74	294420	16.25
OP35160-MSD	75334	4.75	287714	6.07	171221	7.98	293526	9.59	323486	12.74	301809	16.25
MC24900-18	46345[c]	4.75	171984[c]	6.07	104979[c]	7.98	179115[c]	9.58	197200[c]	12.73	185388[c]	16.24
ZZZZZZ	76476	4.75	284664	6.07	172383	7.98	291357	9.58	328322	12.73	303469	16.24
ZZZZZZ	72514	4.75	268286	6.07	162494	7.98	280238	9.58	309684	12.73	288961	16.24
ZZZZZZ	76932	4.75	285034	6.07	172775	7.98	296495	9.58	329242	12.73	298144	16.24
ZZZZZZ	77176	4.75	293341	6.07	177784	7.98	304861	9.58	329234	12.73	310090	16.24
ZZZZZZ	80654	4.75	297921	6.07	180369	7.98	305885	9.58	331794	12.73	311981	16.25
ZZZZZZ	78602	4.75	292186	6.07	178508	7.98	305641	9.58	336433	12.73	319975	16.25
ZZZZZZ	79771	4.75	292481	6.07	175226	7.98	304570	9.58	337356	12.73	325787	16.24

IS 1 = 1,4-Dichlorohenzene-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. Confirmed by reanalysis.

Semivolatile Internal Standard Area Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSR1257-CC1239	Injection Date:	10/24/13
Lab File ID:	R34476.D	Injection Time:	08:42
Instrument ID:	GCMSR	Method:	SW846 8270C

	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	97236	4.63	353119	5.96	222939	7.86	380636	9.46	410146	12.54	398778	15.91
Upper Limit [a]	194472	5.13	706238	6.46	445878	8.36	761272	9.96	820292	13.04	797556	16.41
Lower Limit [b]	48618	4.13	176560	5.46	111470	7.36	190318	8.96	205073	12.04	199389	15.41
Lab Sample ID	1S 1 AREA	RT	1S 2 AREA	RT	1S 3 AREA	RT	IS 4 AREA	RT	1S 5 AREA	RT	1S 6 AREA	RT
OP35377-MB	106815	4.63	383607	5.96	229634	7.86	379513	9.46	407259	12.54	384992	15.90
OP35377-BS	99414	4.63	356931	5.96	217322	7.86	389314	9.46	388236	12.54	392072	15.91
MC25079-5	68391	4.63	257344	5.96	152995	7.86	265118	9.46	303129	12.54	276625	15.90
ZZZZZZ	88208	4.63	323526	5.96	198686	7.86	338749	9.46	376051	12.54	351150	15.90
ZZZZZZ	67569	4.63	242756	5.96	145404	7.86	241976	9.46	273483	12.54	252171	15.91
ZZZZZZ	62204	4.63	229469	5.96	153673	7.87	236467	9.47	261927	12.55	246999	15.91
ZZZZZZ	55118	4.63	204517	5.96	120963	7.86	207635	9.46	228989	12.54	232401	15.93
OP35377-MS	47757[c]	4.64	178593[c]	5.96	107123[c]	7.86	176512[c]	9.46	195940[c]	12.54	190640[c]	15.92
OP35377-MSD	40715[c]	4.63	148111[c]	5.96	91971[c]	7.86	158015[c]	9.46	177198[c]	12.55	166898[c]	15.92
MC25493-1	65014	4.63	236905	5.96	146271	7.86	252572	9.46	277488	12.55	268536	15.92
ZZZZZZ	92833	4.64	332986	5.96	203150	7.87	328163	9.47	353657	12.55	335094	15.92
ZZZZZZ	79394	4.64	283680	5.96	169321	7.86	285154	9.46	309374	12.57	311857	16.00
ZZZZZZ	102088	4.65	364345	5.96	209688	7.87	370185	9.47	404649	12.58	396723	16.02
ZZZZZZ	115011	4.66	402228	5.97	247609	7.87	423582	9.46	465669	12.55	445373	15.93
ZZZZZZ	101985	4.66	317269	5.97	228429	7.87	385976	9.46	400592	12.55	366995	15.93
ZZZZZZ	97179	4.64	336571	5.96	208142	7.87	348552	9.46	374492	12.55	364091	15.93
ZZZZZZ	95606	4.64	342180	5.96	207590	7.87	345584	9.46	411736	12.55	379065	15.93
MC25198-1	109010	4.64	404818	5.96	253609	7.87	427353	9.47	464276	12.56	454146	15.94
MC25198-4	97722	4.64	357131	5.96	223661	7.87	374605	9.46	409543	12.55	384660	15.92
ZZZZZZ	107562	4.64	386278	5.96	237556	7.86	404572	9.46	428970	12.55	399963	15.93
ZZZZZZ	91226	4.65	321200	5.97	154567	7.92	273668	9.52	385123	12.57	361497	15.92

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.
(c) Outside control limits due to possible matrix interfernce. Confirmed by MS/MSD.

7.4.7

7

Semivolatile Surrogate Recovery Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC25198-1	R34496.D	57.0	45.0	112.0* a	94.0	89.0	109.0
MC25198-2	F70031.D	8.0* b	9.0* b	42.0	48.0	43.0	66.0
MC25198-2	R34308.D	2.0* b	2.0* b	11.0* b	90.0	91.0	103.0
MC25198-3	R34309.D	59.0	41.0	101.0	94.0	97.0	110.0
MC25198-4	R34497.D	53.0	37.0	95.0	95.0	95.0	104.0
MC25198-5	R34311.D	96.0	46.0	101.0	89.0	88.0	104.0
MC25198-6	R34312.D	90.0	42.0	100.0	84.0	83.0	98.0
OP35267-BS	R34242.D	46.0	32.0	97.0	85.0	84.0	110.0
OP35267-MB	R34241.D	50.0	32.0	89.0	81.0	77.0	101.0
OP35267-MS	R34293.D	56.0	37.0	103.0	90.0	86.0	112.0
OP35267-MSD	R34294.D	58.0	40.0	100.0	94.0	88.0	108.0

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

(a) Outside control limits. Associated target analytes are non-detect.
(b) Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.

Semivolatile Surrogate Recovery Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270C BY SIM Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC25198-1	I86470.D	86.0	77.0	96.0
MC25198-2	I86471.D	97.0	83.0	98.0
MC25198-3	I86472.D	97.0	86.0	100.0
MC25198-4	I86498.D	93.0	84.0	100.0
MC25198-5	I86499.D	87.0	76.0	100.0
MC25198-6	I86500.D	83.0	73.0	94.0
OP35268-BS	I86454.D	81.0	73.0	103.0
OP35268-MB	I86453.D	81.0	70.0	96.0
OP35268-MS	I86455.D	91.0	78.0	102.0
OP35268-MSD	I86456.D	94.0	79.0	102.0

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35264-MB	BK30943.D	1	10/15/13	NK	10/15/13	OP35264	GBK1020

The QC reported here applies to the following samples: Method: SW846 8011

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6, MC25198-8

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	108%	36-173%
460-00-4	Bromofluorobenzene (S)	99%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35264-BS	BK30944.D	1	10/15/13	NK	10/15/13	OP35264	GBK1020

The QC reported here applies to the following samples: Method: SW846 8011

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6, MC25198-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.068	96	60-140
106-93-4	1,2-Dibromoethane	0.071	0.079	111	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	120%	36-173%
460-00-4	Bromofluorobenzene (S)	101%	36-173%

8.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35264-MS	BK30945.D	1	10/15/13	NK	10/15/13	OP35264	GBK1020
OP35264-MSD	BK30946.D	1	10/15/13	NK	10/15/13	OP35264	GBK1020
MC25242-1	BK30947.D	1	10/16/13	NK	10/15/13	OP35264	GBK1020

The QC reported here applies to the following samples: Method: SW846 8011

MC25198-1, MC25198-2, MC25198-3, MC25198-4, MC25198-5, MC25198-6, MC25198-8

CAS No.	Compound	MC25242-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.0696	0.081	116	0.068	99	17	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.0696	0.083	119	0.071	103	16	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC25242-1	Limits
460-00-4	Bromofluorobenzene (S)	123%	135%	118%	36-173%
460-00-4	Bromofluorobenzene (S)	101%	107%	94%	36-173%

8.3.1

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011 Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC25198-1	BK30956.D	76.0	74.0
MC25198-2	BK30957.D	114.0	89.0
MC25198-3	BK30958.D	88.0	65.0
MC25198-4	BK30959.D	119.0	87.0
MC25198-5	BK30960.D	100.0	68.0
MC25198-6	BK30961.D	84.0	60.0
MC25198-8	BK30962.D	113.0	81.0
OP35264-BS	BK30944.D	120.0	101.0
OP35264-MB	BK30943.D	108.0	99.0
OP35264-MS	BK30945.D	123.0	101.0
OP35264-MSD	BK30946.D	135.0	107.0

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1 B

GC Surrogate Retention Time Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBK1020-ICC1020	Injection Date:	10/15/13
Lab File ID:	BK30938.D	Injection Time:	20:42
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.04	5.04

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BK30941A.D	10/15/13	21:55	4.05	5.05
OP35264-MB	BK30943.D	10/15/13	22:43	4.04	5.05
OP35264-BS	BK30944.D	10/15/13	23:08	4.04	5.04
OP35264-MS	BK30945.D	10/15/13	23:33	4.04	5.05
OP35264-MSD	BK30946.D	10/15/13	23:58	4.04	5.05
MC25242-1	BK30947.D	10/16/13	00:23	4.04	5.05
ZZZZZZ	BK30948.D	10/16/13	00:47	4.04	5.05
ZZZZZZ	BK30949.D	10/16/13	01:12	4.04	5.05
ZZZZZZ	BK30950.D	10/16/13	01:37	4.04	5.05
ZZZZZZ	BK30951.D	10/16/13	02:01	4.04	5.05
ZZZZZZ	BK30952.D	10/16/13	02:26	4.04	5.05

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.1 B

GC Surrogate Retention Time Summary

Job Number: MC25198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBK1020-CC1020	Injection Date:	10/16/13
Lab File ID:	BK30953.D	Injection Time:	02:50
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.04	5.05

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BK30954.D	10/16/13	03:14	4.04	5.05
ZZZZZZ	BK30955.D	10/16/13	03:39	4.04	5.05
MC25198-1	BK30956.D	10/16/13	04:03	4.04	5.05
MC25198-2	BK30957.D	10/16/13	04:28	4.04	5.05
MC25198-3	BK30958.D	10/16/13	04:52	4.04	5.05
MC25198-4	BK30959.D	10/16/13	05:16	4.04	5.05
MC25198-5	BK30960.D	10/16/13	05:41	4.04	5.05
MC25198-6	BK30961.D	10/16/13	06:04	4.04	5.05
MC25198-8	BK30962.D	10/16/13	06:27	4.04	5.05
OP35265-MB	BK30963.D	10/16/13	06:50	4.04	5.05

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.2

Roxana Groundwater Quarterly – 4th Quarter 2013 Data Review

Laboratory SDG: MC25237

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/18/2013

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

Sample Identification	Sample Identification
MW14-ROX-101013	P66-ROX-101013
P56-ROX-101013	P55-ROX-101013-EB
P55-ROX-101013	P59-ROX-101013
TB-ROX-101013-HCL	TB-ROX-101013-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 SVOC LCS recoveries were outside evaluation criteria. The SVOC LCS surrogate 2,4,6-tribromophenol recovery was outside evaluation criteria. VOC MS/MSD recoveries were outside evaluation criteria in sample MW14-ROX-101013. Samples P56-ROX-101013, P55-ROX-101013 and P59-ROX-101013 were diluted due to high levels of target analytes. These issues are addressed further in the appropriate sections below. Additionally, the laboratory report was revised to reprocess GC/MS volatile sample data, and to report down to MDL values, which had previously been inadvertently omitted by the laboratory.

The cooler receipt form indicated that one of two coolers were received by the laboratory at a temperature of 0.6ºC, which is outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
OP35286-BS	SVOCs	Benzoic acid	**13**	30-130
OP35286-BS	SVOCs	4-Nitrophenol	**29**	30-130

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS OP35286-BS was associated with the equipment blank. Equipment blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
MW14-ROX-101013	SVOCs	Benzoic acid	**UJ**
MW14-ROX-101013	SVOCs	4-Nitrophenol	**UJ**
P66-ROX-101013	SVOCs	Benzoic acid	**UJ**
P66-ROX-101013	SVOCs	4-Nitrophenol	**UJ**
P56-ROX-101013	SVOCs	Benzoic acid	**UJ**
P56-ROX-101013	SVOCs	4-Nitrophenol	**UJ**
P55-ROX-101013	SVOCs	Benzoic acid	**UJ**
P55-ROX-101013	SVOCs	4-Nitrophenol	**UJ**
P59-ROX-101013	SVOCs	Benzoic acid	**UJ**
P59-ROX-101013	VOCs	4-Nitrophenol	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
OP35286-BS	SVOCs	2,4,6-Tribromophenol	**113**	15-110

LCS OP35286-BS is a quality control sample and is not qualified. No qualification of data was required.

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

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

Yes, sample MW14-ROX-101013 was spiked and analyzed for VOCs, SVOCs, and PAHs.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
MW14-ROX-101013	VOCs	2-Chloroethyl vinyl ether	**0/0**	NA	70-130/30
MW14-ROX-101013	VOCs	Styrene	**55/55**	1	70-130/30

USEPA National Functional Guidelines for Organic Data Review indicates that organic data does not require qualification based on MS/MSD data alone. LCS/LCSD recoveries were within evaluation criteria. No further qualification of data was required.

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

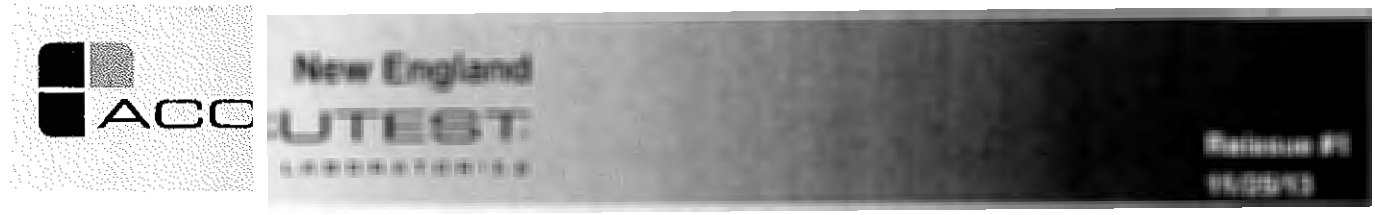
For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

No



Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC25237

Sampling Date: 10/10/13

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: **105**

Reviewed on 11-18-2013

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.

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

ACCUTEST
LABORATORIES

URS Corporation
1001 Highlands Plaza Drive West Suite 300
St. Louis, MO 63110
ATTN: Elizabeth Kunkel

November 25, 2013

Accutest Job MC25237 (revision 1)

Ms. Kunkel,

The report of Accutest job number MC25237 has been revised due to GC/MS Volatile sample data requiring reprocessing, as well as reporting to the MDL. These changes have been incorporated into the revised report which is attached.

Sincerely,

Matthew Morrell
Accutest Laboratories of New England, Inc.

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Sample Summary

Shell Oil

Job No: MC25237

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time By	Received	Matrix Code	Matrix Type	Client Sample ID
MC25237-1	10/10/13	09:35 LRBL	10/11/13	AQ	Ground Water	MW14-ROX-101013
MC25237-1D	10/10/13	09:35 LRBL	10/11/13	AQ	Water Dup/MSD	MW14-ROX-101013
MC25237-1S	10/10/13	09:35 LRBL	10/11/13	AQ	Water Matrix Spike	MW14-ROX-101013
MC25237-2	10/10/13	10:30 LRBL	10/11/13	AQ	Ground Water	P66-ROX-101013
MC25237-3	10/10/13	13:10 LRBL	10/11/13	AQ	Ground Water	P56-ROX-101013
MC25237-4	10/10/13	13:40 LRBL	10/11/13	AQ	Equipment Blank	P55-ROX-101013-EB
MC25237-5	10/10/13	14:55 LRBL	10/11/13	AQ	Ground Water	P55-ROX-101013
MC25237-6	10/10/13	16:20 LRBL	10/11/13	AQ	Ground Water	P59-ROX-101013
MC25237-7	10/10/13	00:00 LRBL	10/11/13	AQ	Trip Blank Water	TB-ROX-101013-HCL
MC25237-8	10/10/13	00:00 LRBL	10/11/13	AQ	Trip Blank Water	TB-ROX-101013-ST

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC25237
Site:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central	**Report Date**	11/4/2013 10:26:39 AM

6 Sample(s), 2 Trip Blank(s) and 0 Field Blank(s) were collected on 10/10/2013 and were received at Accutest on 10/11/2013 properly preserved, at 2.3 Deg. C and intact. These Samples received an Accutest job number of MC25237. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

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

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** MSU759

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC25237-1MS, MC25237-1MSD were used as the QC samples indicated.
- MC25237-1MS for 1,1,2,2-Tetrachloroethane, 2-Chloroethyl vinyl ether, Styrene are outside control limits due to possible matrix interference. Refer to Blank Spike.
- MC25237-1MSD for 1,1,2,2-Tetrachloroethane, 2-Chloroethyl vinyl ether, Styrene, p-Isopropyltoluene are outside control limits due to possible matrix interferenee. Refer to Blank Spike.
- RPD(s) for MC25237-1MSD for p-Isopropyltoluene are outside control limits. High RPD due to possible matrix interference and/or sample non-homogeneity.

Matrix: AQ **Batch ID:** MSU760

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25339-2MS, MC25339-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Extractables by GCMS By Method SW846 8270C

Matrix: AQ **Batch ID:** OP35286

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25237-1MS, MC25237-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- OP35286-BS for 4-Nitrophenol, Benzoic Acid, N-Nitrosodiphenylamine are outside control limits. Blank Spike meets program technical requirements.
- OP35286-BS for 2,4,6-Tribromophenol: Outside control limits. Results confirmed by reanalysis.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix: AQ **Batch ID:** OP35287

- 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) MC25237-1MS, MC25237-1MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8011

Matrix: AQ	Batch ID: OP35265

2

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25237-1MS, MC25237-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Aceutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC25237).

Summary of Hits

Job Number: MC25237
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 Sonth Central Avenue, Roxana, IL
Collected: 10/10/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC25237-1	MW14-ROX-101013					
sec-Bntylbenzene		1.3 J	5.0	0.58	ng/l	SW846 8260B
tert-Bntylbenzene		1.2 J	5.0	0.87	ug/l	SW846 8260B
Isopropylbenzene		1.1 J	5.0	0.64	ug/l	SW846 8260B
p-Isopropyltoluene		1.1 J	5.0	0.55	ug/l	SW846 8260B
1,2,4-Trimethylbenzene		0.88 J	5.0	0.47	ug/l	SW846 8260B
1,3,5-Trimethylbenzene		1.1 J	5.0	1.1	ug/l	SW846 8260B
Dibenzofnran		0.19 J	2.3	0.18	ug/l	SW846 8270C
Acenaphthene		0.65	0.11	0.078	ug/l	SW846 8270C BY SIM
Acenaphthylene		0.11	0.11	0.056	ug/l	SW846 8270C BY SIM
Fluorene		0.34	0.11	0.11	ug/l	SW846 8270C BY SIM
1-Methylnaphthalene		18.4	0.23	0.057	ug/l	SW846 8270C BY SIM
MC25237-2	P66-ROX-101013					
Acetone		9.5 J	10	2.8	ug/l	SW846 8260B
Benzene		64.6	0.50	0.45	ug/l	SW846 8260B
n-Butylbenzene		14.1	5.0	0.54	ug/l	SW846 8260B
sec-Butylbenzene		18.6	5.0	0.58	ug/l	SW846 8260B
tert-Butylbenzene		6.7	5.0	0.87	ug/l	SW846 8260B
Ethylbenzene		4.5	1.0	0.38	ug/l	SW846 8260B
Isopropylbenzene		151	5.0	0.64	ug/l	SW846 8260B
Methyl Tert Butyl Ether		85.0	1.0	0.43	ug/l	SW846 8260B
Naphthalene		10.4	5.0	0.79	ug/l	SW846 8260B
n-Propylbenzene		204	5.0	0.59	ug/l	SW846 8260B
Toluene		1.3	1.0	0.46	ug/l	SW846 8260B
o-Xylene		0.96 J	1.0	0.41	ug/l	SW846 8260B
Xylene (total)		0.96 J	I.0	0.41	ug/l	SW846 8260B
3&4-Methylphenol		3.4 J	11	2.3	ug/l	SW846 8270C
Dibenzofuran		1.6 J	2.2	0.18	ng/l	SW846 8270C
Acenaphthene		0.66	0.11	0.077	ug/l	SW846 8270C BY SIM
Acenaphthylene		0.20	0.11	0.056	ug/l	SW846 8270C BY SIM
Benzo(a)anthracene		0.028 J	0.056	0.022	ug/l	SW846 8270C BY SIM
Benzo(g,h,i)perylene		0.036 J	0.11	0.030	ug/l	SW846 8270C BY SIM
Fluoranthene		0.052 J	0.11	0.046	ug/l	SW846 8270C BY SIM
Fluorene		1.3	0.11	0.11	ug/l	SW846 8270C BY SIM
1-Methylnaphthalene		57.1	0.22	0.056	ug/l	SW846 8270C BY SIM
2-Methylnaphthalene		21.8	0.22	0.083	ng/l	SW846 8270C BY SIM
Phenanthrene		0.50	0.056	0.014	ug/l	SW846 8270C BY SIM
Pyrene		0.090 J	0.11	0.043	ng/l	SW846 8270C BY SIM
MC25237-3	P56-ROX-101013					
Benzene		140	0.50	0.45	ng/l	SW846 8260B

Summary of Hits

Job Number: MC25237
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Collected: 10/10/13

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
n-Butylbenzene	8.8	5.0	0.54	ug/l	SW846 8260B
sec-Butylbenzene	5.0	5.0	0.58	ug/l	SW846 8260B
tert-Butylbenzene	1.8 J	5.0	0.87	ug/l	SW846 8260B
Chloroethane	3.8	2.0	0.84	ug/l	SW846 8260B
trans-1,3-Dichloropropene	1.0	0.50	0.29	ug/l	SW846 8260B
Ethylbenzene	1580	25	9.4	ug/l	SW846 8260B
Isopropylbenzene	82.2	5.0	0.64	ug/l	SW846 8260B
p-Isopropyltoluene	4.6 J	5.0	0.55	ug/l	SW846 8260B
Methyl Tert Butyl Ether	0.58 J	1.0	0.43	ug/l	SW846 8260B
Naphthalene	156	5.0	0.79	ug/l	SW846 8260B
n-Propylbenzene	105	5.0	0.59	ug/l	SW846 8260B
Toluene	157	1.0	0.46	ug/l	SW846 8260B
1,2,4-Trimethylbenzene	330	5.0	0.47	ug/l	SW846 8260B
1,3,5-Trimethylbenzene	71.4	5.0	1.1	ug/l	SW846 8260B
m,p-Xylene	1700	25	18	ug/l	SW846 8260B
o-Xylene	61.7	1.0	0.41	ug/l	SW846 8260B
Xylene (total)	1760	25	10	ug/l	SW846 8260B
2,4-Dimethylphenol	4.2 J	11	1.3	ug/l	SW846 8270C
Dibenzofuran	0.59 J	2.2	0.17	ug/l	SW846 8270C
Acenaphthene	0.60	0.11	0.076	ug/l	SW846 8270C BY SIM
Acenaphthylene	0.092 J	0.11	0.054	ug/l	SW846 8270C BY SIM
Anthracene	0.11	0.11	0.10	ug/l	SW846 8270C BY SIM
Fluorene	0.44	0.11	0.11	ug/l	SW846 8270C BY SIM
1-Methylnaphthalene	25.1	0.22	0.055	ug/l	SW846 8270C BY SIM
2-Methylnaphthalene	30.0	0.22	0.082	ug/l	SW846 8270C BY SIM
Phenanthrene	1.3	0.055	0.014	ug/l	SW846 8270C BY SIM
MC25237-4 P55-ROX-101013-EB					
No hits reported in this sample.					
MC25237-5 P55-ROX-101013					
Benzene	757	5.0	4.5	ug/l	SW846 8260B
n-Butylbenzene	23.9	5.0	0.54	ug/l	SW846 8260B
sec-Butylbenzene	14.7	5.0	0.58	ug/l	SW846 8260B
tert-Butylbenzene	1.3 J	5.0	0.87	ug/l	SW846 8260B
Chloroethane	5.0	2.0	0.84	ug/l	SW846 8260B
Chloromethane	1.7 J	2.0	1.4	ug/l	SW846 8260B
Ethylbenzene	602	10	3.8	ug/l	SW846 8260B
Isopropylbenzene	85.1	5.0	0.64	ug/l	SW846 8260B
p-Isopropyltoluene	6.6	5.0	0.55	ug/l	SW846 8260B
Methyl Tert Butyl Ether	1.0	1.0	0.43	ug/l	SW846 8260B
Naphthalene	121	5.0	0.79	ug/l	SW846 8260B
n-Propylbenzene	167	5.0	0.59	ug/l	SW846 8260B

Summary of Hits

Job Number: MC25237
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Collected: 10/10/13

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
Toluene	601	10	4.6	ug/l	SW846 8260B
1,2,4-Trimethylbenzene	151	5.0	0.47	ug/l	SW846 8260B
1,3,5-Trimethylbenzene	62.0	5.0	1.1	ug/l	SW846 8260B
m,p-Xylene	739	1.0	0.70	ug/l	SW846 8260B
o-Xylene	639	10	4.1	ug/l	SW846 8260B
Xylene (total)	1380	10	4.1	ug/l	SW846 8260B
2,4-Dimethylphenol	1.4 J	11	1.3	ug/l	SW846 8270C
Phenol	2.0 J	5.5	0.56	ug/l	SW846 8270C
Dibenzofuran	1.6 J	2.2	0.17	ng/l	SW846 8270C
bis(2-Ethylhexyl)phthalate	0.60 J	2.2	0.54	ug/l	SW846 8270C
Acenapbtbene	0.71	0.11	0.076	ug/l	SW846 8270C BY SIM
Acenaphthylene	0.19	0.11	0.054	ug/l	SW846 8270C BY SIM
Fluorene	1.4	0.11	0.11	ug/l	SW846 8270C BY SIM
1-Methylnaphthalene	27.9	0.22	0.055	ug/l	SW846 8270C BY SIM
2-Methylnaphthalene	41.5	0.22	0.082	ug/l	SW846 8270C BY SIM
Phenanthrene	1.7	0.055	0.014	ug/l	SW846 8270C BY SIM
MC25237-6 P59-ROX-101013					
Benzene	14700	50	45	ug/l	SW846 8260B
n-Butylbenzene	22.4	5.0	0.54	ug/l	SW846 8260B
tert-Butylbenzene	2.4 J	5.0	0.87	ug/l	SW846 8260B
Chloroethane	3.4	2.0	0.84	ug/l	SW846 8260B
Ethylbenzene	3190	100	38	ug/l	SW846 8260B
Isopropylbenzene	86.0	5.0	0.64	ug/l	SW846 8260B
p-Isopropyltoluene	5.1	5.0	0.55	ug/l	SW846 8260B
Methyl Tert Butyl Ether	1.2	1.0	0.43	ug/l	SW846 8260B
Naphthalene	285	5.0	0.79	ug/l	SW846 8260B
n-Propylbenzene	176	5.0	0.59	ug/l	SW846 8260B
Toluene	2890	100	46	ug/l	SW846 8260B
1,2,4-Trimethylbenzene	1140	500	47	ug/l	SW846 8260B
1,3,5-Trimethylbenzene	273	5.0	1.1	ug/l	SW846 8260B
m,p-Xylene	7470	100	70	ug/l	SW846 8260B
o-Xylene	1280	100	41	ug/l	SW846 8260B
Xylene (total)	8750	100	41	ug/l	SW846 8260B
2,4-Dimethylphenol	78.0	11	1.2	ug/l	SW846 8270C
2-Methylphenol	201	54	7.0	ug/l	SW846 8270C
3&4-Methylphenol	52.8	11	2.2	ug/l	SW846 8270C
Phenol	52.4	5.4	0.56	ug/l	SW846 8270C
Benzyl Alcohol	0.90 J	11	0.62	ug/l	SW846 8270C
Di-n-octyl phthalate	0.91 J	5.4	0.47	ug/l	SW846 8270C
bis(2-Ethylhexyl)phthalate	0.69 J	2.2	0.53	ug/l	SW846 8270C
Acenaphthene	0.55	0.11	0.075	ug/l	SW846 8270C BY SIM
Acenaphthylene	0.084 J	0.11	0.054	ug/l	SW846 8270C BY SIM
Anthracene	0.21	0.11	0.10	ug/l	SW846 8270C BY SIM

Summary of Hits

Job Number: MC25237
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Collected: 10/10/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Benzo(a)anthracene		0.068	0.054	0.021	ug/l	SW846 8270C BY SIM
Benzo(b)fluoranthene		0.039 J	0.054	0.034	ug/l	SW846 8270C BY SIM
Chrysene		0.088 J	0.11	0.026	ug/l	SW846 8270C BY SIM
Fluoranthene		0.15	0.11	0.044	ug/l	SW846 8270C BY SIM
Fluorene		0.70	0.11	0.11	ug/l	SW846 8270C BY SIM
1-Methylnaphthalene		19.2	0.22	0.054	ug/l	SW846 8270C BY SIM
2-Methylnaphthalene		30.5	0.22	0.081	ug/l	SW846 8270C BY SIM
Phenanthrene		1.4	0.054	0.014	ug/l	SW846 8270C BY SIM
Pyrene		0.28	0.11	0.042	ug/l	SW846 8270C BY SIM

MC25237-7 TB-ROX-101013-HCL

No hits reported in this sample.

MC25237-8 TB-ROX-101013-ST

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW14-ROX-101013		
Lab Sample ID:	MC25237-1	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U15302.D	1	10/22/13	GK	n/a	n/a	MSU759
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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

Report of Analysis

Client Sample ID:	MW14-ROX-101013		
Lab Sample ID:	MC25237-1	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	1.1	5.0	0.64	ug/l	J
99-87-6	p-Isopropyltoluene	1.1	5.0	0.55	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroetheue	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethaue	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.88	5.0	0.47	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	1.1	5.0	1.1	ug/l	J
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	MW14-ROX-101013		
Lab Sample ID:	MC25237-1	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 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	107%		70-130%
460-00-4	4-Bromofluorobenzene	107%		70-130%

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

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

Report of Analysis

Client Sample ID:	MW14-ROX-101013		
Lab Sample ID:	MC25237-1	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W14995.D	1	10/23/13	KR	10/16/13	OP35286	MSW676
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	1.4	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.7	0.44	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.56	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.37	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	23	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.4	ug/l	
95-48-7	2-Methylphenol	ND	11	1.5	ug/l	
	3&4-Methylphenol	ND	11	2.3	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.57	ug/l	
100-02-7	4-Nitrophenol	ND	23	0.66	ug/l	UJ
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	ND	5.7	0.58	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.65	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.36	ug/l	
62-53-3	Aniline	ND	11	0.72	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.7	0.23	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.7	0.97	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.65	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.7	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.28	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.7	0.24	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.7	0.26	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.7	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.7	0.23	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.7	0.74	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.77	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.73	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.7	0.57	ug/l	
132-64-9	Dibenzofuran	0.19	2.3	0.18	ug/l	J
84-74-2	Di-n-butyl phthalate	ND	5.7	0.44	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.7	0.49	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-101013		
Lab Sample ID:	MC25237-1	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.7	0.57	ug/l	
131-11-3	Dimethyl phthalate	ND	5.7	0.57	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.3	0.56	ug/l	
118-74-1	Hexachlorobenzene	ND	5.7	0.34	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.8	ug/l	
67-72-1	Hexachloroethane	ND	5.7	0.50	ug/l	
78-59-1	Isophorone	ND	5.7	0.23	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.32	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.57	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.9	ug/l	
98-95-3	Nitrobenzene	ND	5.7	0.28	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.7	0.57	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.7	0.92	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.7	0.61	ug/l	
110-86-1	Pyridine	ND	11	0.59	ng/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	34%		15-110%
4165-62-2	Phenol-d5	27%		15-110%
118-79-6	2,4,6-Tribromophenol	83%		15-110%
4165-60-0	Nitrobenzene-d5	73%		30-130%
321-60-8	2-Fluorobiphenyl	78%		30-130%
1718-51-0	Terphenyl-d14	97%		30-130%

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

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

Report of Analysis

Client Sample ID:	MW14-ROX-101013		
Lab Sample ID:	MC25237-1	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86481.D	1	10/17/13	KR	10/16/13	OP35287	MSI3218
Run #2							

	Initial Volume	Final Volume
Run #1	880 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.65	0.11	0.078	ug/l	
208-96-8	Acenaphthylene	0.11	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	0.34	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	18.4	0.23	0.057	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.23	0.084	ug/l	
85-01-8	Phenanthrene	ND	0.057	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.044	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	81%		30-130%
321-60-8	2-Fluorobiphenyl	73%		30-130%
1718-51-0	Terphenyl-d14	92%		30-130%

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

Report of Analysis

Client Sample ID:	MW14-ROX-101013		
Lab Sample ID:	MC25237-1	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK30978.D	1	10/16/13	NK	10/15/13	OP35265	GBK1020
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	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	69%		36-173%
460-00-4	Bromofluorobenzene (S)	66%		36-173%

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

Report of Analysis

Client Sample ID:	P66-ROX-101013		
Lab Sample ID:	MC25237-2	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U15312.D	1	10/22/13	GK	n/a	n/a	MSU759
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	9.5	10	2.8	ug/l	J
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	64.6	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ng/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Bntanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	14.1	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	18.6	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	6.7	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

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

Report of Analysis

Client Sample ID:	P66-ROX-101013		
Lab Sample ID:	MC25237-2	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	4.5	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	151	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	85.0	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	10.4	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	204	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	1.3	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	0.96	1.0	0.41	ug/l	J
1330-20-7	Xylene (total)	0.96	1.0	0.41	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:	P66-ROX-101013		
Lab Sample ID:	MC25237-2	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 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	110%		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:	P66-ROX-101013		
Lab Sample ID:	MC25237-2	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W14996.D	1	10/23/13	KR	10/16/13	OP35286	MSW676
Run #2							

	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.4	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.6	0.43	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.55	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.37	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	3.4	11	2.3	ug/l	J
88-75-5	2-Nitrophenol	ND	11	0.56	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.66	ug/l	UJ
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	ND	5.6	0.58	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.64	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.36	ug/l	
62-53-3	Aniline	ND	11	0.72	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.23	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.96	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.65	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.28	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.24	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.26	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.73	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.76	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.72	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.56	ug/l	
132-64-9	Dibenzofuran	1.6	2.2	0.18	ug/l	J
84-74-2	Di-n-butyl phthalate	ND	5.6	0.44	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.6	0.49	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-101013		
Lab Sample ID:	MC25237-2	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.56	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.56	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.55	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.8	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.49	ug/l	
78-59-1	Isophorone	ND	5.6	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.31	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.56	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.9	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.28	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	0.56	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.91	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.61	ug/l	
110-86-1	Pyridine	ND	11	0.58	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		15-110%
4165-62-2	Phenol-d5	39%		15-110%
118-79-6	2,4,6-Tribromophenol	98%		15-110%
4165-60-0	Nitrobenzene-d5	76%		30-130%
321-60-8	2-Fluorobiphenyl	79%		30-130%
1718-51-0	Terphenyl-d14	97%		30-130%

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

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

Report of Analysis

Client Sample ID:	P66-ROX-101013		
Lab Sample ID:	MC25237-2	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86509.D	1	10/18/13	WK	10/16/13	OP35287	MSI3219
Run #2							

	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.66	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	0.20	0.11	0.056	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	0.028	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	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.036	0.11	0.030	ug/l	J
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.036	ug/l	
206-44-0	Fluoranthene	0.052	0.11	0.046	ug/l	J
86-73-7	Fluorene	1.3	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	57.1	0.22	0.056	ug/l	
91-57-6	2-Methylnaphthalene	21.8	0.22	0.083	ug/l	
85-01-8	Phenanthrene	0.50	0.056	0.014	ug/l	
129-00-0	Pyrene	0.090	0.11	0.043	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	82%		30-130%
321-60-8	2-Fluorobiphenyl	76%		30-130%
1718-51-0	Terphenyl-d14	93%		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-101013		
Lab Sample ID:	MC25237-2	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK30979.D	1	10/16/13	NK	10/15/13	OP35265	GBK1020
Run #2							

	Initial Volume	Final Volume
Run #1	35.3 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	58%		36-173%
460-00-4	Bromofluorobenzene (S)	62%		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-101013		
Lab Sample ID:	MC25237-3	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U15313.D	1	10/22/13	GK	n/a	n/a	MSU759
Run #2	U15337.D	25	10/23/13	GK	n/a	n/a	MSU760

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

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	140	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	8.8	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	5.0	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	1.8	5.0	0.87	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	3.8	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

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

Report of Analysis

Client Sample ID:	P56-ROX-101013		
Lab Sample ID:	MC25237-3	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	1.0	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	1580 [a]	25	9.4	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	82.2	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	4.6	5.0	0.55	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	0.58	1.0	0.43	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	156	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	105	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	157	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	330	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	71.4	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	1700 [a]	25	18	ug/l	
95-47-6	o-Xylene	61.7	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	1760 [a]	25	10	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:	P56-ROX-101013		
Lab Sample ID:	MC25237-3	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%	115%	70-130%
2037-26-5	Toluene-D8	112%	110%	70-130%
460-00-4	4-Bromofluorobenzene	104%	105%	70-130%

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

(a) Result is from Run# 2

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

Report of Analysis

Client Sample ID:	P56-ROX-101013		
Lab Sample ID:	MC25237-3	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxaua 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W14997.D	1	10/23/13	KR	10/16/13	OP35286	MSW676
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.4	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.5	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.54	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	4.2	11	1.3	ug/l	J
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.55	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.64	ug/l	UJ
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	ND	5.5	0.56	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.63	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.35	ug/l	
62-53-3	Aniline	ND	11	0.70	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.5	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.5	0.94	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.63	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.5	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.5	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.5	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.5	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.5	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.5	0.72	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.74	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.71	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.5	0.55	ug/l	
132-64-9	Dibenzofuran	0.59	2.2	0.17	ug/l	J
84-74-2	Di-n-butyl phthalate	ND	5.5	0.43	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.5	0.48	ug/l	

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

Report of Analysis

Client Sample ID:	P56-ROX-101013		
Lab Sample ID:	MC25237-3	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.5	0.55	ug/l	
131-11-3	Dimethyl phthalate	ND	5.5	0.55	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.54	ug/l	
118-74-1	Hexachlorobenzene	ND	5.5	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.5	0.48	ug/l	
78-59-1	Isophorone	ND	5.5	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.31	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.55	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.8	ug/l	
98-95-3	Nitrobenzene	ND	5.5	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.5	0.55	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.5	0.89	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.5	0.59	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	55%		15-110%
4165-62-2	Phenol-d5	40%		15-110%
118-79-6	2,4,6-Tribromophenol	99%		15-110%
4165-60-0	Nitrobenzene-d5	74%		30-130%
321-60-8	2-Fluorobiphenyl	75%		30-130%
1718-51-0	Terphenyl-d14	97%		30-130%

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

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

Report of Analysis

Client Sample ID:	P56-ROX-101013		
Lab Sample ID:	MC25237-3	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86511.D	1	10/18/13	WK	10/16/13	OP35287	MSI3219
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.60	0.11	0.076	ug/l	
208-96-8	Acenaphthylene	0.092	0.11	0.054	ug/l	J
120-12-7	Anthracene	0.11	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	0.44	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	25.1	0.22	0.055	ug/l	
91-57-6	2-Methylnaphthalene	30.0	0.22	0.082	ug/l	
85-01-8	Phenanthrene	1.3	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	81%		30-130%
321-60-8	2-Fluorobiphenyl	73%		30-130%
1718-51-0	Terphenyl-d14	92%		30-130%

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

Report of Analysis

Client Sample ID:	P56-ROX-101013		
Lab Sample ID:	MC25237-3	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK30980.D	1	10/16/13	NK	10/15/13	OP35265	GBK1020
Run #2							

	Initial Volume	Final Volume
Run #1	36.0 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	113%		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 fonnd in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P55-ROX-101013-EB		
Lab Sample ID:	MC25237-4	Date Sampled:	10/10/13
Matrix:	AQ - Equipment Blank	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U15300.D	1	10/22/13	GK	n/a	n/a	MSU759
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	Acetoue	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ng/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

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

Report of Analysis

Client Sample ID:	P55-ROX-101013-EB		
Lab Sample ID:	MC25237-4	Date Sampled:	10/10/13
Matrix:	AQ - Equipment Blank	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	P55-ROX-101013-EB		
Lab Sample ID:	MC25237-4	Date Sampled:	10/10/13
Matrix:	AQ - Equipment Blank	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		70-130%
2037-26-5	Toluene-D8	110%		70-130%
460-00-4	4-Bromofluorobenzene	106%		70-130%

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

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

Report of Analysis

Client Sample ID:	P55-ROX-101013-EB		
Lab Sample ID:	MC25237-4	Date Sampled:	10/10/13
Matrix:	AQ - Equipment Blank	Date Received:	10/11/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W15000.D	1	10/23/13	KR	10/16/13	OP35286	MSW676
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	ND	5.4	0.56	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.93	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.71	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.70	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

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

Report of Analysis

Client Sample ID:	P55-ROX-101013-EB		
Lab Sample ID:	MC25237-4	Date Sampled:	10/10/13
Matrix:	AQ - Equipment Blank	Date Received:	10/11/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.53	ug/l	
118-74-1	Hexachlorohenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.48	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.88	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.59	ug/l	
110-86-1	Pyridine	ND	11	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	43%		15-110%
4165-62-2	Phenol-d5	30%		15-110%
118-79-6	2,4,6-Tribromophenol	79%		15-110%
4165-60-0	Nitrobenzene-d5	68%		30-130%
321-60-8	2-Fluorobiphenyl	73%		30-130%
1718-51-0	Terphenyl-d14	102%		30-130%

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

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

Report of Analysis

Client Sample ID:	P55-ROX-101013-EB		
Lab Sample ID:	MC25237-4	Date Sampled:	10/10/13
Matrix:	AQ - Equipment Blank	Date Received:	10/11/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86512.D	1	10/18/13	WK	10/16/13	OP35287	MSI3219
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(h)flnoranthene	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)fluorantheue	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	68%		30-130%
1718-51-0	Terphenyl-d14	92%		30-130%

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

Report of Analysis

Client Sample ID:	P55-ROX-101013-EB		
Lab Sample ID:	MC25237-4	Date Sampled:	10/10/13
Matrix:	AQ - Equipment Blank	Date Received:	10/11/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK30981.D	1	10/16/13	NK	10/15/13	OP35265	GBK1020
Run #2							

	Initial Volume	Final Volume
Run #1	36.8 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	87%		36-173%
460-00-4	Bromofluorobenzene (S)	69%		36-173%

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

Report of Analysis

Client Sample ID:	P55-ROX-101013		
Lab Sample ID:	MC25237-5	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxaua 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U15314.D	1	10/22/13	GK	n/a	n/a	MSU759
Run #2	U15336.D	10	10/23/13	GK	n/a	n/a	MSU760

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

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	757 [a]	5.0	4.5	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	23.9	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	14.7	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	1.3	5.0	0.87	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	5.0	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	1.7	2.0	1.4	ug/l	J
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochlorometbane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ng/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

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

Report of Analysis

Client Sample ID:	P55-ROX-101013		
Lab Sample ID:	MC25237-5	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ng/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	602 [a]	10	3.8	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	85.1	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	6.6	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.0	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	121	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	167	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	601 [a]	10	4.6	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	151	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	62.0	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	739	1.0	0.70	ug/l	
95-47-6	o-Xylene	639 [a]	10	4.1	ug/l	
1330-20-7	Xylene (total)	1380 [a]	10	4.1	ug/l	

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

Report of Analysis

Client Sample ID:	P55-ROX-101013		
Lab Sample ID:	MC25237-5	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%	114%	70-130%
2037-26-5	Toluene-D8	111%	109%	70-130%
460-00-4	4-Bromofluorobenzene	103%	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
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P55-ROX-101013		
Lab Sample ID:	MC25237-5	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W15131.D	1	11/01/13	KR	10/16/13	OP35286	MSW682
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.4	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.5	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.54	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	1.4	11	1.3	ug/l	J
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.55	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.64	ug/l	UJ
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	2.0	5.5	0.56	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND	11	0.63	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.35	ug/l	
62-53-3	Aniline	ND	11	0.70	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.5	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.5	0.94	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.63	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.5	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.5	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.5	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.5	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.5	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.5	0.72	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.74	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.71	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.5	0.55	ug/l	
132-64-9	Dibenzofuran	1.6	2.2	0.17	ug/l	J
84-74-2	Di-n-butyl phthalate	ND	5.5	0.43	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.5	0.48	ug/l	

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

Report of Analysis

Client Sample ID:	P55-ROX-101013		
Lab Sample ID:	MC25237-5	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.5	0.55	ug/l	
131-11-3	Dimethyl phthalate	ND	5.5	0.55	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.60	2.2	0.54	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.5	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.5	0.48	ug/l	
78-59-1	Isophorone	ND	5.5	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.31	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.55	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.8	ug/l	
98-95-3	Nitrobenzene	ND	5.5	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.5	0.55	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.5	0.89	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.5	0.59	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	29%		15-110%
4165-62-2	Phenol-d5	19%		15-110%
118-79-6	2,4,6-Tribromophenol	67%		15-110%
4165-60-0	Nitrobenzene-d5	62%		30-130%
321-60-8	2-Fluorobiphenyl	72%		30-130%
1718-51-0	Terphenyl-d14	94%		30-130%

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

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

Report of Analysis

Client Sample ID:	P55-ROX-101013		
Lab Sample ID:	MC25237-5	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86513.D	1	10/18/13	WK	10/16/13	OP35287	MSI3219
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.71	0.11	0.076	ug/l	
208-96-8	Acenaphthylene	0.19	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.055	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.055	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ng/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	1.4	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	27.9	0.22	0.055	ng/l	
91-57-6	2-Methylnaphthalene	41.5	0.22	0.082	ug/l	
85-01-8	Phenanthrene	1.7	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	74%		30-130%
321-60-8	2-Fluorobiphenyl	70%		30-130%
1718-51-0	Terphenyl-d14	90%		30-130%

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

Report of Analysis

Client Sample ID:	P55-ROX-101013		
Lab Sample ID:	MC25237-5	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK30982.D	1	10/16/13	NK	10/15/13	OP35265	GBK1020
Run #2							

	Initial Volume	Final Volume
Run #1	35.1 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	90%		36-173%
460-00-4	Bromofluorobenzene (S)	63%		36-173%

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

Report of Analysis

Client Sample ID:	P59-ROX-101013		
Lab Sample ID:	MC25237-6	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U15315.D	1	10/22/13	GK	n/a	n/a	MSU759
Run #2	U15338.D	100	10/23/13	GK	n/a	n/a	MSU760

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

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	14700 [a]	50	45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	22.4	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	2.4	5.0	0.87	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	3.4	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

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RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evideuce of a compound

Report of Analysis

Client Sample ID:	P59-ROX-101013		
Lab Sample ID:	MC25237-6	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	3190 [a]	100	38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	86.0	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	5.1	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.2	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	285	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	176	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	2890 [a]	100	46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	1140 [a]	500	47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	273	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	7470 [a]	100	70	ug/l	
95-47-6	o-Xylene	1280 [a]	100	41	ug/l	
1330-20-7	Xylene (total)	8750 [a]	100	41	ug/l	

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

Report of Analysis

Client Sample ID:	P59-ROX-101013		
Lab Sample ID:	MC25237-6	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%	111%	70-130%
2037-26-5	Toluene-D8	113%	110%	70-130%
460-00-4	4-Bromofluorobenzene	108%	105%	70-130%

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

(a) Result is from Run# 2

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

Report of Analysis

Client Sample ID:	P59-ROX-101013		
Lab Sample ID:	MC25237-6	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W15002.D	1	10/23/13	KR	10/16/13	OP35286	MSW676
Run #2	W15132.D	5	11/01/13	KR	10/16/13	OP35286	MSW682

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.4	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.4	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	78.0	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	201 [a]	54	7.0	ug/l	
	3&4-Methylphenol	52.8	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	UJ
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	52.4	5.4	0.56	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.93	ug/l	
100-51-6	Benzyl Alcohol	0.90	11	0.62	ug/l	J
91-58-7	2-Chloronaphthalene	ND	5.4	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.71	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.70	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	0.91	5.4	0.47	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:	P59-ROX-101013		
Lab Sample ID:	MC25237-6	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.69	2.2	0.53	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.48	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.88	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.59	ug/l	
110-86-1	Pyridine	ND	11	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	30%	35%	15-110%
4165-62-2	Phenol-d5	31%	30%	15-110%
118-79-6	2,4,6-Tribromophenol	77%	90%	15-110%
4165-60-0	Nitrobenzene-d5	53%	48%	30-130%
321-60-8	2-Fluorobiphenyl	59%	67%	30-130%
1718-51-0	Terphenyl-d14	93%	79%	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-101013		
Lab Sample ID:	MC25237-6	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86514.D	1	10/18/13	WK	10/16/13	OP35287	MSI3219
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	0.55	0.11	0.075	ug/l	
208-96-8	Acenaphthylene	0.084	0.11	0.054	ug/l	J
120-12-7	Anthracene	0.21	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	0.068	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)flnoranthene	0.039	0.054	0.034	ug/l	J
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	0.088	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	0.15	0.11	0.044	ug/l	
86-73-7	Fluorene	0.70	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	19.2	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	30.5	0.22	0.081	ug/l	
85-01-8	Phenanthrene	1.4	0.054	0.014	ug/l	
129-00-0	Pyrene	0.28	0.11	0.042	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	56%		30-130%
321-60-8	2-Fluorobiphenyl	59%		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:	P59-ROX-101013		
Lab Sample ID:	MC25237-6	Date Sampled:	10/10/13
Matrix:	AQ - Ground Water	Date Received:	10/11/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK30983.D	1	10/16/13	NK	10/15/13	OP35265	GBK1020
Run #2							

	Initial Volume	Final Volume
Run #1	35.6 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	58%		36-173%
460-00-4	Bromofluorobenzene (S)	47%		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-101013-HCL		
Lab Sample ID:	MC25237-7	Date Sampled:	10/10/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U15296.D	1	10/22/13	GK	n/a	n/a	MSU759
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

ND = Not detected MDL - Method Detectiou Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates au 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-101013-HCL		
Lab Sample ID:	MC25237-7	Date Sampled:	10/10/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Etbyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ng/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	TB-ROX-101013-HCL		
Lab Sample ID:	MC25237-7	Date Sampled:	10/10/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/11/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		70-130%
2037-26-5	Toluene-D8	109%		70-130%
460-00-4	4-Bromofluorobenzene	106%		70-130%

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

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

Report of Analysis

Client Sample ID:	TB-ROX-101013-ST		
Lab Sample ID:	MC25237-8	Date Sampled:	10/10/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/11/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK30984.D	1	10/16/13	NK	10/15/13	OP35265	GBK1020
Run #2							

	Initial Volume	Final Volume
Run #1	35.1 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	84%		36-173%
460-00-4	Bromofluorobenzene (S)	74%		36-173%

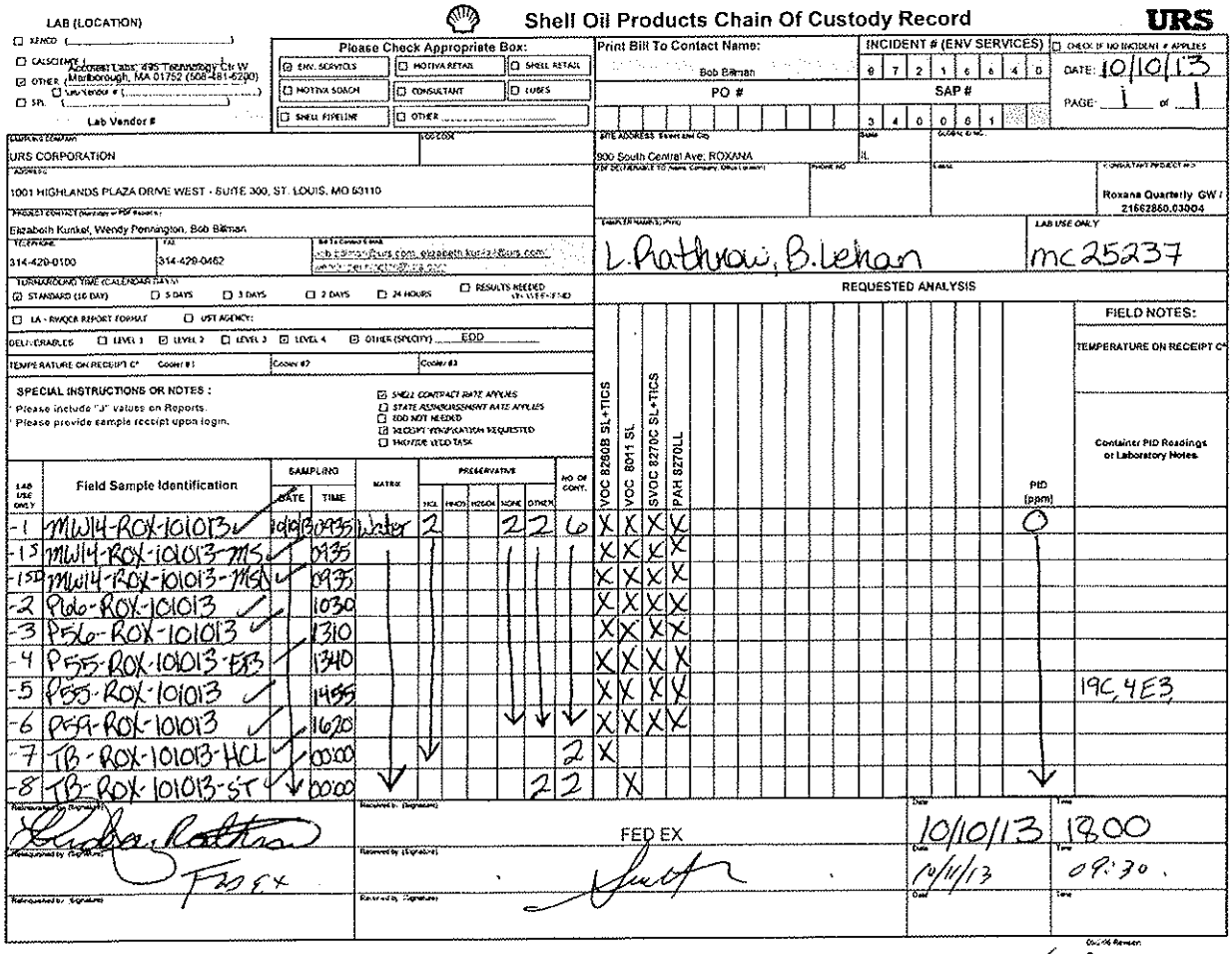
ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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



Shell Oil Products Chain Of Custody Record

URS

LAB (LOCATION)
☐ XENCO (_____)
☐ CALSCIENCE (_____)
☑ OTHER Accutest Labs: 495 Technology Ctr W Marlborough, MA 01752 (508-481-6200)
☐ SPL (_____)
Lab Vendor #

Please Check Appropriate Box:
☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SOAGH ☐ CONSULTANT ☐ CUSES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Billman
INCIDENT # (ENV SERVICES): 9 7 2 1 6 6 4 0 ☐ CHECK IF NO INCIDENT # APPLIES
DATE: 10/10/13
PO #
SAP #: 3 4 0 0 0 1
PAGE: 1 of 1

BILLING COMPANY: URS CORPORATION
COST CODE
ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST · SUITE 300, ST. LOUIS, MO 63110
SITE ADDRESS (Event and City): 900 South Central Ave, ROXANA
STORE #:
PROJECT CONTACT (Name of PM Reports): Elizabeth Kunkel, Wendy Pennington, Bob Billman
PHONE NO:
EMAIL:
CONSULTANT PROJECT #: Roxana Quarterly GW / 21662860.03004
TELEPHONE: 314-429-0100
FAX: 314-429-0462
SAMPLER NAME(S) PRINT: L. Rathbun, B. Lehan
LAB USE ONLY: mc25237
TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND
☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:
DELIVERABLES ☐ LEVEL 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD
TEMPERATURE ON RECEIPT C° Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
Please include "J" values on Reports.
Please provide sample receipt upon login.
☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE VEED TASK

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	PRESERVATIVE HNO3	PRESERVATIVE H2SO4	PRESERVATIVE NONE	PRESERVATIVE OTHER	NO. OF CONT.	VOC 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	MW14-ROX-101013	10/8	0935	Water	2			2	2	6	X	X	X	X	0	
-1S	MW14-ROX-101013-MS		0935								X	X	X	X		
-1SD	MW14-ROX-101013-MSD		0935								X	X	X	X		
-2	P26-ROX-101013		1030								X	X	X	X		
-3	P52-ROX-101013		1310								X	X	X	X		
-4	P55-ROX-101013-EB3		1340								X	X	X	X		
-5	P55-ROX-101013		1455								X	X	X	X		19C, 4E3
-6	P59-ROX-101013		1620								X	X	X	X		
-7	TB-ROX-101013-HCL		0000							2	X					
-8	TB-ROX-101013-ST		0000							2		X				

FIELD NOTES:
TEMPERATURE ON RECEIPT C°
Container PID Readings or Laboratory Notes

Relinquished by (Signature)	Received by (Signature)	Date	Time
Linda Rathbun	FED EX	10/10/13	18:00
FED EX		10/11/13	09:30

2.3, 0.6 0

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MC25237: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC25237 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 10/11/2013 **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

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MC25237: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC25237

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC25237-1 Collected: 10-OCT-13 09:35 By: LRBL Received: 11-OCT-13 By: MW14-ROX-101013						
MC25237-1	SW846 8011	16-OCT-13 12:42	NK	15-OCT-13	PA	V8011SL
MC25237-1	SW846 8270C BY SIM	17-OCT-13 19:36	KR	16-OCT-13	SC	B8270SIMSL
MC25237-1	SW846 8260B	22-OCT-13 14:50	GK			V8260SL+
MC25237-1	SW846 8270C	23-OCT-13 10:17	KR	16-OCT-13	MR	AB8270SL+
MC25237-2 Collected: 10-OCT-13 10:30 By: LRBL Received: 11-OCT-13 By: P66-ROX-101013						
MC25237-2	SW846 8011	16-OCT-13 13:06	NK	15-OCT-13	PA	V8011SL
MC25237-2	SW846 8270C BY SIM	18-OCT-13 11:52	WK	16-OCT-13	SC	B8270SIMSL
MC25237-2	SW846 8260B	22-OCT-13 19:24	GK			V8260SL+
MC25237-2	SW846 8270C	23-OCT-13 10:45	KR	16-OCT-13	MR	AB8270SL+
MC25237-3 Collected: 10-OCT-13 13:10 By: LRBL Received: 11-OCT-13 By: P56-ROX-101013						
MC25237-3	SW846 8011	16-OCT-13 13:30	NK	15-OCT-13	PA	V8011SL
MC25237-3	SW846 8270C BY SIM	18-OCT-13 12:38	WK	16-OCT-13	SC	B8270SIMSL
MC25237-3	SW846 8260B	22-OCT-13 19:51	GK			V8260SL+
MC25237-3	SW846 8270C	23-OCT-13 11:14	KR	16-OCT-13	MR	AB8270SL+
MC25237-3	SW846 8260B	23-OCT-13 17:59	GK			V8260SL+
MC25237-4 Collected: 10-OCT-13 13:40 By: LRBL Received: 11-OCT-13 By: P55-ROX-101013-EB						
MC25237-4	SW846 8011	16-OCT-13 13:55	NK	15-OCT-13	PA	V8011SL
MC25237-4	SW846 8270C BY SIM	18-OCT-13 13:02	WK	16-OCT-13	SC	B8270SIMSL
MC25237-4	SW846 8260B	22-OCT-13 13:55	GK			V8260SL+
MC25237-4	SW846 8270C	23-OCT-13 12:40	KR	16-OCT-13	MR	AB8270SL+
MC25237-5 Collected: 10-OCT-13 14:55 By: LRBL Received: 11-OCT-13 By: P55-ROX-101013						
MC25237-5	SW846 8011	16-OCT-13 14:19	NK	15-OCT-13	PA	V8011SL
MC25237-5	SW846 8270C BY SIM	18-OCT-13 13:25	WK	16-OCT-13	SC	B8270SIMSL
MC25237-5	SW846 8260B	22-OCT-13 20:18	GK			V8260SL+
MC25237-5	SW846 8260B	23-OCT-13 17:32	GK			V8260SL+

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC25237

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC25237-5	SW846 8270C	01-NOV-13 15:41	KR	16-OCT-13	MR	AB8270SL+
MC25237-6 Collected: 10-OCT-13 16:20 By: LRBL Received: 11-OCT-13 By: P59-ROX-101013						
MC25237-6	SW846 8011	16-OCT-13 14:43	NK	15-OCT-13	PA	V8011SL
MC25237-6	SW846 8270C BY SIM	18-OCT-13 13:49	WK	16-OCT-13	SC	B8270SIMSL
MC25237-6	SW846 8260B	22-OCT-13 20:45	GK			V8260SL+
MC25237-6	SW846 8270C	23-OCT-13 13:37	KR	16-OCT-13	MR	AB8270SL+
MC25237-6	SW846 8260B	23-OCT-13 18:27	GK			V8260SL+
MC25237-6	SW846 8270C	01-NOV-13 16:10	KR	16-OCT-13	MR	AB8270SL+
MC25237-7 Collected: 10-OCT-13 00:00 By: LRBL Received: 11-OCT-13 By: TB-ROX-101013-HCL						
MC25237-7	SW846 8260B	22-OCT-13 12:05	GK			V8260SL+
MC25237-8 Collected: 10-OCT-13 00:00 By: LRBL Received: 11-OCT-13 By: TB-ROX-101013-ST						
MC25237-8	SW846 8011	16-OCT-13 15:08	NK	15-OCT-13	PA	V8011SL

Accutest Internal Chain of Custody

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Received: 10/11/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC25237-1.1	Walk In Ref #22	Thomas Abruzzise	10/16/13 14:54	Retrieve from Storage
MC25237-1.2	Walk In Ref #22	Thomas Abruzzise	10/16/13 14:54	Retrieve from Storage
MC25237-1.3	Walk In Ref #22	Thomas Abruzzise	10/16/13 14:54	Retrieve from Storage
MC25237-1.7	VOC Ref #4	Gary Krasinski	10/22/13 11:35	Retrieve from Storage
MC25237-1.7	Gary Krasinski	VOC Ref #4	10/23/13 11:28	Return to Storage
MC25237-1.8	VOC Ref #4	Gary Krasinski	10/22/13 11:35	Retrieve from Storage
MC25237-1.8	Gary Krasinski	VOC Ref #4	10/23/13 11:28	Return to Storage
MC25237-1.11	VOC Ref #4	Gary Krasinski	10/22/13 11:35	Retrieve from Storage
MC25237-1.11	Gary Krasinski	VOC Ref #4	10/23/13 11:28	Return to Storage
MC25237-1.12	VOC Ref #4	Gary Krasinski	10/22/13 11:35	Retrieve from Storage
MC25237-1.12	Gary Krasinski	VOC Ref #4	10/23/13 11:28	Return to Storage
MC25237-1.13	VOC Ref #4	Michael Rolo	10/15/13 07:17	Retrieve from Storage
MC25237-1.13	Michael Rolo		10/16/13 07:19	Depleted
MC25237-1.14	VOC Ref #4	Michael Rolo	10/15/13 07:17	Retrieve from Storage
MC25237-1.14	Michael Rolo		10/16/13 07:19	Depleted
MC25237-1.18	VOC Ref #4	Michael Rolo	10/15/13 07:17	Retrieve from Storage
MC25237-1.18	Michael Rolo		10/16/13 07:19	Depleted
MC25237-2.1	Walk In Ref #22	Thomas Abruzzise	10/16/13 14:54	Retrieve from Storage
MC25237-2.3	VOC Ref #4	Gary Krasinski	10/22/13 11:35	Retrieve from Storage
MC25237-2.3	Gary Krasinski	VOC Ref #4	10/23/13 11:28	Return to Storage
MC25237-2.5	VOC Ref #4	Michael Rolo	10/15/13 07:17	Retrieve from Storage
MC25237-2.5	Michael Rolo		10/16/13 07:19	Depleted
MC25237-3.1	Walk In Ref #22	Thomas Abruzzise	10/16/13 14:54	Retrieve from Storage
MC25237-3.3	VOC Ref #4	Gary Krasinski	10/22/13 11:35	Retrieve from Storage
MC25237-3.3	Gary Krasinski	VOC Ref #4	10/23/13 11:28	Return to Storage
MC25237-3.4	VOC Ref #10	Gary Krasinski	10/23/13 11:47	Retrieve from Storage
MC25237-3.4	Gary Krasinski	VOC Ref #10	10/24/13 09:39	Return to Storage
MC25237-3.5	VOC Ref #4	Michael Rolo	10/15/13 07:17	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Received: 10/11/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC25237-3.5	Michael Rolo		10/16/13 07:19	Depleted
MC25237-4.2	Walk In Ref #22	Thomas Abruzzise	10/16/13 14:54	Retrieve from Storage
MC25237-4.3	VOC Ref #4	Gary Krasinski	10/22/13 11:35	Retrieve from Storage
MC25237-4.3	Gary Krasinski	VOC Ref #4	10/23/13 11:28	Return to Storage
MC25237-4.5	VOC Ref #4	Michael Rolo	10/15/13 07:17	Retrieve from Storage
MC25237-4.5	Michael Rolo		10/16/13 07:19	Depleted
MC25237-5.1	Walk In Ref #22	Thomas Abruzzise	10/16/13 14:54	Retrieve from Storage
MC25237-5.3	VOC Ref #10	Gary Krasinski	10/23/13 11:47	Retrieve from Storage
MC25237-5.3	Gary Krasinski	VOC Ref #10	10/24/13 09:39	Return to Storage
MC25237-5.4	VOC Ref #4	Gary Krasinski	10/22/13 11:35	Retrieve from Storage
MC25237-5.4	Gary Krasinski	VOC Ref #4	10/23/13 11:28	Return to Storage
MC25237-5.6	VOC Ref #4	Michael Rolo	10/15/13 07:17	Retrieve from Storage
MC25237-5.6	Michael Rolo		10/16/13 07:19	Depleted
MC25237-6.1	Walk In Ref #22	Thomas Abruzzise	10/16/13 14:54	Retrieve from Storage
MC25237-6.3	VOC Ref #10	Gary Krasinski	10/23/13 11:47	Retrieve from Storage
MC25237-6.3	Gary Krasinski	VOC Ref #10	10/24/13 09:39	Retnrn to Storage
MC25237-6.4	VOC Ref #4	Gary Krasinski	10/22/13 11:35	Retrieve from Storage
MC25237-6.4	Gary Krasinski	VOC Ref #4	10/23/13 11:28	Retnrn to Storage
MC25237-6.6	VOC Ref #4	Michael Rolo	10/15/13 07:17	Retrieve from Storage
MC25237-6.6	Michael Rolo		10/16/13 07:19	Depleted
MC25237-7.1	VOC Ref #4	Gary Krasinski	10/22/13 11:19	Retrieve from Storage
MC25237-7.1	Gary Krasinski	GCMSU	10/22/13 11:19	Load on Instrument
MC25237-7.1	GCMSU	Gary Krasinski	10/23/13 11:26	Unload from Instrument
MC25237-7.1	Gary Krasinski	VOC Ref #4	10/23/13 11:26	Return to Storage
MC25237-8.1	VOC Ref #4	Michael Rolo	10/15/13 07:17	Retrieve from Storage
MC25237-8.1	Michael Rolo		10/16/13 07:19	Depleted

5.3
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GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU759-MB	U15294.D	1	10/22/13	GK	n/a	n/a	MSU759

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

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6, MC25237-7

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

Method Blank Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU759-MB	U15294.D	1	10/22/13	GK	n/a	n/a	MSU759

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

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6, MC25237-7

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

Method Blank Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU759-MB	U15294.D	1	10/22/13	GK	n/a	n/a	MSU759

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

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6, MC25237-7

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	108%	70-130%
2037-26-5	Toluene-D8	109%	70-130%
460-00-4	4-Bromofluorobenzene	107%	70-130%

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

6.1.1

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Method Blank Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU760-MB	U15323.D	1	10/23/13	GK	n/a	n/a	MSU760

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

MC25237-3, MC25237-5, MC25237-6

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.45	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	110%	70-130%
2037-26-5	Toluene-D8	109%	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	

Blank Spike Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU759-BS	U15292.D	1	10/22/13	GK	n/a	n/a	MSU759

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

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6, MC25237-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	61.2	122	70-130
107-02-8	Acrolein	250	325	130	70-130
107-13-1	Acrylonitrile	50	54.0	108	70-130
71-43-2	Benzene	50	56.2	112	70-130
108-86-1	Bromobenzene	50	54.5	109	70-130
74-97-5	Bromochloromethane	50	57.0	114	70-130
75-27-4	Bromodichloromethane	50	54.8	110	70-130
75-25-2	Bromoform	50	51.3	103	70-130
74-83-9	Bromomethane	50	56.6	113	70-130
78-93-3	2-Butanone (MEK)	50	60.7	121	70-130
104-51-8	n-Butylbenzene	50	53.3	107	70-130
135-98-8	sec-Butylbenzene	50	53.5	107	70-130
98-06-6	tert-Butylbenzene	50	51.9	104	70-130
75-15-0	Carbon disulfide	50	57.0	114	70-130
56-23-5	Carbon tetrachloride	50	56.1	112	70-130
108-90-7	Chlorobenzene	50	52.1	104	70-130
75-00-3	Chloroethane	50	55.3	111	70-130
110-75-8	2-Chloroethyl vinyl ether	50	63.3	127	70-130
67-66-3	Chloroform	50	52.7	105	70-130
74-87-3	Chloromethane	50	63.0	126	70-130
95-49-8	o-Chlorotoluene	50	50.1	100	70-130
106-43-4	p-Chlorotoluene	50	50.9	102	70-130
124-48-1	Dibromochloromethane	50	52.1	104	70-130
95-50-1	1,2-Dichlorobenzene	50	51.0	102	70-130
541-73-1	1,3-Dichlorobenzene	50	52.5	105	70-130
106-46-7	1,4-Dichlorobenzene	50	53.9	108	70-130
75-71-8	Dichlorodifluoromethane	50	53.3	107	70-130
75-34-3	1,1-Dichloroethane	50	55.8	112	70-130
107-06-2	1,2-Dichloroethane	50	52.9	106	70-130
75-35-4	1,1-Dichloroethene	50	56.5	113	70-130
156-59-2	cis-1,2-Dichloroethene	50	54.0	108	70-130
156-60-5	trans-1,2-Dichloroethene	50	56.1	112	70-130
78-87-5	1,2-Dichloropropane	50	54.5	109	70-130
142-28-9	1,3-Dichloropropane	50	53.9	108	70-130
594-20-7	2,2-Dichloropropane	50	58.3	117	70-130
563-58-6	1,1-Dichloropropene	50	57.2	114	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU759-BS	U15292.D	1	10/22/13	GK	n/a	n/a	MSU759

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

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6, MC25237-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	49.0	98	70-130
10061-02-6	trans-1,3-Dichloropropene	50	52.8	106	70-130
123-91-1	1,4-Dioxane	250	268	107	70-130
97-63-2	Ethyl methacrylate	50	50.0	100	77-137
100-41-4	Ethylbenzene	50	52.7	105	70-130
87-68-3	Hexachlorobutadiene	50	51.2	102	70-130
591-78-6	2-Hexanone	50	53.2	106	70-130
98-82-8	Isopropylbenzene	50	53.7	107	70-130
99-87-6	p-Isopropyltoluene	50	55.2	110	70-130
1634-04-4	Methyl Tert Butyl Ether	50	51.9	104	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	50.1	100	70-130
74-95-3	Methylene bromide	50	55.6	111	70-130
75-09-2	Methylene chloride	50	54.0	108	70-130
91-20-3	Naphthalene	50	48.4	97	70-130
103-65-1	n-Propylbenzene	50	50.6	101	70-130
100-42-5	Styrene	50	54.2	108	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	55.9	112	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	51.2	102	70-130
127-18-4	Tetrachloroethene	50	53.5	107	70-130
108-88-3	Toluene	50	53.1	106	70-130
87-61-6	1,2,3-Trichlorobenzene	50	50.5	101	70-130
120-82-1	1,2,4-Trichlorobenzene	50	51.4	103	70-130
71-55-6	1,1,1-Trichloroethane	50	55.3	111	70-130
79-00-5	1,1,2-Trichloroethane	50	52.8	106	70-130
79-01-6	Trichloroethene	50	55.2	110	70-130
75-69-4	Trichlorofluoromethane	50	50.2	100	70-130
96-18-4	1,2,3-Trichloropropane	50	51.2	102	70-130
95-63-6	1,2,4-Trimethylbenzene	50	51.1	102	70-130
108-67-8	1,3,5-Trimethylbenzene	50	52.2	104	70-130
108-05-4	Vinyl Acetate	50	55.1	110	70-130
75-01-4	Vinyl chloride	50	46.1	92	70-130
	m,p-Xylene	100	103	103	70-130
95-47-6	o-Xylene	50	52.7	105	70-130
1330-20-7	Xylene (total)	150	156	104	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU759-BS	U15292.D	1	10/22/13	GK	n/a	n/a	MSU759

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

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6, MC25237-7

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	110%	70-130%
2037-26-5	Toluene-D8	112%	70-130%
460-00-4	4-Bromofluorobenzene	105%	70-130%

6.2.1

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* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU760-BS	U15321.D	1	10/23/13	GK	n/a	n/a	MSU760

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

MC25237-3, MC25237-5, MC25237-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	55.2	110	70-130
100-41-4	Ethylbenzene	50	51.9	104	70-130
108-88-3	Toluene	50	52.4	105	70-130
95-63-6	1,2,4-Trimethylbenzene	50	53.1	106	70-130
	m,p-Xylene	100	103	103	70-130
95-47-6	o-Xylene	50	51.8	104	70-130
1330-20-7	Xylene (total)	150	154	103	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	107%	70-130%
2037-26-5	Toluene-D8	111%	70-130%
460-00-4	4-Bromofluorobenzene	106%	70-130%

* = Outside of Control Limits.

6.2.2

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Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25237-1MS	U15303.D	1	10/22/13	GK	n/a	n/a	MSU759
MC25237-1MSD	U15304.D	1	10/22/13	GK	n/a	n/a	MSU759
MC25237-1	U15302.D	1	10/22/13	GK	n/a	n/a	MSU759

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

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6, MC25237-7

CAS No.	Compound	MC25237-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	41.9	84	41.6	83	1	70-130/30
107-02-8	Acrolein	ND		250	285	114	289	116	1	70-130/30
107-13-1	Acrylonitrile	ND		50	53.2	106	54.4	109	2	70-130/30
71-43-2	Benzene	ND		50	57.1	114	57.5	115	1	70-130/30
108-86-1	Bromobenzene	ND		50	54.5	109	55.7	111	2	70-130/30
74-97-5	Bromochloromethane	ND		50	56.3	113	56.2	112	0	70-130/30
75-27-4	Bromodichloromethane	ND		50	53.7	107	53.7	107	0	70-130/30
75-25-2	Bromoform	ND		50	45.9	92	45.4	91	1	70-130/30
74-83-9	Bromomethane	ND		50	55.0	110	56.6	113	3	70-130/30
78-93-3	2-Butanone (MEK)	ND		50	47.7	95	51.5	103	8	70-130/30
104-51-8	n-Butylbenzene	ND		50	52.5	105	54.0	108	3	70-130/30
135-98-8	sec-Butylbenzene	1.3	J	50	53.7	105	55.3	108	3	70-130/30
98-06-6	tert-Butylbenzene	1.2	J	50	53.2	104	55.5	109	4	70-130/30
75-15-0	Carbon disulfide	ND		50	47.9	96	49.5	99	3	70-130/30
56-23-5	Carbon tetrachloride	ND		50	55.9	112	57.3	115	2	70-130/30
108-90-7	Chlorobenzene	ND		50	53.3	107	52.9	106	1	70-130/30
75-00-3	Chloroethane	ND		50	56.7	113	56.5	113	0	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		50	ND	0* a	ND	0* a	nc	70-130/30
67-66-3	Chloroform	ND		50	50.5	101	51.4	103	2	70-130/30
74-87-3	Chloromethane	ND		50	61.8	124	63.7	127	3	70-130/30
95-49-8	o-Chlorotoluene	ND		50	50.8	102	52.1	104	3	70-130/30
106-43-4	p-Chlorotoluene	ND		50	51.0	102	52.0	104	2	70-130/30
124-48-1	Dibromochloromethane	ND		50	48.4	97	48.4	97	0	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		50	53.0	106	54.0	108	2	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		50	52.9	106	54.5	109	3	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		50	54.8	110	55.9	112	2	70-130/30
75-71-8	Dichlorodifluoromethane	ND		50	55.8	112	58.9	118	5	70-130/30
75-34-3	1,1-Dichloroethane	ND		50	54.5	109	57.5	115	5	70-130/30
107-06-2	1,2-Dichloroethane	ND		50	53.4	107	53.5	107	0	70-130/30
75-35-4	1,1-Dichloroethene	ND		50	55.1	110	58.4	117	6	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50	53.5	107	53.5	107	0	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50	55.0	110	56.8	114	3	70-130/30
78-87-5	1,2-Dichloropropane	ND		50	55.6	111	54.8	110	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	55.6	111	53.4	107	4	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	52.2	104	54.6	109	4	70-130/30
563-58-6	1,1-Dichloropropene	ND		50	55.3	111	57.6	115	4	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25237-1MS	U15303.D	1	10/22/13	GK	n/a	n/a	MSU759
MC25237-1MSD	U15304.D	1	10/22/13	GK	n/a	n/a	MSU759
MC25237-1	U15302.D	1	10/22/13	GK	n/a	n/a	MSU759

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

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6, MC25237-7

CAS No.	Compound	MC25237-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		50	47.3	95	46.4	93	2	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		50	49.8	100	50.4	101	1	70-130/30
123-91-1	1,4-Dioxane	ND		250	262	105	245	98	7	70-130/30
97-63-2	Ethyl methacrylate	ND		50	47.7	95	47.9	96	0	72-139/30
100-41-4	Ethylbenzene	ND		50	50.7	101	50.9	102	0	70-130/30
87-68-3	Hexachlorobutadiene	ND		50	54.7	109	55.7	111	2	70-130/30
591-78-6	2-Hexanone	ND		50	46.5	93	46.4	93	0	70-130/30
98-82-8	Isopropylbenzene	1.1	J	50	54.4	107	56.1	110	3	70-130/30
99-87-6	p-Isopropyltoluene	1.1	J	50	52.3	102	53.1	104	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		50	52.0	104	52.6	105	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	55.8	112	55.7	111	0	70-130/30
74-95-3	Methylene bromide	ND		50	57.2	114	56.2	112	2	70-130/30
75-09-2	Methylene chloride	ND		50	53.7	107	54.2	108	1	70-130/30
91-20-3	Naphthalene	ND		50	55.7	111	56.3	113	1	70-130/30
103-65-1	n-Propylbenzene	ND		50	50.5	101	51.6	103	2	70-130/30
100-42-5	Styrene	ND		50	27.7	55* a	27.5	55* a	1	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	57.1	114	57.0	114	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	65.2	130	65.2	130	0	70-130/30
127-18-4	Tetrachloroethene	ND		50	56.1	112	56.3	113	0	70-130/30
108-88-3	Toluene	ND		50	52.0	104	52.2	104	0	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	53.3	107	54.2	108	2	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	54.5	109	55.0	110	1	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		50	54.3	109	58.0	116	7	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50	54.7	109	54.9	110	0	70-130/30
79-01-6	Trichloroethene	ND		50	53.6	107	51.4	103	4	70-130/30
75-69-4	Trichlorofluoromethane	ND		50	48.3	97	50.0	100	3	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		50	52.1	104	52.9	106	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	0.88	J	50	41.2	81	43.0	84	4	70-130/30
108-67-8	1,3,5-Trimethylbenzene	1.1	J	50	37.6	73	39.2	76	4	70-130/30
108-05-4	Vinyl Acetate	ND		50	56.8	114	57.1	114	1	70-130/30
75-01-4	Vinyl chloride	ND		50	45.3	91	47.2	94	4	70-130/30
	m,p-Xylene	ND		100	90.3	90	90.8	91	1	70-130/30
95-47-6	o-Xylene	ND		50	46.2	92	46.3	93	0	70-130/30
1330-20-7	Xylene (total)	ND		150	136	90	137	91	1	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25237-1MS	U15303.D	1	10/22/13	GK	n/a	n/a	MSU759
MC25237-1MSD	U15304.D	1	10/22/13	GK	n/a	n/a	MSU759
MC25237-1	U15302.D	1	10/22/13	GK	n/a	n/a	MSU759

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

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6, MC25237-7

CAS No.	Surrogate Recoveries	MS	MSD	MC25237-1	Limits
1868-53-7	Dibromofluoromethane	114%	114%	117%	70-130%
2037-26-5	Toluene-D8	109%	108%	107%	70-130%
460-00-4	4-Bromofluorobenzene	105%	106%	107%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25339-2MS	U15332.D	5	10/23/13	GK	n/a	n/a	MSU760
MC25339-2MSD	U15333.D	5	10/23/13	GK	n/a	n/a	MSU760
MC25339-2	U15326.D	1	10/23/13	GK	n/a	n/a	MSU760

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

MC25237-3, MC25237-5, MC25237-6

CAS No.	Compound	MC25339-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		250	284	114	282	113	1	70-130/30
100-41-4	Ethylbenzene	ND		250	278	111	271	108	3	70-130/30
108-88-3	Toluene	ND		250	266	106	269	108	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	270	108	270	108	0	70-130/30
	m,p-Xylene	ND		500	532	106	522	104	2	70-130/30
95-47-6	o-Xylene	ND		250	274	110	268	107	2	70-130/30
1330-20-7	Xylene (total)	ND		750	805	107	790	105	2	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC25339-2	Limits
1868-53-7	Dibromofluoromethane	111%	110%	115%	70-130%
2037-26-5	Toluene-D8	109%	110%	105%	70-130%
460-00-4	4-Bromofluorobenzene	106%	108%	105%	70-130%

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSU759-CC756	Injection Date:	10/22/13
Lab File ID:	U15291.D	Injection Time:	09:40
Instrument ID:	GCMSU	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	128244	8.98	201043	9.85	101164	13.12	97701	15.69	53132	6.54
Upper Limit [a]	256488	9.48	402086	10.35	202328	13.62	195402	16.19	106264	7.04
Lower Limit [b]	64122	8.48	100522	9.35	50582	12.62	48851	15.19	26566	6.04
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	1S 4 AREA	RT	1S 5 AREA	RT
MSU759-BS	129618	8.98	202338	9.85	102722	13.12	101360	15.68	58420	6.55
MSU759-MB	122815	8.98	191507	9.85	94939	13.12	93478	15.69	55986	6.55
ZZZZZZ	121909	8.98	187701	9.85	95159	13.12	93352	15.69	48193	6.55
MC25237-7	126190	8.98	191979	9.85	96456	13.12	93794	15.69	52165	6.54
ZZZZZZ	126288	8.98	193143	9.85	97576	13.12	95224	15.69	56784	6.55
ZZZZZZ	126972	8.98	194930	9.85	97617	13.12	96046	15.69	58291	6.55
ZZZZZZ	123577	8.98	191800	9.85	97551	13.12	94636	15.69	58828	6.55
MC25237-4	124027	8.98	190229	9.85	95391	13.12	92170	15.69	59909	6.55
ZZZZZZ	120741	8.98	189006	9.85	93686	13.12	92362	15.69	62055	6.55
MC25237-1	120561	8.98	186317	9.85	93909	13.12	90234	15.69	60318	6.54
MC25237-1MS	126576	8.98	192899	9.85	97565	13.12	94846	15.68	62996	6.55
MC25237-1MSD	127222	8.97	197716	9.85	101010	13.12	96419	15.68	62430	6.54
ZZZZZZ	129733	8.98	198547	9.85	100780	13.12	98504	15.69	65412	6.55
ZZZZZZ	125784	8.98	191798	9.85	97789	13.12	95432	15.69	64433	6.55
ZZZZZZ	126282	8.98	194898	9.85	99206	13.12	96897	15.69	62841	6.55
ZZZZZZ	123381	8.98	188048	9.85	94495	13.12	94188	15.69	57834	6.54
ZZZZZZ	124861	8.98	193817	9.85	96270	13.12	94501	15.69	58806	6.55
ZZZZZZ	120565	8.98	186805	9.85	94839	13.12	90857	15.69	55677	6.55
ZZZZZZ	118413	8.98	180898	9.85	90673	13.12	89755	15.69	53857	6.55
MC25237-2	120414	8.98	187944	9.85	94382	13.12	95198	15.69	63799	6.55
MC25237-3	132239	8.97	201708	9.85	104781	13.12	102985	15.69	77490	6.55
MC25237-5	133970	8.98	208163	9.85	104474	13.12	105232	15.69	58533	6.55
MC25237-6	141946	8.97	214265	9.85	115125	13.12	113691	15.69	102559	6.56

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

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

Volatile Internal Standard Area Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSU760-CC756	Injection Date:	10/23/13
Lab File ID:	U15320.D	Injection Time:	10:15
Instrument ID:	GCMSU	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	129996	8.97	204979	9.85	101468	13.12	99475	15.69	54082	6.54
Upper Limit [a]	259992	9.47	409958	10.35	202936	13.62	198950	16.19	108164	7.04
Lower Limit [b]	64998	8.47	102490	9.35	50734	12.62	49738	15.19	27041	6.04
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSU760-BS	132131	8.98	205744	9.85	103711	13.12	100351	15.69	54045	6.54
MSU760-MB	127398	8.98	195998	9.85	97369	13.12	94980	15.69	52765	6.55
ZZZZZZ	118863	8.98	185701	9.85	90571	13.12	91576	15.69	42884	6.55
ZZZZZZ	121395	8.98	189416	9.85	94417	13.12	93419	15.69	46091	6.55
MC25339-2	120966	8.98	186218	9.85	93690	13.12	93336	15.69	47542	6.54
ZZZZZZ	119134	8.98	183103	9.85	89966	13.12	91903	15.69	47343	6.55
ZZZZZZ	118751	8.98	186466	9.85	93321	13.12	90912	15.69	51680	6.56
ZZZZZZ	121238	8.98	188594	9.85	93748	13.12	94377	15.69	54822	6.55
ZZZZZZ	123985	8.98	192172	9.85	97195	13.12	95096	15.69	53472	6.55
ZZZZZZ	126514	8.98	196013	9.85	99687	13.12	98443	15.69	48843	6.55
MC25339-2MS	131706	8.97	204796	9.85	100731	13.12	99377	15.69	49341	6.54
MC25339-2MSD	127970	8.98	199347	9.85	99001	13.12	95484	15.69	50279	6.55
ZZZZZZ	133560	8.98	212092	9.85	104773	13.12	98017	15.69	52932	6.54
ZZZZZZ	130732	8.98	199965	9.85	98752	13.12	97168	15.69	51928	6.55
MC25237-5	130912	8.98	203090	9.85	100864	13.12	97564	15.69	51728	6.55
MC25237-3	123366	8.98	190567	9.85	94912	13.12	93336	15.69	50252	6.55
MC25237-6	123846	8.98	193388	9.85	96295	13.12	93735	15.69	49963	6.55
ZZZZZZ	123135	8.98	192126	9.85	97521	13.12	93370	15.69	47814	6.55
ZZZZZZ	120606	8.98	186953	9.85	92178	13.12	92494	15.69	48092	6.54
ZZZZZZ	122777	8.98	195733	9.85	92943	13.12	92256	15.69	49212	6.55
ZZZZZZ	121924	8.98	192413	9.85	91525	13.12	88805	15.69	48653	6.55
ZZZZZZ	123331	8.98	188770	9.85	95733	13.12	95176	15.69	51845	6.55
ZZZZZZ	131727	9.00	195873	9.87	105713	13.12	98336	15.69	53135	6.56
ZZZZZZ	140212	9.05	211007	9.91	108591	13.13	100448	15.69	56205	6.57

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

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

Volatile Surrogate Recovery Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260B Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC25237-1	U15302.D	117.0	107.0	107.0
MC25237-2	U15312.D	117.0	110.0	103.0
MC25237-3	U15337.D	115.0	110.0	105.0
MC25237-3	U15313.D	112.0	112.0	104.0
MC25237-4	U15300.D	110.0	110.0	106.0
MC25237-5	U15336.D	114.0	109.0	106.0
MC25237-5	U15314.D	114.0	111.0	103.0
MC25237-6	U15338.D	111.0	110.0	105.0
MC25237-6	U15315.D	110.0	113.0	108.0
MC25237-7	U15296.D	107.0	109.0	106.0
MC25237-1MS	U15303.D	114.0	109.0	105.0
MC25237-1MSD	U15304.D	114.0	108.0	106.0
MC25339-2MS	U15332.D	111.0	109.0	106.0
MC25339-2MSD	U15333.D	110.0	110.0	108.0
MSU759-BS	U15292.D	110.0	112.0	105.0
MSU759-MB	U15294.D	108.0	109.0	107.0
MSU760-BS	U15321.D	107.0	111.0	106.0
MSU760-MB	U15323.D	110.0	109.0	108.0

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

6.5.1

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35286-MB	W14991.D	1	10/23/13	KR	10/16/13	OP35286	MSW676

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

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6

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

Method Blank Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35286-MB	W14991.D	1	10/23/13	KR	10/16/13	OP35286	MSW676

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

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6

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

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	42%	15-110%
4165-62-2	Phenol-d5	30%	15-110%
118-79-6	2,4,6-Tribromophenol	94%	15-110%
4165-60-0	Nitrobenzene-d5	78%	30-130%
321-60-8	2-Fluorobiphenyl	82%	30-130%
1718-51-0	Terphenyl-d14	109%	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: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35287-MB	I86476.D	1	10/17/13	KR	10/16/13	OP35287	MSI3218

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

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.032	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	ug/l	
85-01-8	Phenanthrene	ND	0.050	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	85%	30-130%
321-60-8	2-Fluorobiphenyl	77%	30-130%
1718-51-0	Terphenyl-d14	101%	30-130%

Blank Spike Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35286-BS	W14992.D	1	10/23/13	KR	10/16/13	OP35286	MSW676

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

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	6.4	13* [a]	30-130
95-57-8	2-Chlorophenol	50	38.1	76	30-130
59-50-7	4-Chloro-3-methyl phenol	50	35.4	71	30-130
120-83-2	2,4-Dichlorophenol	50	43.4	87	30-130
105-67-9	2,4-Dimethylphenol	50	38.2	76	30-130
51-28-5	2,4-Dinitrophenol	50	40.4	81	30-130
534-52-1	4,6-Dinitro-o-cresol	50	49.5	99	30-130
95-48-7	2-Methylphenol	50	33.8	68	30-130
	3&4-Methylphenol	100	62.5	63	30-130
88-75-5	2-Nitrophenol	50	43.5	87	30-130
100-02-7	4-Nitrophenol	50	14.7	29* [a]	30-130
87-86-5	Pentachlorophenol	50	40.5	81	30-130
108-95-2	Phenol	50	18.0	36	30-130
95-95-4	2,4,5-Trichlorophenol	50	42.7	85	30-130
88-06-2	2,4,6-Trichlorophenol	50	44.5	89	30-130
62-53-3	Aniline	50	32.8	66	40-140
101-55-3	4-Bromophenyl phenyl ether	50	47.7	95	40-140
85-68-7	Butyl benzyl phthalate	50	44.5	89	40-140
100-51-6	Benzyl Alcohol	50	34.7	69	40-140
91-58-7	2-Chloronaphthalene	50	42.3	85	40-140
106-47-8	4-Chloroaniline	50	38.6	77	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	46.4	93	40-140
111-44-4	bis(2-Chloroethyl)ether	50	39.9	80	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	41.5	83	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	40.4	81	40-140
122-66-7	1,2-Diphenylhydrazine	50	40.1	80	40-140
121-14-2	2,4-Dinitrotoluene	50	40.2	80	40-140
606-20-2	2,6-Dinitrotoluene	50	39.0	78	40-140
91-94-1	3,3'-Dichlorobenzidine	50	43.2	86	40-140
132-64-9	Dibenzofuran	50	38.4	77	40-140
84-74-2	Di-n-butyl phthalate	50	39.5	79	40-140
117-84-0	Di-n-octyl phthalate	50	50.5	101	40-140
84-66-2	Diethyl phthalate	50	37.8	76	40-140
131-11-3	Dimethyl phthalate	50	35.3	71	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	46.1	92	40-140
118-74-1	Hexachlorobenzene	50	45.3	91	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35286-BS	W14992.D	1	10/23/13	KR	10/16/13	OP35286	MSW676

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

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	21.1	42	40-140
67-72-1	Hexachloroethane	50	28.8	58	40-140
78-59-1	Isophorone	50	38.2	76	40-140
88-74-4	2-Nitroaniline	50	42.6	85	40-140
99-09-2	3-Nitroaniline	50	37.8	76	40-140
100-01-6	4-Nitroaniline	50	34.9	70	40-140
98-95-3	Nitrobenzene	50	37.8	76	40-140
62-75-9	n-Nitrosodimethylamine	50	24.7	49	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	39.7	79	40-140
86-30-6	N-Nitrosodiphenylamine	50	88.5	88	40-140
110-86-1	Pyridine	50	20.6	41	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	56%	15-110%
4165-62-2	Phenol-d5	37%	15-110%
118-79-6	2,4,6-Tribromophenol	113%* b	15-110%
4165-60-0	Nitrobenzene-d5	86%	30-130%
321-60-8	2-Fluorobiphenyl	89%	30-130%
1718-51-0	Terphenyl-d14	108%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.
(b) Ontside control limits. Results confirmed by reanalysis.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35287-BS	I86477.D	1	10/17/13	KR	10/16/13	OP35287	MSI3218
OP35287-BSD	I86478.D	1	10/17/13	KR	10/16/13	OP35287	MSI3218

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

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	50	38.4	77	36.7	73	5	40-140/30
208-96-8	Acenaphthylene	50	31.8	64	30.0	60	6	40-140/30
120-12-7	Anthracene	50	39.7	79	38.0	76	4	40-140/30
56-55-3	Benzo(a)anthracene	50	42.9	86	43.5	87	1	40-140/30
50-32-8	Benzo(a)pyrene	50	42.9	86	42.5	85	1	40-140/30
205-99-2	Benzo(b)fluoranthene	50	44.1	88	41.7	83	6	40-140/30
191-24-2	Benzo(g,h,i)perylene	50	43.3	87	44.9	90	4	40-140/30
207-08-9	Benzo(k)fluoranthene	50	46.0	92	45.1	90	2	40-140/30
218-01-9	Chrysene	50	39.4	79	39.8	80	1	40-140/30
53-70-3	Dibenzo(a,h)anthracene	50	46.1	92	46.3	93	0	40-140/30
206-44-0	Fluoranthene	50	40.2	80	39.2	78	3	40-140/30
86-73-7	Fluorene	50	40.9	82	38.7	77	6	40-140/30
193-39-5	Indeno(1,2,3-cd)pyrene	50	45.8	92	46.3	93	1	40-140/30
90-12-0	1-Methylnapbthalene	50	36.9	74	35.3	71	4	40-140/30
91-57-6	2-Methylnaphthalene	50	34.9	70	33.6	67	4	40-140/30
85-01-8	Pbenanthrene	50	41.8	84	40.9	82	2	40-140/30
129-00-0	Pyrene	50	38.9	78	38.1	76	2	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
4165-60-0	Nitrobenzene-d5	93%	89%	30-130%
321-60-8	2-Fluorobiphenyl	83%	78%	30-130%
1718-51-0	Terphenyl-d14	104%	98%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35286-MS	W14993.D	1	10/23/13	KR	10/16/13	OP35286	MSW676
OP35286-MSD	W14994.D	1	10/23/13	KR	10/16/13	OP35286	MSW676
MC25237-1	W14995.D	1	10/23/13	KR	10/16/13	OP35286	MSW676

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

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6

CAS No.	Compound	MC25237-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		55.6	28.8	52	27.1	50	6	30-130/20
95-57-8	2-Chlorophenol	ND		55.6	36.9	66	38.0	70	3	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		55.6	35.6	64	36.7	68	3	30-130/20
120-83-2	2,4-Dichlorophenol	ND		55.6	41.9	75	42.9	79	2	30-130/20
105-67-9	2,4-Dimethylphenol	ND		55.6	39.1	70	41.1	76	5	30-130/20
51-28-5	2,4-Dinitrophenol	ND		55.6	47.9	86	47.3	87	1	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		55.6	53.8	97	55.6	102	3	30-130/20
95-48-7	2-Methylphenol	ND		55.6	33.8	61	36.5	67	8	30-130/20
	3&4-Methylphenol	ND		111	62.9	57	67.7	62	7	30-130/20
88-75-5	2-Nitrophenol	ND		55.6	46.0	83	45.8	84	0	30-130/20
100-02-7	4-Nitrophenol	ND		55.6	17.1	31	16.2	30	5	30-130/20
87-86-5	Pentachlorophenol	ND		55.6	45.4	82	45.8	84	1	30-130/20
108-95-2	Phenol	ND		55.6	19.4	35	21.4	39	10	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		55.6	46.4	84	44.8	82	4	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		55.6	44.9	81	45.7	84	2	30-130/20
62-53-3	Aniline	ND		55.6	33.0	59	34.2	63	4	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		55.6	50.2	90	50.8	93	1	40-140/20
85-68-7	Butyl benzyl phthalate	ND		55.6	49.4	89	49.0	90	1	40-140/20
100-51-6	Benzyl Alcohol	ND		55.6	36.4	66	37.9	70	4	40-140/20
91-58-7	2-Chloronaphthalene	ND		55.6	46.7	84	46.6	86	0	40-140/20
106-47-8	4-Chloroaniline	ND		55.6	39.5	71	40.0	74	1	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		55.6	49.1	88	50.0	92	2	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		55.6	42.3	76	43.7	80	3	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		55.6	44.2	80	45.3	83	2	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		55.6	43.8	79	43.9	81	0	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		55.6	42.9	77	42.4	78	1	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		55.6	43.7	79	43.3	80	1	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		55.6	43.5	78	42.1	77	3	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		55.6	40.0	72	39.7	73	1	40-140/20
132-64-9	Dibenzofuran	0.19	J	55.6	42.5	76	41.2	75	3	40-140/20
84-74-2	Di-n-butyl phthalate	ND		55.6	42.1	76	42.9	79	2	40-140/20
117-84-0	Di-n-octyl phthalate	ND		55.6	54.2	98	53.6	99	1	40-140/20
84-66-2	Diethyl phthalate	ND		55.6	43.1	78	42.8	79	1	40-140/20
131-11-3	Dimethyl phthalate	ND		55.6	44.6	80	43.7	80	2	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		55.6	51.0	92	51.4	95	1	40-140/20
118-74-1	Hexachlorobenzene	ND		55.6	48.9	88	49.6	91	1	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35286-MS	W14993.D	1	10/23/13	KR	10/16/13	OP35286	MSW676
OP35286-MSD	W14994.D	1	10/23/13	KR	10/16/13	OP35286	MSW676
MC25237-1	W14995.D	1	10/23/13	KR	10/16/13	OP35286	MSW676

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

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6

7.4.1

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CAS No.	Compound	MC25237-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		55.6	23.7	43	25.1	46	6	40-140/20
67-72-1	Hexachloroethane	ND		55.6	30.3	55	32.0	59	5	40-140/20
78-59-1	Isophorone	ND		55.6	40.8	73	41.3	76	1	40-140/20
88-74-4	2-Nitroaniline	ND		55.6	47.0	85	47.1	87	0	40-140/20
99-09-2	3-Nitroaniline	ND		55.6	41.4	75	41.3	76	0	40-140/20
100-01-6	4-Nitroaniline	ND		55.6	37.5	68	36.9	68	2	40-140/20
98-95-3	Nitrobenzene	ND		55.6	40.7	73	42.3	78	4	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		55.6	26.6	48	28.1	52	5	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		55.6	41.5	75	42.5	78	2	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		55.6	97.5	88	97.0	89	1	40-140/20
110-86-1	Pyridine	ND		55.6	22.2	40	22.7	42	2	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25237-1	Limits
367-12-4	2-Fluorophenol	42%	44%	34%	15-110%
4165-62-2	Phenol-d5	33%	37%	27%	15-110%
118-79-6	2,4,6-Tribromophenol	91%	99%	83%	15-110%
4165-60-0	Nitrobenzene-d5	77%	83%	73%	30-130%
321-60-8	2-Fluorobiphenyl	81%	84%	78%	30-130%
1718-51-0	Terphenyl-d14	94%	99%	97%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35287-MS	I86479.D	1	10/17/13	KR	10/16/13	OP35287	MSI3218
OP35287-MSD	I86480.D	1	10/17/13	KR	10/16/13	OP35287	MSI3218
MC25237-1	I86481.D	1	10/17/13	KR	10/16/13	OP35287	MSI3218

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

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6

7.4.2

7

CAS No.	Compound	MC25237-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	0.65		55.6	41.6	74	42.0	76	1	40-140/20
208-96-8	Acenaphthylene	0.11		55.6	34.1	61	34.2	63	0	40-140/20
120-12-7	Anthracene	ND		55.6	43.0	77	42.3	78	2	40-140/20
56-55-3	Benzo(a)anthracene	ND		55.6	47.0	85	46.5	86	1	40-140/20
50-32-8	Benzo(a)pyrene	ND		55.6	46.0	83	46.2	85	0	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		55.6	46.6	84	47.7	88	2	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		55.6	43.7	79	45.3	83	4	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		55.6	49.9	90	47.3	87	5	40-140/20
218-01-9	Chrysene	ND		55.6	43.0	77	42.5	78	1	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		55.6	47.7	86	48.6	89	2	40-140/20
206-44-0	Fluoranthene	ND		55.6	43.3	78	43.5	80	0	40-140/20
86-73-7	Fluorene	0.34		55.6	43.8	78	43.6	80	0	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		55.6	47.3	85	48.3	89	2	40-140/20
90-12-0	1-Methylnaphthalene	18.4		55.6	57.4	70	58.9	75	3	40-140/20
91-57-6	2-Methylnaphthalene	ND		55.6	38.2	69	38.4	71	1	40-140/20
85-01-8	Phenanthrene	ND		55.6	45.4	82	45.4	84	0	40-140/20
129-00-0	Pyrene	ND		55.6	41.7	75	41.6	77	0	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25237-1	Limits
4165-60-0	Nitrobenzene-d5	84%	89%	81%	30-130%
321-60-8	2-Fluorobiphenyl	74%	79%	73%	30-130%
1718-51-0	Terphenyl-d14	91%	95%	92%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3218-CC3155	Injection Date:	10/17/13
Lab File ID:	I86475.D	Injection Time:	17:14
Instrument ID:	GCMSI	Method:	SW846 8270C 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	186539	4.08	553236	5.07	327771	6.51	572418	7.85	513909	10.64	873289	12.12
Upper Limit [a]	373078	4.58	1106472	5.57	655542	7.01	1144836	8.35	1027818	11.14	1746578	12.62
Lower Limit [b]	93270	3.58	276618	4.57	163886	6.01	286209	7.35	256955	10.14	436645	11.62
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
OP35287-MB	171252	4.08	508401	5.07	303024	6.51	515608	7.85	469061	10.64	787389	12.12
OP35287-BS	178417	4.08	527329	5.07	310779	6.51	538482	7.86	460349	10.64	751898	12.12
OP35287-BSD	160356	4.08	481078	5.07	288664	6.51	496281	7.85	439169	10.64	736923	12.12
OP35287-MS	172743	4.08	511836	5.07	302954	6.51	519687	7.86	452019	10.64	758451	12.12
OP35287-MSD	164541	4.08	480426	5.07	284291	6.51	483193	7.86	410805	10.64	684461	12.12
MC25237-1	171575	4.08	505779	5.07	300701	6.51	517061	7.85	457462	10.64	762887	12.12
ZZZZZZ	157861	4.08	468565	5.07	281521	6.51	482906	7.85	430578	10.64	735209	12.12
ZZZZZZ	159655	4.08	477515	5.07	282839	6.51	491205	7.85	441935	10.64	746315	12.12
ZZZZZZ	166139	4.08	493659	5.07	293538	6.51	497903	7.85	454364	10.64	760524	12.12
ZZZZZZ	157111	4.08	468747	5.07	278530	6.51	480938	7.85	434643	10.64	731777	12.12
ZZZZZZ	147374	4.08	434347	5.07	260211	6.51	452132	7.85	412041	10.64	686868	12.12
ZZZZZZ	147040	4.08	447381	5.07	262383	6.51	454717	7.85	408504	10.64	662931	12.12
ZZZZZZ	148092	4.08	435286	5.07	259577	6.51	449464	7.85	394839	10.64	646022	12.12
ZZZZZZ	143453	4.08	427401	5.07	255540	6.51	447714	7.85	406328	10.64	669459	12.12
ZZZZZZ	155044	4.08	454073	5.07	272072	6.51	466607	7.85	427744	10.64	711118	12.12
ZZZZZZ	153144	4.08	449210	5.07	267112	6.51	458618	7.85	412185	10.64	669905	12.12
ZZZZZZ	153917	4.08	455693	5.07	273877	6.51	470604	7.85	427275	10.64	683730	12.12
ZZZZZZ	156177	4.08	457378	5.07	273078	6.51	469896	7.85	411033	10.64	655659	12.12
ZZZZZZ	148791	4.08	437204	5.07	261707	6.51	448436	7.85	410557	10.64	667678	12.12
ZZZZZZ	155809	4.08	460267	5.07	272622	6.51	469776	7.85	419414	10.64	686574	12.12
ZZZZZZ	149802	4.08	445240	5.07	268158	6.51	461770	7.85	420268	10.64	688312	12.12
ZZZZZZ	146370	4.08	436742	5.07	258770	6.51	443927	7.85	404157	10.64	665570	12.12
ZZZZZZ	163089	4.08	481081	5.07	287867	6.51	488299	7.85	437756	10.64	716088	12.12
ZZZZZZ	202919	4.09	623028	5.08	387708	6.52	635631	7.86	586125	10.64	954584	12.12
ZZZZZZ	178802	4.08	538019	5.07	333670	6.52	550429	7.86	501852	10.64	829624	12.12
ZZZZZZ	145455	4.08	426804	5.07	253044	6.51	435862	7.85	384821	10.64	640217	12.12
ZZZZZZ	160558	4.08	466102	5.07	272568	6.51	467078	7.85	409249	10.64	680141	12.12

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

Semivolatile Internal Standard Area Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3218-CC3155	Injection Date:	10/17/13
Lab File ID:	I86475.D	Injection Time:	17:14
Instrument ID:	GCMSI	Method:	SW846 8270C BY SIM

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

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

7.5.1

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Semivolatile Internal Standard Area Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3219-CC3155	Injection Date:	10/18/13
Lab File ID:	I86508.D	Injection Time:	10:06
Instrument ID:	GCMSI	Method:	SW846 8270C BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	1S 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	202310	4.08	588767	5.06	349415	6.51	596390	7.85	520494	10.64	858513	12.12
Upper Limit [a]	404620	4.58	1177534	5.56	698830	7.01	1192780	8.35	1040988	11.14	1717026	12.62
Lower Limit [b]	101155	3.58	294384	4.56	174708	6.01	298195	7.35	260247	10.14	429257	11.62
Lab Sample ID	IS 1 AREA	RT	1S 2 AREA	RT	1S 3 AREA	RT	1S 4 AREA	RT	1S 5 AREA	RT	1S 6 AREA	RT
MC25237-2	176879	4.08	503859	5.07	290337	6.51	501076	7.86	429812	10.64	721176	12.12
ZZZZZZ	183544	4.08	528380	5.06	318991	6.51	549049	7.85	499605	10.64	836682	12.12
MC25237-3	171033	4.08	496928	5.07	294747	6.51	513814	7.85	455039	10.64	775172	12.12
MC25237-4	174165	4.08	506828	5.07	300647	6.51	513668	7.85	453826	10.63	762557	12.12
MC25237-5	180219	4.08	522975	5.07	308689	6.51	528769	7.85	465421	10.64	779986	12.11
MC25237-6	175850	4.08	518612	5.07	298223	6.51	509753	7.85	441843	10.64	742046	12.12
ZZZZZZ	186854	4.08	542393	5.06	316729	6.51	538441	7.85	457622	10.64	747493	12.12
ZZZZZZ	181494	4.08	526330	5.06	312722	6.51	537556	7.85	476787	10.63	800140	12.11
ZZZZZZ	165688	4.08	481988	5.06	284178	6.51	480902	7.85	438460	10.63	735626	12.11
ZZZZZZ	169231	4.08	492374	5.07	294629	6.51	507170	7.85	462689	10.64	752343	12.12
ZZZZZZ	189532	4.08	547239	5.07	324365	6.51	556822	7.85	498665	10.64	796045	12.12

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

Semivolatile Internal Standard Area Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSW676-CC672	Injection Date:	10/23/13
Lab File ID:	W14990.D	Injection Time:	07:54
Instrument ID:	GCMSW	Method:	SW846 8270C

	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	119066	4.87	461359	6.03	297719	7.69	504862	9.08	571309	12.53	522351	16.29
Upper Limit [a]	238132	5.37	922718	6.53	595438	8.19	1009724	9.58	1142618	13.03	1044702	16.79
Lower Limit [b]	59533	4.37	230680	5.53	148860	7.19	252431	8.58	285655	12.03	261176	15.79
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
OP35286-MB	112639	4.87	432404	6.03	282826	7.69	475485	9.07	550176	12.52	490818	16.29
OP35286-BS	114606	4.87	448395	6.03	296659	7.69	498171	9.08	580528	12.53	506444	16.29
OP35286-MS	121289	4.87	460293	6.03	297165	7.69	501109	9.08	576316	12.53	515597	16.29
OP35286-MSD	109475	4.87	420416	6.03	275674	7.69	460405	9.08	521778	12.53	470395	16.29
MC25237-1	88980	4.87	346452	6.03	220427	7.69	365229	9.07	424922	12.52	387441	16.28
MC25237-2	115973	4.87	445305	6.03	277633	7.69	464236	9.07	533504	12.53	498330	16.29
MC25237-3	113099	4.87	441283	6.03	288801	7.69	487492	9.07	575075	12.53	527100	16.29
OP35362-MB	138507	4.87	486119	6.03	263813	7.69	441601	9.07	502932	12.52	557020	16.28
OP35362-BS	179715	4.87	674710	6.03	440311	7.69	750575	9.07	819660	12.53	711699	16.29
MC25237-4	226168	4.87	862048	6.03	543877	7.69	909774	9.07	980354	12.53	860372	16.29
MC25237-6	227511	4.87	858559	6.03	564591	7.69	891671	9.07	964078	12.53	954647	16.29
ZZZZZZ	236931	4.87	897286	6.03	527652	7.69	841105	9.07	876772	12.52	749343	16.28
ZZZZZZ	218248	4.87	819404	6.03	497076	7.69	776779	9.07	821900	12.52	710817	16.29
ZZZZZZ	227305	4.87	863655	6.03	510253	7.69	804975	9.07	848864	12.52	724175	16.28
ZZZZZZ	221841	4.87	857250	6.03	511348	7.69	803563	9.07	841200	12.52	721398	16.29
ZZZZZZ	225744	4.87	875545	6.03	516399	7.69	818734	9.07	858502	12.52	721933	16.28
OP35362-MS	252287[c]	4.87	929421[c]	6.03	568738	7.69	895742	9.07	933076	12.53	795028	16.31
OP35362-MSD	249717[c]	4.87	938772[c]	6.03	570812	7.69	889387	9.07	902191	12.53	774389	16.31
MC25229-1	250222[c]	4.87	916162	6.03	559922	7.69	875117	9.07	873505	12.53	752112	16.31

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 interfernce. Confirmed by MS/MSD.

Semivolatile Internal Standard Area Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSW682-CC672	Injection Date:	11/01/13
Lab File ID:	W15129.D	Injection Time:	14:44
Instrument ID:	GCMSW	Method:	SW846 8270C

	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	107994	4.84	466743	6.00	271108	7.66	460068	9.04	477257	12.47	424473	16.23
Upper Limit [a]	215988	5.34	933486	6.50	542216	8.16	920136	9.54	954514	12.97	848946	16.73
Lower Limit [b]	53997	4.34	233372	5.50	135554	7.16	230034	8.54	238629	11.97	212237	15.73
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
ZZZZZZ	95471	4.84	392196	6.00	212944	7.66	348597	9.04	403723	12.46	393801	16.22
MC25237-5	110694	4.84	473082	6.00	281921	7.66	478170	9.04	508680	12.46	460078	16.22
MC25237-6	85270	4.84	360883	6.00	211993	7.66	326504	9.04	351960	12.46	352880	16.22
OP35442-MB	91146	4.83	402028	6.00	185790	7.66	356802	9.04	330975	12.46	407210	16.22
OP35442-BS	100771	4.84	401978	6.00	237435	7.66	432219	9.04	434528	12.46	428962	16.23
OP35442-MS	109833	4.84	467469	6.00	273249	7.66	458805	9.04	419579	12.46	425042	16.22
OP35442-MSD	101096	4.83	434130	6.00	228210	7.66	418899	9.04	417216	12.46	350603	16.23
MC25493-15	105723	4.83	456605	5.99	269885	7.66	444032	9.04	382654	12.45	445182	16.22
ZZZZZZ	99521	4.83	420246	5.99	233032	7.65	426029	9.04	436425	12.46	455572	16.22
ZZZZZZ	102196	4.84	439265	6.00	235557	7.66	373257	9.04	334563	12.48	249344	16.24
ZZZZZZ	84594	4.83	359696	6.00	215011	7.66	344961	9.04	348123	12.46	292057	16.22
OP35514-MB	109648	4.84	470020	6.00	267613	7.66	433678	9.04	438285	12.46	315639	16.22
OP35514-BS	95379	4.84	414951	6.00	247581	7.66	404413	9.04	399845	12.46	356009	16.22
OP35514-MS	95704	4.84	409645	6.00	240903	7.66	391507	9.04	369754	12.46	321229	16.22
OP35514-MSD	114096	4.84	484083	6.00	280779	7.66	465777	9.04	450631	12.46	393866	16.22
MC25745-1	100734	4.83	411584	6.00	231797	7.65	372682	9.04	359224	12.46	386748	16.22
ZZZZZZ	91066	4.84	389947	6.00	221854	7.65	354821	9.04	310832	12.46	276701	16.22
MC25462-2	84576	4.83	358578	6.00	208655	7.65	308383	9.04	281833	12.45	315360	16.22

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: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC25237-1	W14995.D	34.0	27.0	83.0	73.0	78.0	97.0
MC25237-2	W14996.D	48.0	39.0	98.0	76.0	79.0	97.0
MC25237-3	W14997.D	55.0	40.0	99.0	74.0	75.0	97.0
MC25237-4	W15000.D	43.0	30.0	79.0	68.0	73.0	102.0
MC25237-5	W15131.D	29.0	19.0	67.0	62.0	72.0	94.0
MC25237-6	W15132.D	35.0	30.0	90.0	48.0	67.0	79.0
MC25237-6	W15002.D	30.0	31.0	77.0	53.0	59.0	93.0
OP35286-BS	W14992.D	56.0	37.0	113.0* [a]	86.0	89.0	108.0
OP35286-MB	W14991.D	42.0	30.0	94.0	78.0	82.0	109.0
OP35286-MS	W14993.D	42.0	33.0	91.0	77.0	81.0	94.0
OP35286-MSD	W14994.D	44.0	37.0	99.0	83.0	84.0	99.0

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

(a) Outside control limits. Results confirmed by reanalysis.

Semivolatile Surrogate Recovery Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270C BY SIM Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC25237-1	I86481.D	81.0	73.0	92.0
MC25237-2	I86509.D	82.0	76.0	93.0
MC25237-3	I86511.D	81.0	73.0	92.0
MC25237-4	I86512.D	74.0	68.0	92.0
MC25237-5	I86513.D	74.0	70.0	90.0
MC25237-6	I86514.D	56.0	59.0	81.0
OP35287-BS	I86477.D	93.0	83.0	104.0
OP35287-BSD	I86478.D	89.0	78.0	98.0
OP35287-MB	I86476.D	85.0	77.0	101.0
OP35287-MS	I86479.D	84.0	74.0	91.0
OP35287-MSD	I86480.D	89.0	79.0	95.0

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35265-MB	BK30963.D	1	10/16/13	NK	10/15/13	OP35265	GBK1020

The QC reported here applies to the following samples: Method: SW846 8011

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6, MC25237-8

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	98%	36-173%
460-00-4	Bromofluorobenzene (S)	80%	36-173%

Blank Spike Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35265-BS	BK30965.D	1	10/16/13	NK	10/15/13	OP35265	GBK1020

The QC reported here applies to the following samples: Method: SW846 8011

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6, MC25237-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.061	86	60-140
106-93-4	1,2-Dibromoethane	0.071	0.074	104	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	98%	36-173%
460-00-4	Bromofluorobenzene (S)	71%	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35265-MS	BK30966.D	1	10/16/13	NK	10/15/13	OP35265	GBK1020
OP35265-MSD	BK30967.D	1	10/16/13	NK	10/15/13	OP35265	GBK1020
MC25237-1	BK30978.D	1	10/16/13	NK	10/15/13	OP35265	GBK1020

The QC reported here applies to the following samples: Method: SW846 8011

MC25237-1, MC25237-2, MC25237-3, MC25237-4, MC25237-5, MC25237-6, MC25237-8

CAS No.	Compound	MC25237-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.0692	0.067	97	0.062	88	8	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.0692	0.065	94	0.070	99	7	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC25237-1	Limits
460-00-4	Bromofluorobenzene (S)	89%	78%	69%	36-173%
460-00-4	Bromofluorobenzene (S)	76%	69%	66%	36-173%

* = Outside of Control Limits.

8.3.1

Volatile Surrogate Recovery Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011 Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC25237-1	BK30978.D	69.0	66.0
MC25237-2	BK30979.D	58.0	62.0
MC25237-3	BK30980.D	113.0	79.0
MC25237-4	BK30981.D	87.0	69.0
MC25237-5	BK30982.D	90.0	63.0
MC25237-6	BK30983.D	58.0	47.0
MC25237-8	BK30984.D	84.0	74.0
OP35265-BS	BK30965.D	98.0	71.0
OP35265-MB	BK30963.D	98.0	80.0
OP35265-MS	BK30966.D	89.0	76.0
OP35265-MSD	BK30967.D	78.0	69.0

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

8

GC Surrogate Retention Time Summary

Job Number: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBK1020-CC1020	Injection Date:	10/16/13
Lab File ID:	BK30953.D	Injection Time:	02:50
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.04	5.05

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BK30954.D	10/16/13	03:14	4.04	5.05
ZZZZZZ	BK30955.D	10/16/13	03:39	4.04	5.05
ZZZZZZ	BK30956.D	10/16/13	04:03	4.04	5.05
ZZZZZZ	BK30957.D	10/16/13	04:28	4.04	5.05
ZZZZZZ	BK30958.D	10/16/13	04:52	4.04	5.05
ZZZZZZ	BK30959.D	10/16/13	05:16	4.04	5.05
ZZZZZZ	BK30960.D	10/16/13	05:41	4.04	5.05
ZZZZZZ	BK30961.D	10/16/13	06:04	4.04	5.05
ZZZZZZ	BK30962.D	10/16/13	06:27	4.04	5.05
OP35265-MB	BK30963.D	10/16/13	06:50	4.04	5.05

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: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBK1020-CC1020	Injection Date:	10/16/13
Lab File ID:	BK30964.D	Injection Time:	07:13
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.05	5.05

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP35265-BS	BK30965.D	10/16/13	07:36	4.05	5.05
OP35265-MS	BK30966.D	10/16/13	07:59	4.05	5.05
OP35265-MSD	BK30967.D	10/16/13	08:22	4.04	5.05
ZZZZZZ	BK30968.D	10/16/13	08:45	4.05	5.05
ZZZZZZ	BK30969.D	10/16/13	09:09	4.05	5.05
ZZZZZZ	BK30970.D	10/16/13	09:32	4.05	5.05
ZZZZZZ	BK30971.D	10/16/13	09:55	4.05	5.05
ZZZZZZ	BK30972.D	10/16/13	10:19	4.05	5.05
ZZZZZZ	BK30973.D	10/16/13	10:42	4.05	5.05
ZZZZZZ	BK30974.D	10/16/13	11:06	4.05	5.05

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: MC25237
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBK1020-CC1020	Injection Date:	10/16/13
Lab File ID:	BK30975.D	Injection Time:	11:30
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.05	5.05

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BK30976.D	10/16/13	11:54	4.05	5.05
ZZZZZZ	BK30977.D	10/16/13	12:18	4.05	5.05
MC25237-1	BK30978.D	10/16/13	12:42	4.05	5.05
MC25237-2	BK30979.D	10/16/13	13:06	4.05	5.06
MC25237-3	BK30980.D	10/16/13	13:30	4.05	5.06
MC25237-4	BK30981.D	10/16/13	13:55	4.05	5.06
MC25237-5	BK30982.D	10/16/13	14:19	4.05	5.05
MC25237-6	BK30983.D	10/16/13	14:43	4.05	5.06
MC25237-8	BK30984.D	10/16/13	15:08	4.05	5.06
ZZZZZZ	BK30985.D	10/16/13	15:32	4.05	5.06

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.3

Roxana Groundwater Quarterly – 4th Quarter 2013 Data Review

Laboratory SDG: MC25284

Data Reviewer: Elizabeth Kunkel

Peer Reviewer: Steve Gragert

Date Reviewed: 11/11/2013

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

Sample Identification	Sample Identification
P93D-ROX-101113	P93A-ROX-101113
TB-ROX-101113-HCL	TB-ROX-101113-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 that VOC and SVOC LCS recoveries were outside evaluation criteria. SVOC acid fraction surrogate recoveries were outside evaluation criteria in sample P93D-ROX-101113. Sample P93D-ROX-101113 was re-extracted outside holding time criteria. These issues are addressed further in the appropriate sections below.

The cooler receipt form indicated that the cooler was received by the laboratory at a temperature of 1.0ºC, which is outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

No, sample P93D-ROX-101113 was re-extracted 10 days outside of extraction holding time criteria (7 days) due to low recoveries of surrogates 2-fluorophenol and phenol-d_5 in the original analysis. The re-extracted/re-analysis confirmation run indicates matrix interference. Data was reported and qualified from the original analysis (section 6.0 of this data review). No further qualification of data was required.

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
MSN3052-BS	VOCs	Acetone	**65**	70-130
MSN3052-BS	VOCs	Vinyl acetate	**67**	70-130
MSN3053-BS1	VOCs	Dichlorodifluoromethane	**48**	70-130
MSN3053-BS1	VOCs	Ethyl methacrylate	**74**	77-137
MSN3053-BS1	VOCs	Methyl tert-butyl ether	**67**	70-130
MSN3053-BS1	VOCs	Vinyl acetate	**66**	70-130
MSN3053-BS1	VOCs	Vinyl chloride	**58**	70-130
OP35311-BS	SVOCs	Benzoic acid	**13**	30-130
OP35311-BS	SVOCs	Phenol	**29**	30-130
OP35311-BS	SVOCs	Hexachlorocyclopentadiene	**35**	40-140
OP35311-BS	SVOCs	Hexachloroethane	**39**	40-140
OP35311-BS	SVOCs	Pyridine	**34**	40-140

Analytical data that required qualification based on LCS data are included in the table below.

Sample ID	Parameter	Analyte	Qualification
P93D-ROX-101113	VOCs	Dichlorodifluoromethane	**UJ**
P93D-ROX-101113	VOCs	Ethyl methacrylate	**UJ**
P93D-ROX-101113	VOCs	Methyl tert-butyl ether	**J**
P93D-ROX-101113	VOCs	Vinyl acetate	**UJ**
P93D-ROX-101113	VOCs	Vinyl chloride	**UJ**
P93A-ROX-101113	VOCs	Acetone	**UJ**
P93A-ROX-101113	VOCs	Vinyl acetate	**UJ**
P93D-ROX-101113	SVOCs	Benzoic acid	**UJ**
P93D-ROX-101113	SVOCs	Phenol	**UJ**
P93D-ROX-101113	SVOCs	Hexachlorocyclopentadiene	**UJ**
P93D-ROX-101113	SVOCs	Hexachloroethane	**UJ**
P93D-ROX-101113	SVOCs	Pyridine	**UJ**
P93A-ROX-101113	SVOCs	Benzoic acid	**UJ**
P93A-ROX-101113	SVOCs	Phenol	**J**
P93A-ROX-101113	SVOCs	Hexachlorocyclopentadiene	**UJ**
P93A-ROX-101113	SVOCs	Hexachloroethane	**UJ**
P93A-ROX-101113	SVOCs	Pyridine	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
P93D-ROX-101113-Run#1	SVOCs	2-Fluorophenol	**8**	15-110
P93D-ROX-101113-Run#1	SVOCs	Phenol-d_5	**11**	15-110
P93D-ROX-101113-Run#2	SVOCs	2-Fluorophenol	**7**	15-110
P93D-ROX-101113-Run#2	SVOCs	Phenol-d_5	**9**	15-110

Analytical data that required qualification based on surrogate data are included in the table below.

Sample ID	Parameter	Analyte	Qualification
P93D-ROX-101113	SVOCs	Benzoic acid	**UJ**
P93D-ROX-101113	SVOCs	2-Chlorophenol	**UJ**
P93D-ROX-101113	SVOCs	4-Chloro-3-methyl phenol	**UJ**
P93D-ROX-101113	SVOCs	2,4-Dichlorophenol	**UJ**
P93D-ROX-101113	SVOCs	2,4-Dimethylphenol	**UJ**
P93D-ROX-101113	SVOCs	2,4-Dinitrophenol	**UJ**
P93D-ROX-101113	SVOCs	4,6-Dinitro-o-cresol	**UJ**
P93D-ROX-101113	SVOCs	2-Methylphenol	**UJ**
P93D-ROX-101113	SVOCs	3&4-Methylphenol	**UJ**
P93D-ROX-101113	SVOCs	2-Nitrophenol	**UJ**
P93D-ROX-101113	SVOCs	4-Nitrophenol	**UJ**
P93D-ROX-101113	SVOCs	Pentachlorophenol	**UJ**
P93D-ROX-101113	SVOCs	Phenol	**UJ**
P93D-ROX-101113	SVOCs	2,4,5-Trichlorophenol	**UJ**
P93D-ROX-101113	SVOCs	2,4,6-Trichlorophenol	**UJ**

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

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

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

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

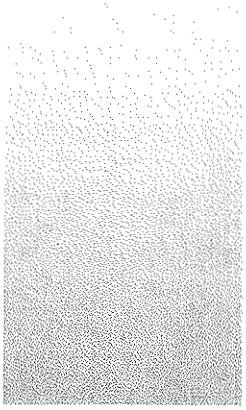
Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

No

New England ACCUTEST LABORATORIES





Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC25284

Sampling Date: 10/11/13

Report to:

URS Corporation

elizabeth.kunkel@URS.com

ATTN: Elizabeth Kunkel

Total number of pages in report: **83**

Reviewed on 11/7/2013

Reza Pand
Lab Director

ACCREDITED IN ACCORDANCE WITH nelac

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

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: MC25284

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC25284-1	10/11/13	13:35	BL	10/14/13	AQ	Ground Water	P93D-ROX-101113
MC25284-2	10/11/13	16:45	BL	10/14/13	AQ	Ground Water	P93A-ROX-101113
MC25284-3	10/11/13	00:00	BL	10/14/13	AQ	Trip Blank Water	TB-ROX-101113-HCL
MC25284-4	10/11/13	00:00	BL	10/14/13	AQ	Trip Blank Water	TB-ROX-101113-ST

ACCUTEST LABORATORIES

2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC25284
Site:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central	**Report Date**	11/7/2013 9:49:12 AM

2 Sample(s) and 2 Trip Blank(s) were collected on 10/11/2013 and were received at Accutest on 10/14/2013 properly preserved, at 1 Deg. C and intact. These Samples received an Accutest job number of MC25284. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

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

Volatiles by GCMS By Method SW846 8260B

Matrix AQ **Batch ID:** MSN3052

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25248-1MS, MC25248-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MSN3052-BS Recovery(s) for Acetone, Vinyl Acetate are outside control limits. Blank Spike meets program technical requirements.
- MC25248-1MS/MSD Recovery(s) for Benzene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- MC25248-1MS for 2-Butanone (MEK), 2-Hexanone, Acetone, Chloromethane, Dichlorodifluoromethane, Ethylbenzene, Vinyl Acetate, Vinyl chloride: Outside control limits due to possible matrix interference. Refer to Blank Spike.
- MC25248-1MSD Recovery(s) for 2-Butanone (MEK), 2-Hexanone, Acetone, Dichlorodifluoromethane, Ethylbenzene, Vinyl Acetate, Vinyl chloride are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- All samples analyzed by method SW846 8260C.

Matrix AQ **Batch ID:** MSN3053

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25500-18MS, MC25500-18MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MSN3053-BS1 Recovery(s) for Dichlorodifluoromethane, Ethyl methacrylate, Methyl Tert Butyl Ether, Vinyl Acetate, Vinyl chloride are outside control limits. Blank Spike meets program technical requirements.
- MC25500-18MS Recovery(s) for 1,1,2,2-Tetrachloroethane, Acrolein, Chloromethane, Dichlorodifluoromethane, Methyl Tert Butyl Ether, Vinyl Acetate, Vinyl chloride are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- MC25500-18MSD Recovery(s) for 1,1,2,2-Tetrachloroethane, Acrolein, Dichlorodifluoromethane, Vinyl Acetate, Vinyl chloride are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- All samples analyzed by method SW846 8260C.

Extractables by GCMS By Method SW846 8270C

Matrix AQ	Batch ID: OP35311

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25100-6MS, MC25100-6MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- OP35311-BS Recovery(s) for Benzoic Acid, Hexachlorocyclopentadiene, Hexachloroethane, Phenol, Pyridine are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for Benzoic Acid, Hexachlorocyclopentadiene, Phenol, Pyridine are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Duplicate Recovery(s) for Hexachlorocyclopentadiene, Pyridine are outside control limits. Blank Spike meets program technical requirements.
- RPD(s) for MSD for Benzoic Acid are outside control limits for sample OP35311-MSD. Blank Spike meets program technical requirements.
- OP35311-MS/MSD for N-Nitrosodiphenylamine: Outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- MC25284-1 for Phenol-d5, 2-Fluorophenol: Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.

Matrix AQ	Batch ID: OP35455

- MC25284-1 for Phenol-d5, 2-Fluorophenol: Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.
- MC25284-1 was re-extracted outside of holding time.
- MC25284-1: Confirmation run.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix AQ	Batch ID: OP35312

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25100-7MS, MC25100-7MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Volatiles by GC By Method SW846 8011

Matrix AQ	Batch ID: OP35265

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25237-1MS, MC25237-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC25284).

Summary of Hits

Job Number: MC25284
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Collected: 10/11/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC25284-1	P93D-ROX-101113					
Benzene		1.4	0.50	0.45	ug/l	SW846 8260B
Methyl Tert Butyl Ether		0.66 J	1.0	0.43	ug/l	SW846 8260B
Fluoranthene		0.087 J	0.10	0.041	ug/l	SW846 8270C BY SIM
Pyrene		0.084 J	0.10	0.038	ug/l	SW846 8270C BY SIM
MC25284-2	P93A-ROX-101113					
Benzene		197000	1000	900	ug/l	SW846 8260B
Ethylbenzene		264	1.0	0.38	ug/l	SW846 8260B
Isopropylbenzene		14.2	5.0	0.64	ug/l	SW846 8260B
p-Isopropyltoluene		2.5 J	5.0	0.55	ug/l	SW846 8260B
Methyl Tert Butyl Ether		3.4	1.0	0.43	ug/l	SW846 8260B
Naphthalene		62.1	5.0	0.79	ug/l	SW846 8260B
n-Propylbeuzene		15.0	5.0	0.59	ug/l	SW846 8260B
Toluene		13.3	1.0	0.46	ug/l	SW846 8260B
1,2,4-Trimethylbenzene		146	5.0	0.47	ug/l	SW846 8260B
1,3,5-Trimethylbenzene		16.3	5.0	1.1	ug/l	SW846 8260B
m,p-Xylene		451	1.0	0.70	ug/l	SW846 8260B
o-Xylene		78.9	1.0	0.41	ug/l	SW846 8260B
Xylene (total)		530	1.0	0.41	ug/l	SW846 8260B
Phenol		83.7 J	5.0	0.51	ug/l	SW846 8270C
Acenaphthene		0.17	0.10	0.069	ug/l	SW846 8270C BY SIM
Fluorene		0.28	0.10	0.099	ug/l	SW846 8270C BY SIM
1-Methylnaphthalene		12.8	0.20	0.050	ug/l	SW846 8270C BY SIM
2-Methylnaphthaleue		8.5	0.20	0.074	ug/l	SW846 8270C BY SIM
Phenanthrene		0.13	0.050	0.013	ug/l	SW846 8270C BY SIM
MC25284-3	TB-ROX-101113-HCL					
No hits reported in this sample.						
MC25284-4	TB-ROX-101113-ST					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P93D-ROX-101113		
Lab Sample ID:	MC25284-1	Date Sampled:	10/11/13
Matrix:	AQ - Ground Water	Date Received:	10/14/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N81796.D	1	10/25/13	JB	n/a	n/a	MSN3053
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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

Report of Analysis

Client Sample ID:	P93D-ROX-101113		
Lab Sample ID:	MC25284-1	Date Sampled:	10/11/13
Matrix:	AQ - Ground Water	Date Received:	10/14/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	UJ
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.66	1.0	0.43	ug/l	J J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	UJ
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	UJ
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	P93D-ROX-101113		
Lab Sample ID:	MC25284-1	Date Sampled:	10/11/13
Matrix:	AQ - Ground Water	Date Received:	10/14/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	81%		70-130%
2037-26-5	Toluene-D8	88%		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
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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:	P93D-ROX-101113		
Lab Sample ID:	MC25284-1	Date Sampled:	10/11/13
Matrix:	AQ - Ground Water	Date Received:	10/14/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W14977.D	1	10/23/13	KR	10/17/13	OP35311	MSW675
Run #2 [a]	F70029.D	1	10/31/13	WK	10/28/13	OP35455	MSF3129

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

ABN Special List

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

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-101113		
Lab Sample ID:	MC25284-1	Date Sampled:	10/11/13
Matrix:	AQ - Ground Water	Date Received:	10/14/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 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	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	UJ
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	8% b	11% b	15-110%
4165-62-2	Phenol-d5	7% b	9% b	15-110%
118-79-6	2,4,6-Tribromophenol	45%	44%	15-110%
4165-60-0	Nitrohenzene-d5	53%	65%	30-130%
321-60-8	2-Fluorobiphenyl	57%	60%	30-130%
1718-51-0	Terphenyl-d14	95%	78%	30-130%

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

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

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

Report of Analysis

Client Sample ID:	P93D-ROX-101113		
Lab Sample ID:	MC25284-1	Date Sampled:	10/11/13
Matrix:	AQ - Ground Water	Date Received:	10/14/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86531.D	1	10/21/13	WK	10/17/13	OP35312	MSI3220
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	ng/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	0.087	0.10	0.041	ug/l	J
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	0.084	0.10	0.038	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	59%		30-130%
321-60-8	2-Fluorobiphenyl	54%		30-130%
1718-51-0	Terphenyl-dI4	88%		30-130%

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

Report of Analysis

Client Sample ID:	P93D-ROX-101113		
Lab Sample ID:	MC25284-1	Date Sampled:	10/11/13
Matrix:	AQ - Ground Water	Date Received:	10/14/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK30985.D	1	10/16/13	NK	10/15/13	OP35265	GBK1020
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	85%		36-173%
460-00-4	Bromofluorobenzene (S)	69%		36-173%

ND = Not detected MDL - Method Detection Limit
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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-101113		
Lab Sample ID:	MC25284-2	Date Sampled:	10/11/13
Matrix:	AQ - Ground Water	Date Received:	10/14/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N81741.D	1	10/23/13	JB	n/a	n/a	MSN3052
Run #2	N81771.D	2000	10/24/13	JB	n/a	n/a	MSN3053

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

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	UJ
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	197000 [a]	1000	900	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ng/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

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

Report of Analysis

Client Sample ID:	P93A-ROX-101113		
Lab Sample ID:	MC25284-2	Date Sampled:	10/11/13
Matrix:	AQ - Ground Water	Date Received:	10/14/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	264	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	14.2	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	2.5	5.0	0.55	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	3.4	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	62.1	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	15.0	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	13.3	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorohenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorohenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	146	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	16.3	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	UJ
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	451	1.0	0.70	ug/l	
95-47-6	o-Xylene	78.9	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	530	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	P93A-ROX-101113		
Lab Sample ID:	MC25284-2	Date Sampled:	10/11/13
Matrix:	AQ - Ground Water	Date Received:	10/14/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%	82%	70-130%
2037-26-5	Toluene-D8	77%	87%	70-130%
460-00-4	4-Bromofluorobenzene	91%	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
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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-101113		
Lab Sample ID:	MC25284-2	Date Sampled:	10/11/13
Matrix:	AQ - Ground Water	Date Received:	10/14/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W14978.D	1	10/23/13	KR	10/17/13	OP35311	MSW675
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	83.7	5.0	0.51	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.39	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	ug/l	

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Report of Analysis

Client Sample ID:	P93A-ROX-101113		
Lab Sample ID:	MC25284-2	Date Sampled:	10/11/13
Matrix:	AQ - Ground Water	Date Received:	10/14/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	UJ
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	40%		15-110%
4165-62-2	Phenol-d5	29%		15-110%
118-79-6	2,4,6-Tribromophenol	99%		15-110%
4165-60-0	Nitrobenzene-d5	64%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	97%		30-130%

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

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

Report of Analysis

Client Sample ID:	P93A-ROX-101113		
Lab Sample ID:	MC25284-2	Date Sampled:	10/11/13
Matrix:	AQ - Ground Water	Date Received:	10/14/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86532.D	1	10/21/13	WK	10/17/13	OP35312	MSI3220
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	0.17	0.10	0.069	ug/l	
208-96-8	Acenapbthylene	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	0.28	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	12.8	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	8.5	0.20	0.074	ug/l	
85-01-8	Phenanthrene	0.13	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	69%		30-130%
321-60-8	2-Fluorobiphenyl	65%		30-130%
1718-51-0	Terphenyl-d14	88%		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:	P93A-ROX-101113		
Lab Sample ID:	MC25284-2	Date Sampled:	10/11/13
Matrix:	AQ - Ground Water	Date Received:	10/14/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK30987.D	1	10/16/13	NK	10/15/13	OP35265	GBK1020
Run #2							

	Initial Volume	Final Volume
Run #1	34.5 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	0.0055	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.012	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	84%		36-173%
460-00-4	Bromofluorobenzene (S)	78%		36-173%

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

Report of Analysis

Client Sample ID:	TB-ROX-101113-HCL		
Lab Sample ID:	MC25284-3	Date Sampled:	10/11/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/14/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N81728.D	1	10/23/13	JB	n/a	n/a	MSN3052
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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

Report of Analysis

Client Sample ID:	TB-ROX-101113-HCL		
Lab Sample ID:	MC25284-3	Date Sampled:	10/11/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/14/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	TB-ROX-101113-HCL		
Lab Sample ID:	MC25284-3	Date Sampled:	10/11/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/14/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	82%		70-130%
2037-26-5	Toluene-D8	89%		70-130%
460-00-4	4-Bromofluorobenzene	100%		70-130%

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

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

Report of Analysis

Client Sample ID:	TB-ROX-101113-ST		
Lab Sample ID:	MC25284-4	Date Sampled:	10/11/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/14/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK30988.D	1	10/16/13	NK	10/15/13	OP35265	GBK1020
Run #2							

	Initial Volume	Final Volume
Run #1	35.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	95%		36-173%
460-00-4	Bromofluorobenzene (S)	78%		36-173%

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

New England ACCUTEST LABORATORIES

Misc. Forms

5

Custody Documents and Other Forms

Includes the following where applicable:

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

LAB (LOCATION)

☐ XENCO (_____)

☐ CALSCIENCE (_____)

☑ OTHER (Accutest Labs, 495 Technology Ctr W Marlborough, MA 01752 (508-481-6200))

☐ SPL (_____)

Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:

☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL

☐ MOTIVA SOBCH ☐ CONSULTANT ☐ LUNIS

☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Billman

PO #

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

SAP #: 3 4 0 0 6 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 10-11-13

PAGE: 1 of 1

SUPPLIER COMPANY: URS CORPORATION

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

PROJECT CONTACT (Name of Report): Elizabeth Kunkel, Wendy Pennington, Bob Billman

TELEPHONE: 314-429-0100 FAX: 314-429-0462

Bill To Contact Email: bob.billman@urs.com, elizabeth.kunkel@urs.com, wendy.pennington@urs.com

SITE ADDRESS: Street and City: 600 South Central Ave; ROXANA

State: IL

CONSULTANT PROJECT NO.: Roxana Quarterly GW / 21562550.03004

Sampler's Name: B. Lehan

LAB USE ONLY: MC25284

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (10 DAYS) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED (Pre-Schedule)

REQUESTED ANALYSIS

☐ 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 LEAD DISK

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO OF CONT.	VOC 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	P93D-ROX-101113	10/11/13	1315	water	2			2	2	6	X	X	X	X		
	P93B-ROX-101113									1	X	X	X	X		
	P93C-ROX-101113									1	X	X	X	X		
-2	P93A-ROX-101113		1645							1	X	X	X	X		
-3	TB-ROX-101113-HCL		00:00							2	X					
-4	TB-ROX-101113-ST		00:00						2	2	X					
																19BB, 462

Relinquished by (Signature)	Received by (Signature)	Date	Time
Barbara Lehan	FED EX	10/11/13	1700
FEDX		10-14-13	1030

1.0°C

5.1

MC25284: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC25284 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 10/14/2013 **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. Smpt 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

MC25284: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC25284

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC25284-1 Collected: 11-OCT-13 13:35 By: BL			Received: 14-OCT-13 By:			
P93D-ROX-101113						
MC25284-1	SW846 8011	16-OCT-13 15:32	NK	15-OCT-13	PA	V8011SL
MC25284-1	SW846 8270C BY SIM	21-OCT-13 11:15	WK	17-OCT-13	TA	B8270SIMSL
MC25284-1	SW846 8270C	23-OCT-13 01:20	KR	17-OCT-13	FC	AB8270SL+
MC25284-1	SW846 8260B	25-OCT-13 11:37	JB			V8260SL+
MC25284-1	SW846 8270C	31-OCT-13 18:11	WK	28-OCT-13	AJ	AB8270SL+
MC25284-2 Collected: 11-OCT-13 16:45 By: BL			Received: 14-OCT-13 By:			
P93A-ROX-101113						
MC25284-2	SW846 8011	16-OCT-13 16:20	NK	15-OCT-13	PA	V8011SL
MC25284-2	SW846 8270C BY SIM	21-OCT-13 11:38	WK	17-OCT-13	TA	B8270SIMSL
MC25284-2	SW846 8270C	23-OCT-13 01:49	KR	17-OCT-13	FC	AB8270SL+
MC25284-2	SW846 8260B	23-OCT-13 16:55	JB			V8260SL+
MC25284-2	SW846 8260B	24-OCT-13 17:11	JB			V8260SL+
MC25284-3 Collected: 11-OCT-13 00:00 By: BL			Received: 14-OCT-13 By:			
TB-ROX-101113-HCL						
MC25284-3	SW846 8260B	23-OCT-13 09:42	JB			V8260SL+
MC25284-4 Collected: 11-OCT-13 00:00 By: BL			Received: 14-OCT-13 By:			
TB-ROX-101113-ST						
MC25284-4	SW846 8011	16-OCT-13 16:45	NK	15-OCT-13	PA	V8011SL

Accutest Internal Chain of Custody

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Received: 10/14/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC25284-1.1	Walk In Ref #22	Thomas Abruzzise	10/17/13 14:18	Retrieve from Storage
MC25284-1.2	Walk In Ref #22	Thomas Abruzzise	10/28/13 14:29	Retrieve from Storage
MC25284-1.3	VOC Ref #4	Jaclyn Bergeron	10/24/13 07:54	Retrieve from Storage
MC25284-1.3	Jaclyn Bergeron	GCMSN	10/24/13 07:54	Load on Instrument
MC25284-1.3	GCMSN	Jaclyn Bergeron	10/25/13 10:03	Unload from Instrnment
MC25284-1.3	Jaclyn Bergeron	VOC Ref #4	10/25/13 10:03	Return to Storage
MC25284-1.4	VOC Ref #4	Jaclyn Bergeron	10/23/13 08:09	Retrieve from Storage
MC25284-1.4	Jaclyn Bergeron	GCMSN	10/23/13 08:09	Load on Instrument
MC25284-1.4	GCMSN	Jaclyn Bergeron	10/24/13 07:53	Unload from Instrument
MC25284-1.4	Jaclyn Bergeron	VOC Ref #4	10/24/13 07:53	Return to Storage
MC25284-1.5	VOC Ref #4	Michael Rolo	10/15/13 07:17	Retrieve from Storage
MC25284-1.5	Michael Rolo		10/16/13 07:19	Depleted
MC25284-2.1	Walk In Ref #22	Thomas Abruzzise	10/17/13 14:18	Retrieve from Storage
MC25284-2.3	VOC Ref #4	Jaclyn Bergeron	10/24/13 07:54	Retrieve from Storage
MC25284-2.3	Jaclyn Bergeron	GCMSN	10/24/13 07:54	Load on Instrument
MC25284-2.3	GCMSN	Jaclyn Bergeron	10/25/13 10:03	Unload from Instrument
MC25284-2.3	Jaclyn Bergeron	VOC Ref #4	10/25/13 10:03	Return to Storage
MC25284-2.4	VOC Ref #4	Jaclyn Bergeron	10/23/13 08:09	Retrieve from Storage
MC25284-2.4	Jaclyn Bergeron	GCMSN	10/23/13 08:09	Load on Instrument
MC25284-2.4	GCMSN	Jaclyn Bergeron	10/24/13 07:53	Unload from Instrument
MC25284-2.4	Jaclyn Bergeron	VOC Ref #4	10/24/13 07:53	Return to Storage
MC25284-2.5	VOC Ref #4	Michael Rolo	10/15/13 07:17	Retrieve from Storage
MC25284-2.5	Michael Rolo		10/16/13 07:19	Depleted
MC25284-3.2	VOC Ref #4	Jaclyn Bergeron	10/23/13 08:09	Retrieve from Storage
MC25284-3.2	Jaclyn Bergeron	GCMSN	10/23/13 08:09	Load on Instrument
MC25284-3.2	GCMSN	Jaclyn Bergeron	10/24/13 07:53	Unload from Instrument
MC25284-3.2	Jaclyn Bergeron	VOC Ref #4	10/24/13 07:53	Return to Storage
MC25284-4.1	VOC Ref #4	Michael Rolo	10/15/13 07:17	Retrieve from Storage
MC25284-4.1	Michael Rolo		10/16/13 07:19	Depleted

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: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3052-MB	N81725.D	1	10/23/13	JB	n/a	n/a	MSN3052

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

MC25284-2, MC25284-3

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

Method Blank Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3052-MB	N81725.D	1	10/23/13	JB	n/a	n/a	MSN3052

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

MC25284-2, MC25284-3

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

6.1.1

Method Blank Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3052-MB	N81725.D	1	10/23/13	JB	n/a	n/a	MSN3052

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

MC25284-2, MC25284-3

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	83%	70-130%
2037-26-5	Toluene-D8	88%	70-130%
460-00-4	4-Bromofluorobenzene	100%	70-130%

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

6.1.1

Method Blank Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3053-MB	N81762.D	1	10/24/13	JB	n/a	n/a	MSN3053

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

MC25284-1, MC25284-2

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

Method Blank Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3053-MB	N81762.D	1	10/24/13	JB	n/a	n/a	MSN3053

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

MC25284-1, MC25284-2

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

6.1.2

Method Blank Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3053-MB	N81762.D	1	10/24/13	JB	n/a	n/a	MSN3053

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

MC25284-1, MC25284-2

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	80%	70-130%
2037-26-5	Toluene-D8	87%	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	

6.1.2

Method Blank Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3053-MB1	N81793.D	1	10/25/13	JB	n/a	n/a	MSN3053

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

MC25284-1, MC25284-2

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

Method Blank Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3053-MB1	N81793.D	1	10/25/13	JB	n/a	n/a	MSN3053

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

MC25284-1, MC25284-2

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

Method Blank Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3053-MB1	N81793.D	1	10/25/13	JB	n/a	n/a	MSN3053

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

MC25284-1, MC25284-2

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	81%	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	

6.1.3

Blank Spike Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3052-BS	N81723.D	1	10/23/13	JB	n/a	n/a	MSN3052

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

MC25284-2, MC25284-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	32.5	65* a	70-130
107-02-8	Acrolein	250	179	72	70-130
107-13-1	Acrylonitrile	50	39.6	79	70-130
71-43-2	Benzene	50	43.6	87	70-130
108-86-1	Bromobenzene	50	46.9	94	70-130
74-97-5	Bromochloromethane	50	46.4	93	70-130
75-27-4	Bromodichloromethane	50	45.4	91	70-130
75-25-2	Bromoform	50	46.7	93	70-130
74-83-9	Bromomethane	50	47.2	94	70-130
78-93-3	2-Butanone (MEK)	50	38.4	77	70-130
104-51-8	n-Butylbenzene	50	48.4	97	70-130
135-98-8	sec-Butylbenzene	50	46.0	92	70-130
98-06-6	tert-Butylbenzene	50	44.9	90	70-130
75-15-0	Carbon disulfide	50	44.2	88	70-130
56-23-5	Carbon tetrachloride	50	48.7	97	70-130
108-90-7	Chlorobenzene	50	44.0	88	70-130
75-00-3	Chloroethane	50	44.5	89	70-130
110-75-8	2-Chloroethyl vinyl ether	50	45.4	91	70-130
67-66-3	Chloroform	50	42.8	86	70-130
74-87-3	Chloromethane	50	38.3	77	70-130
95-49-8	o-Chlorotoluene	50	45.4	91	70-130
106-43-4	p-Chlorotoluene	50	46.3	93	70-130
124-48-1	Dibromochloromethane	50	46.7	93	70-130
95-50-1	1,2-Dichlorobenzene	50	44.1	88	70-130
541-73-1	1,3-Dichlorobenzene	50	44.2	88	70-130
106-46-7	1,4-Dichlorobenzene	50	45.9	92	70-130
75-71-8	Dichlorodifluoromethane	50	39.1	78	70-130
75-34-3	1,1-Dichloroethane	50	43.7	87	70-130
107-06-2	1,2-Dichloroethane	50	43.8	88	70-130
75-35-4	1,1-Dichloroethene	50	42.4	85	70-130
156-59-2	cis-1,2-Dichloroethene	50	42.8	86	70-130
156-60-5	trans-1,2-Dichloroethene	50	43.7	87	70-130
78-87-5	1,2-Dichloropropane	50	45.4	91	70-130
142-28-9	1,3-Dichloropropane	50	45.1	90	70-130
594-20-7	2,2-Dichloropropane	50	36.8	74	70-130
563-58-6	1,1-Dichloropropene	50	45.8	92	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3052-BS	N81723.D	1	10/23/13	JB	n/a	n/a	MSN3052

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

MC25284-2, MC25284-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	43.9	88	70-130
10061-02-6	trans-1,3-Dichloropropene	50	45.6	91	70-130
123-91-1	1,4-Dioxane	250	231	92	70-130
97-63-2	Ethyl methacrylate	50	42.3	85	77-137
100-41-4	Ethylbenzene	50	45.9	92	70-130
87-68-3	Hexachlorobutadiene	50	49.1	98	70-130
591-78-6	2-Hexanone	50	39.6	79	70-130
98-82-8	Isopropylbenzene	50	45.5	91	70-130
99-87-6	p-Isopropyltoluene	50	47.3	95	70-130
1634-04-4	Methyl Tert Butyl Ether	50	39.2	78	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	39.8	80	70-130
74-95-3	Methylene bromide	50	43.9	88	70-130
75-09-2	Methylene chloride	50	43.0	86	70-130
91-20-3	Naphthalene	50	53.7	107	70-130
103-65-1	n-Propylbenzene	50	43.6	87	70-130
100-42-5	Styrene	50	47.7	95	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	46.8	94	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	39.9	80	70-130
127-18-4	Tetrachloroethene	50	45.2	90	70-130
108-88-3	Toluene	50	45.3	91	70-130
87-61-6	1,2,3-Trichlorobenzene	50	50.5	101	70-130
120-82-1	1,2,4-Trichlorobenzene	50	51.7	103	70-130
71-55-6	1,1,1-Trichloroethane	50	47.2	94	70-130
79-00-5	1,1,2-Trichloroethane	50	41.8	84	70-130
79-01-6	Trichloroethene	50	45.0	90	70-130
75-69-4	Trichlorofluoromethane	50	42.7	85	70-130
96-18-4	1,2,3-Trichloropropane	50	44.1	88	70-130
95-63-6	1,2,4-Trimethylbenzene	50	44.7	89	70-130
108-67-8	1,3,5-Trimethylbenzene	50	44.6	89	70-130
108-05-4	Vinyl Acetate	50	33.5	67* a	70-130
75-01-4	Vinyl chloride	50	35.4	71	70-130
	m,p-Xylene	100	88.3	88	70-130
95-47-6	o-Xylene	50	44.0	88	70-130
1330-20-7	Xylene (total)	150	132	88	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3052-BS	N81723.D	1	10/23/13	JB	n/a	n/a	MSN3052

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

MC25284-2, MC25284-3

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	83%	70-130%
2037-26-5	Toluene-D8	89%	70-130%
460-00-4	4-Bromofluorobenzene	89%	70-130%

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

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3053-BS	N81760.D	1	10/24/13	JB	n/a	n/a	MSN3053

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

MC25284-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	41.1	82	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	86%	70-130%
2037-26-5	Toluene-D8	90%	70-130%
460-00-4	4-Bromofluorobenzene	88%	70-130%

6.2.2

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3053-BS1	N81790.D	1	10/25/13	JB	n/a	n/a	MSN3053

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

MC25284-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	41.3	83	70-130
107-02-8	Acrolein	250	174	70	70-130
107-13-1	Acrylonitrile	50	38.7	77	70-130
71-43-2	Benzene	50	38.8	78	70-130
108-86-1	Bromobenzene	50	41.9	84	70-130
74-97-5	Bromochloromethane	50	41.9	84	70-130
75-27-4	Bromodichloromethane	50	39.7	79	70-130
75-25-2	Bromoform	50	43.3	87	70-130
74-83-9	Bromomethane	50	44.1	88	70-130
78-93-3	2-Butanone (MEK)	50	42.4	85	70-130
104-51-8	n-Butylbenzene	50	46.3	93	70-130
135-98-8	sec-Butylbenzene	50	43.2	86	70-130
98-06-6	tert-Butylbenzene	50	41.4	83	70-130
75-15-0	Carbon disulfide	50	40.3	81	70-130
56-23-5	Carbon tetrachloride	50	45.8	92	70-130
108-90-7	Chlorobenzene	50	38.6	77	70-130
75-00-3	Chloroethane	50	38.2	76	70-130
110-75-8	2-Chloroethyl vinyl ether	50	40.1	80	70-130
67-66-3	Chloroform	50	39.2	78	70-130
74-87-3	Chloromethane	50	37.7	75	70-130
95-49-8	o-Chlorotoluene	50	40.7	81	70-130
106-43-4	p-Chlorotoluene	50	42.2	84	70-130
124-48-1	Dibromochloromethane	50	41.1	82	70-130
95-50-1	1,2-Dichlorobenzene	50	39.7	79	70-130
541-73-1	1,3-Dichlorobenzene	50	40.7	81	70-130
106-46-7	1,4-Dichlorobenzene	50	41.6	83	70-130
75-71-8	Dichlorodifluoromethane	50	24.1	48* a	70-130
75-34-3	1,1-Dichloroethane	50	40.8	82	70-130
107-06-2	1,2-Dichloroethane	50	38.2	76	70-130
75-35-4	1,1-Dichloroethene	50	41.5	83	70-130
156-59-2	cis-1,2-Dichloroethene	50	38.4	77	70-130
156-60-5	trans-1,2-Dichloroethene	50	40.1	80	70-130
78-87-5	1,2-Dichloropropane	50	40.0	80	70-130
142-28-9	1,3-Dichloropropane	50	40.3	81	70-130
594-20-7	2,2-Dichloropropane	50	42.8	86	70-130
563-58-6	1,1-Dichloropropene	50	43.1	86	70-130

* = Outside of Control Limits.

6.2.3

Blank Spike Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3053-BS1	N81790.D	1	10/25/13	JB	n/a	n/a	MSN3053

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

MC25284-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	40.8	82	70-130
10061-02-6	trans-1,3-Dichloropropene	50	41.5	83	70-130
123-91-1	1,4-Dioxane	250	201	80	70-130
97-63-2	Ethyl methacrylate	50	36.9	74* a	77-137
100-41-4	Ethylbenzene	50	41.4	83	70-130
87-68-3	Hexachlorobutadiene	50	50.3	101	70-130
591-78-6	2-Hexanone	50	41.5	83	70-130
98-82-8	Isopropylbenzene	50	42.2	84	70-130
99-87-6	p-Isopropyltoluene	50	44.6	89	70-130
1634-04-4	Methyl Tert Butyl Ether	50	33.6	67* a	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	39.0	78	70-130
74-95-3	Methylene bromide	50	38.1	76	70-130
75-09-2	Methylene chloride	50	39.3	79	70-130
91-20-3	Naphthalene	50	46.3	93	70-130
103-65-1	n-Propylbenzene	50	40.8	82	70-130
100-42-5	Styrene	50	41.7	83	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	41.6	83	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	37.3	75	70-130
127-18-4	Tetrachloroethene	50	41.7	83	70-130
108-88-3	Toluene	50	40.0	80	70-130
87-61-6	1,2,3-Trichlorobenzene	50	45.1	90	70-130
120-82-1	1,2,4-Trichlorobenzene	50	45.8	92	70-130
71-55-6	1,1,1-Trichloroethane	50	44.8	90	70-130
79-00-5	1,1,2-Trichloroethane	50	37.6	75	70-130
79-01-6	Trichloroethene	50	38.7	77	70-130
75-69-4	Trichlorofluoromethane	50	36.6	73	70-130
96-18-4	1,2,3-Trichloropropane	50	40.5	81	70-130
95-63-6	1,2,4-Trimethylbenzene	50	40.9	82	70-130
108-67-8	1,3,5-Trimethylbenzene	50	40.5	81	70-130
108-05-4	Vinyl Acetate	50	32.8	66* a	70-130
75-01-4	Vinyl chloride	50	29.1	58* a	70-130
	m,p-Xylene	100	79.2	79	70-130
95-47-6	o-Xylene	50	39.6	79	70-130
1330-20-7	Xylene (total)	150	119	79	70-130

* = Outside of Control Limits.

6.2.3

Blank Spike Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3053-BS1	N81790.D	1	10/25/13	JB	n/a	n/a	MSN3053

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

MC25284-1

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	85%	70-130%
2037-26-5	Toluene-D8	87%	70-130%
460-00-4	4-Bromofluorobenzene	89%	70-130%

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

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25248-1MS	N81742.D	20	10/23/13	JB	n/a	n/a	MSN3052
MC25248-1MSD	N81743.D	20	10/23/13	JB	n/a	n/a	MSN3052
MC25248-1	N81730.D	1	10/23/13	JB	n/a	n/a	MSN3052

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

MC25284-2, MC25284-3

CAS No.	Compound	MC25248-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		1000	332	33* [a]	384	38* [a]	15	70-130/30
107-02-8	Acrolein	ND		5000	4220	84	4410	88	4	70-130/30
107-13-1	Acrylonitrile	ND		1000	755	76	789	79	4	70-130/30
71-43-2	Benzene	2460	E	1000	10700	824* [b]	9780	732* [b]	9	70-130/30
108-86-1	Bromobenzene	ND		1000	875	88	894	89	2	70-130/30
74-97-5	Bromochloromethane	ND		1000	818	82	833	83	2	70-130/30
75-27-4	Bromodichloromethane	ND		1000	787	79	793	79	1	70-130/30
75-25-2	Bromoform	ND		1000	859	86	913	91	6	70-130/30
74-83-9	Bromomethane	ND		1000	807	81	985	99	20	70-130/30
78-93-3	2-Butanone (MEK)	ND		1000	572	57* [a]	615	62* [a]	7	70-130/30
104-51-8	n-Butylbenzene	ND		1000	928	93	967	97	4	70-130/30
135-98-8	sec-Butylbenzene	ND		1000	884	88	916	92	4	70-130/30
98-06-6	tert-Butylbenzene	ND		1000	853	85	883	88	3	70-130/30
75-15-0	Carbon disulfide	ND		1000	799	80	833	83	4	70-130/30
56-23-5	Carbon tetrachloride	ND		1000	865	87	876	88	1	70-130/30
108-90-7	Chlorobenzene	ND		1000	782	78	827	83	6	70-130/30
75-00-3	Chloroethane	ND		1000	831	83	862	86	4	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		1000	795	80	805	81	1	70-130/30
67-66-3	Chloroform	ND		1000	735	74	755	76	3	70-130/30
74-87-3	Chloromethane	ND		1000	681	68* [a]	812	81	18	70-130/30
95-49-8	o-Chlorotoluene	ND		1000	844	84	857	86	2	70-130/30
106-43-4	p-Chlorotoluene	ND		1000	865	87	886	89	2	70-130/30
124-48-1	Dibromochloromethane	ND		1000	836	84	879	88	5	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		1000	817	82	858	86	5	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		1000	832	83	856	86	3	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		1000	852	85	883	88	4	70-130/30
75-71-8	Dichlorodifluoromethane	ND		1000	662	66* [a]	693	69* [a]	5	70-130/30
75-34-3	1,1-Dichloroethane	ND		1000	772	77	796	80	3	70-130/30
107-06-2	1,2-Dichloroethane	ND		1000	722	72	738	74	2	70-130/30
75-35-4	1,1-Dichloroethene	ND		1000	798	80	816	82	2	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		1000	746	75	780	78	4	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		1000	781	78	817	82	5	70-130/30
78-87-5	1,2-Dichloropropane	ND		1000	794	79	804	80	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		1000	831	83	872	87	5	70-130/30
594-20-7	2,2-Dichloropropane	ND		1000	851	85	868	87	2	70-130/30
563-58-6	1,1-Dichloropropene	ND		1000	807	81	834	83	3	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25248-1MS	N81742.D	20	10/23/13	JB	n/a	n/a	MSN3052
MC25248-1MSD	N81743.D	20	10/23/13	JB	n/a	n/a	MSN3052
MC25248-1	N81730.D	1	10/23/13	JB	n/a	n/a	MSN3052

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

MC25284-2, MC25284-3

CAS No.	Compound	MC25248-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		1000	806	81	824	82	2	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		1000	807	81	838	84	4	70-130/30
123-91-1	1,4-Dioxane	ND		5000	4010	80	4320	86	7	70-130/30
97-63-2	Ethyl methacrylate	ND		1000	763	76	791	79	4	72-139/30
100-41-4	Ethylbenzene	916	E	1000	1470	55* [a]	1550	63* [a]	5	70-130/30
87-68-3	Hexachlorobutadiene	ND		1000	1010	101	1020	102	1	70-130/30
591-78-6	2-Hexanone	ND		1000	620	62* [a]	662	66* [a]	7	70-130/30
98-82-8	Isopropylbenzene	24.5		1000	893	87	892	87	0	70-130/30
99-87-6	p-Isopropyltoluene	ND		1000	908	91	930	93	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	3.1		1000	750	75	789	79	5	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1000	728	73	776	78	6	70-130/30
74-95-3	Methylene bromide	ND		1000	742	74	773	77	4	70-130/30
75-09-2	Methylene chloride	ND		1000	764	76	802	80	5	70-130/30
91-20-3	Naphthalene	23.3		1000	1050	103	1060	104	1	70-130/30
103-65-1	n-Propylbenzene	27.7		1000	853	83	871	84	2	70-130/30
100-42-5	Styrene	ND		1000	843	84	897	90	6	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		1000	815	82	866	87	6	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		1000	769	77	792	79	3	70-130/30
127-18-4	Tetrachloroethene	ND		1000	855	86	883	88	3	70-130/30
108-88-3	Toluene	140		1000	897	76	908	77	1	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		1000	940	94	957	96	2	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		1000	955	96	978	98	2	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		1000	850	85	903	90	6	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		1000	745	75	765	77	3	70-130/30
79-01-6	Trichloroethene	ND		1000	779	78	791	79	2	70-130/30
75-69-4	Trichlorofluoromethane	ND		1000	796	80	821	82	3	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		1000	834	83	865	87	4	70-130/30
95-63-6	1,2,4-Trimethylbenzene	320		1000	1090	77	1110	79	2	70-130/30
108-67-8	1,3,5-Trimethylbenzene	34.2		1000	868	83	879	84	1	70-130/30
108-05-4	Vinyl Acetate	ND		1000	647	65* [a]	681	68* [a]	5	70-130/30
75-01-4	Vinyl chloride	ND		1000	622	62* [a]	658	66* [a]	6	70-130/30
	m,p-Xylene	185		2000	1740	78	1820	82	4	70-130/30
95-47-6	o-Xylene	38.4		1000	826	79	871	83	5	70-130/30
1330-20-7	Xylene (total)	223		3000	2560	78	2690	82	5	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25248-1MS	N81742.D	20	10/23/13	JB	n/a	n/a	MSN3052
MC25248-1MSD	N81743.D	20	10/23/13	JB	n/a	n/a	MSN3052
MC25248-1	N81730.D	1	10/23/13	JB	n/a	n/a	MSN3052

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

MC25284-2, MC25284-3

CAS No.	Surrogate Recoveries	MS	MSD	MC25248-1	Limits
1868-53-7	Dibromofluoromethane	79%	81%	83%	70-130%
2037-26-5	Toluene-D8	85%	85%	81%	70-130%
460-00-4	4-Bromofluorobenzene	90%	90%	91%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25500-18MS	N81781.D	1	10/24/13	JB	n/a	n/a	MSN3053
MC25500-18MSD	N81782.D	1	10/24/13	JB	n/a	n/a	MSN3053
MC25500-18	N81774.D	1	10/24/13	JB	n/a	n/a	MSN3053

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

MC25284-1, MC25284-2

CAS No.	Compound	MC25500-18 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	45.4	91	46.8	94	3	70-130/30
107-02-8	Acrolein	ND		250	107	43* [a]	101	40* [a]	6	70-130/30
107-13-1	Acrylonitrile	ND		50	38.5	77	37.8	76	2	70-130/30
71-43-2	Benzene	2.2		50	40.5	77	41.9	79	3	70-130/30
108-86-1	Bromobenzene	ND		50	41.2	82	43.2	86	5	70-130/30
74-97-5	Bromochloromethane	ND		50	39.9	80	40.9	82	2	70-130/30
75-27-4	Bromodichloromethane	ND		50	40.1	80	41.3	83	3	70-130/30
75-25-2	Bromoform	ND		50	42.4	85	44.0	88	4	70-130/30
74-83-9	Bromomethane	ND		50	39.3	79	44.5	89	12	70-130/30
78-93-3	2-Butanone (MEK)	ND		50	40.5	81	40.3	81	0	70-130/30
104-51-8	n-Butylbenzene	ND		50	46.1	92	47.7	95	3	70-130/30
135-98-8	sec-Butylbenzene	ND		50	43.6	87	45.2	90	4	70-130/30
98-06-6	tert-Butylbenzene	ND		50	41.9	84	43.0	86	3	70-130/30
75-15-0	Carbon disulfide	ND		50	39.2	78	39.6	79	1	70-130/30
56-23-5	Carbon tetrachloride	ND		50	45.4	91	47.2	94	4	70-130/30
108-90-7	Chlorobenzene	ND		50	38.6	77	40.2	80	4	70-130/30
75-00-3	Chloroethane	ND		50	38.2	76	38.9	78	2	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		50	40.8	82	41.4	83	1	70-130/30
67-66-3	Chloroform	ND		50	37.7	75	38.0	76	1	70-130/30
74-87-3	Chloromethane	ND		50	34.3	69* [a]	36.4	73	6	70-130/30
95-49-8	o-Chlorotoluene	ND		50	40.4	81	42.3	85	5	70-130/30
106-43-4	p-Chlorotoluene	ND		50	42.2	84	44.0	88	4	70-130/30
124-48-1	Dibromochloromethane	ND		50	40.5	81	42.3	85	4	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		50	39.5	79	40.8	82	3	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		50	40.7	81	41.3	83	1	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		50	41.4	83	42.7	85	3	70-130/30
75-71-8	Dichlorodifluoromethane	ND		50	26.5	53* [a]	27.5	55* [a]	4	70-130/30
75-34-3	1,1-Dichloroethane	ND		50	38.8	78	39.9	80	3	70-130/30
107-06-2	1,2-Dichloroethane	ND		50	38.2	76	39.5	79	3	70-130/30
75-35-4	1,1-Dichloroethene	ND		50	39.7	79	40.3	81	1	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50	37.8	76	38.4	77	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50	39.1	78	38.9	78	1	70-130/30
78-87-5	1,2-Dichloropropane	ND		50	40.8	82	41.4	83	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	40.5	81	42.5	85	5	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	40.6	81	41.1	82	1	70-130/30
563-58-6	1,1-Dichloropropene	ND		50	43.3	87	44.1	88	2	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25500-18MS	N81781.D	1	10/24/13	JB	n/a	n/a	MSN3053
MC25500-18MSD	N81782.D	1	10/24/13	JB	n/a	n/a	MSN3053
MC25500-18	N81774.D	1	10/24/13	JB	n/a	n/a	MSN3053

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

MC25284-1, MC25284-2

CAS No.	Compound	MC25500-18 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		50	40.0	80	41.0	82	2	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		50	40.4	81	41.6	83	3	70-130/30
123-91-1	1,4-Dioxane	ND		250	202	81	193	77	5	70-130/30
97-63-2	Ethyl methacrylate	ND		50	36.9	74	37.0	74	0	72-139/30
100-41-4	Ethylbenzene	0.53	J	50	42.1	83	43.4	86	3	70-130/30
87-68-3	Hexachlorobutadiene	ND		50	49.7	99	51.9	104	4	70-130/30
591-78-6	2-Hexanone	ND		50	47.5	95	47.6	95	0	70-130/30
98-82-8	Isopropylbenzene	ND		50	41.8	84	43.4	87	4	70-130/30
99-87-6	p-Isopropyltoluene	ND		50	44.7	89	46.1	92	3	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		50	34.4	69* [a]	35.7	71	4	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	44.0	88	44.4	89	1	70-130/30
74-95-3	Methylene bromide	ND		50	38.2	76	39.5	79	3	70-130/30
75-09-2	Methylene chloride	ND		50	38.0	76	38.2	76	1	70-130/30
91-20-3	Naphthalene	1.7	J	50	52.9	102	54.8	106	4	70-130/30
103-65-1	n-Propylbenzene	ND		50	40.2	80	41.9	84	4	70-130/30
100-42-5	Styrene	ND		50	42.4	85	43.7	87	3	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	40.8	82	42.5	85	4	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	14.8	30* [a]	13.9	28* [a]	6	70-130/30
127-18-4	Tetrachloroethene	ND		50	42.1	84	43.1	86	2	70-130/30
108-88-3	Toluene	0.52	J	50	41.3	82	42.3	84	2	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	44.9	90	48.1	96	7	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	45.6	91	48.0	96	5	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		50	44.3	89	44.5	89	0	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50	38.7	77	38.9	78	1	70-130/30
79-01-6	Trichloroethene	ND		50	61.0	122	62.8	126	3	70-130/30
75-69-4	Trichlorofluoromethane	ND		50	37.5	75	38.4	77	2	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		50	40.6	81	41.8	84	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	1.0	J	50	41.6	81	43.0	84	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		50	40.6	81	42.0	84	3	70-130/30
108-05-4	Vinyl Acetate	ND		50	18.3	37* [a]	17.8	36* [a]	3	70-130/30
75-01-4	Vinyl chloride	ND		50	29.6	59* [a]	30.6	61* [a]	3	70-130/30
	m,p-Xylene	0.99	J	100	80.8	80	83.3	82	3	70-130/30
95-47-6	o-Xylene	1.6		50	41.3	79	42.2	81	2	70-130/30
1330-20-7	Xylene (total)	2.6		150	122	80	126	82	3	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25500-18MS	N81781.D	1	10/24/13	JB	n/a	n/a	MSN3053
MC25500-18MSD	N81782.D	1	10/24/13	JB	n/a	n/a	MSN3053
MC25500-18	N81774.D	I	10/24/13	JB	n/a	n/a	MSN3053

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

MC25284-1, MC25284-2

CAS No.	Surrogate Recoveries	MS	MSD	MC25500-18	Limits
1868-53-7	Dibromofluoromethane	82%	80%	81%	70-130%
2037-26-5	Toluene-D8	90%	90%	88%	70-130%
460-00-4	4-Bromofluorobenzene	88%	89%	98%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Ontside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSN3052-CC3048	Injection Date:	10/23/13
Lab File ID:	N81723.D	Injection Time:	07:23
Instrument ID:	GCMSN	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	219883	9.21	311350	10.09	164224	13.34	143222	15.90	66700	6.77
Upper Limit [a]	439766	9.71	622700	10.59	328448	13.84	286444	16.40	133400	7.27
Lower Limit [b]	109942	8.71	155675	9.59	82112	12.84	71611	15.40	33350	6.27
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSN3052-BS	219883	9.21	311350	10.09	164224	13.34	143222	15.90	66700	6.77
MSN3052-MB	207933	9.21	297924	10.09	154684	13.35	111112	15.90	71271	6.78
ZZZZZZ	202676	9.22	288917	10.09	144602	13.34	107495	15.90	66049	6.78
ZZZZZZ	198509	9.22	281550	10.09	143646	13.34	104913	15.90	64436	6.78
MC25284-3	197877	9.22	283774	10.09	146113	13.34	106965	15.90	73574	6.78
ZZZZZZ	200517	9.22	284608	10.09	147305	13.34	109136	15.90	65174	6.78
MC25248-1	252219	9.21	421294	10.08	191080	13.34	172047	15.89	79387	6.78
ZZZZZZ	200800	9.21	284083	10.09	146225	13.34	108577	15.90	61614	6.77
ZZZZZZ	206553	9.21	315602	10.09	149616	13.34	111801	15.90	64933	6.78
ZZZZZZ	207722	9.21	341115	10.09	161879	13.34	130292	15.90	65683	6.78
ZZZZZZ	200704	9.21	308879	10.09	152167	13.34	110641	15.90	77874	6.78
ZZZZZZ	205624	9.21	319335	10.09	159364	13.34	123162	15.90	67667	6.78
ZZZZZZ	216061	9.22	419176	10.09	191686	13.34	139166	15.90	80679	6.77
MC25284-2	209277	9.22	496327	10.12	218693	13.34	189422	15.89	71903	6.78
MC25248-1MS	257136	9.21	379130	10.09	192708	13.34	160643	15.90	88051	6.77
MC25248-1MSD	237390	9.21	358541	10.09	177404	13.34	155907	15.89	76239	6.77

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

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

Volatile Internal Standard Area Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSN3053-CC3048	Injection Date:	10/24/13
Lab File ID:	N81760.D	Injection Time:	12:03
Instrument ID:	GCMSN	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	219911	9.21	316650	10.09	168382	13.34	149818	15.90	73281	6.77
Upper Limit [a]	439822	9.71	633300	10.59	336764	13.84	299636	16.40	146562	7.27
Lower Limit [b]	109956	8.71	158325	9.59	84191	12.84	74909	15.40	36641	6.27
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSN3053-BS	219911	9.21	316650	10.09	168382	13.34	149818	15.90	73281	6.77
MSN3053-MB	203486	9.22	285838	10.09	144603	13.34	106182	15.90	77988	6.78
ZZZZZZ	202420	9.21	292217	10.09	146972	13.35	108870	15.90	70087	6.78
ZZZZZZ	205757	9.22	288847	10.09	146232	13.34	105317	15.90	77629	6.78
ZZZZZZ	204609	9.22	291911	10.09	148445	13.34	107754	15.90	71994	6.78
ZZZZZZ	201399	9.21	287062	10.09	148712	13.34	105386	15.90	68592	6.78
ZZZZZZ	199268	9.21	288496	10.09	147557	13.34	106679	15.89	77749	6.78
ZZZZZZ	194018	9.21	287323	10.09	144726	13.34	100795	15.90	62781	6.77
MC25284-2	193525	9.21	283241	10.09	145164	13.34	103704	15.90	70142	6.78
MC25500-18	201535	9.21	286278	10.09	145837	13.34	109477	15.90	53570	6.78
ZZZZZZ	196648	9.21	277944	10.09	141725	13.34	104742	15.90	57140	6.78
ZZZZZZ	196231	9.21	277695	10.09	143476	13.34	107466	15.90	66314	6.78
ZZZZZZ	195400	9.21	279611	10.09	142195	13.34	105154	15.90	58787	6.78
ZZZZZZ	203506	9.21	293554	10.09	149528	13.34	118248	15.89	74738	6.78
ZZZZZZ	201145	9.21	284052	10.09	149009	13.34	116571	15.90	64039	6.77
ZZZZZZ	196541	9.22	280884	10.09	144848	13.34	110538	15.90	55683	6.77
MC25500-18MS	208250	9.21	301378	10.09	161038	13.34	142036	15.89	69149	6.77
MC25500-18MSD	217661	9.21	309287	10.09	162019	13.34	141061	15.89	65453	6.77

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

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

Volatile Internal Standard Area Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSN3054-CC3048	Injection Date:	10/25/13
Lab File ID:	N81789.D	Injection Time:	08:22
Instrument ID:	GCMSN	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	204706	9.21	304710	10.08	159309	13.34	139312	15.89	71550	6.77
Upper Limit [a]	409412	9.71	609420	10.58	318618	13.84	278624	16.39	143100	7.27
Lower Limit [b]	102353	8.71	152355	9.58	79655	12.84	69656	15.39	35775	6.27
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSN3054-BS	222236	9.21	329575	10.09	172984	13.34	149048	15.89	71683	6.77
MSN3053-BS1	222236	9.21	329575	10.09	172984	13.34	149048	15.89	71683	6.77
MSN3053-MB1	199824	9.22	289362	10.09	145866	13.34	103603	15.90	72972	6.78
MSN3054-MB	199824	9.22	289362	10.09	145866	13.34	103603	15.90	72972	6.78
ZZZZZZ	201948	9.21	282765	10.09	144974	13.35	101849	15.90	70551	6.78
ZZZZZZ	199947	9.21	282190	10.09	146440	13.34	100996	15.90	67060	6.78
MC25284-1	195372	9.22	275857	10.09	142408	13.34	103452	15.90	64080	6.78
ZZZZZZ	201342	9.21	296973	10.09	146792	13.34	103791	15.90	66527	6.77
ZZZZZZ	200439	9.21	290520	10.09	151302	13.34	118401	15.90	77039	6.78
ZZZZZZ	203235	9.21	287115	10.09	143773	13.34	111270	15.90	60689	6.78
ZZZZZZ	202222	9.21	286873	10.09	148800	13.34	114069	15.89	68785	6.78
ZZZZZZ	204456	9.22	289589	10.09	148594	13.34	114835	15.90	80471	6.77
ZZZZZZ	196602	9.21	277213	10.09	144507	13.34	115268	15.89	63991	6.78
ZZZZZZ	200826	9.21	283830	10.09	148250	13.34	108650	15.90	73308	6.78
ZZZZZZ	197456	9.22	283783	10.09	145931	13.34	105873	15.90	72319	6.78
ZZZZZZ	196507	9.21	280863	10.09	144549	13.34	104259	15.90	62683	6.78
ZZZZZZ	200452	9.22	284566	10.09	149997	13.34	111511	15.90	74459	6.78
ZZZZZZ	198783	9.21	279489	10.09	143465	13.34	104151	15.90	66671	6.78
ZZZZZZ	195937	9.21	282466	10.09	142612	13.34	106158	15.90	63480	6.78
ZZZZZZ	195606	9.21	282480	10.09	141701	13.34	102330	15.89	66831	6.78
ZZZZZZ	200911	9.21	287733	10.09	147798	13.34	114884	15.89	59381	6.78
ZZZZZZ	200826	9.22	290181	10.09	151374	13.34	130658	15.90	65321	6.78
ZZZZZZ	213497	9.21	297517	10.09	155054	13.34	126516	15.90	64363	6.78
ZZZZZZ	209411	9.21	301381	10.09	164200	13.34	136502	15.90	68512	6.78

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

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

Volatile Surrogate Recovery Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260B Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC25284-1	N81796.D	81.0	88.0	101.0
MC25284-2	N81771.D	82.0	87.0	101.0
MC25284-2	N81741.D	85.0	77.0	91.0
MC25284-3	N81728.D	82.0	89.0	100.0
MC25248-1MS	N81742.D	79.0	85.0	90.0
MC25248-1MSD	N81743.D	81.0	85.0	90.0
MC25500-18MS	N81781.D	82.0	90.0	88.0
MC25500-18MSD	N81782.D	80.0	90.0	89.0
MSN3052-BS	N81723.D	83.0	89.0	89.0
MSN3052-MB	N81725.D	83.0	88.0	100.0
MSN3053-BS	N81760.D	86.0	90.0	88.0
MSN3053-BS1	N81790.D	85.0	87.0	89.0
MSN3053-MB	N81762.D	80.0	87.0	99.0
MSN3053-MB1	N81793.D	81.0	87.0	102.0

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

6.5.1

New England ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35311-MB	W14922.D	1	10/21/13	KR	10/17/13	OP35311	MSW673

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

MC25284-1, MC25284-2

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

Method Blank Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35311-MB	W14922.D	1	10/21/13	KR	10/17/13	OP35311	MSW673

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

MC25284-1, MC25284-2

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

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	31%	15-110%
4165-62-2	Phenol-d5	22%	15-110%
118-79-6	2,4,6-Tribromophenol	68%	15-110%
4165-60-0	Nitrobenzene-d5	56%	30-130%
321-60-8	2-Fluorobiphenyl	53%	30-130%
1718-51-0	Terphenyl-d14	95%	30-130%

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

Method Blank Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35312-MB	I86526.D	1	10/21/13	WK	10/19/13	OP35312	MSI3220

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

MC25284-1, MC25284-2

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	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	34%	15-110%
4165-62-2	Phenol-d5	23%	15-110%
118-79-6	2,4,6-Tribromophenol	65%	15-110%
4165-60-0	Nitrobenzene-d5	59%	30-130%
321-60-8	2-Fluorobiphenyl	51%	30-130%
1718-51-0	Terphenyl-d14	96%	30-130%

Blank Spike Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35311-BS	W14923.D	1	10/21/13	KR	10/17/13	OP35311	MSW673

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

MC25284-1, MC25284-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	6.6	13* a	30-130
95-57-8	2-Chlorophenol	50	29.3	59	30-130
59-50-7	4-Chloro-3-methyl phenol	50	34.6	69	30-130
120-83-2	2,4-Dichlorophenol	50	34.3	69	30-130
105-67-9	2,4-Dimethylphenol	50	33.5	67	30-130
51-28-5	2,4-Dinitrophenol	50	42.2	84	30-130
534-52-1	4,6-Dinitro-o-cresol	50	47.0	94	30-130
95-48-7	2-Methylphenol	50	26.3	53	30-130
	3&4-Methylphenol	100	51.6	52	30-130
88-75-5	2-Nitrophenol	50	32.4	65	30-130
100-02-7	4-Nitrophenol	50	17.9	36	30-130
87-86-5	Pentachlorophenol	50	39.4	79	30-130
108-95-2	Phenol	50	14.4	29* a	30-130
95-95-4	2,4,5-Trichlorophenol	50	38.4	77	30-130
88-06-2	2,4,6-Trichlorophenol	50	37.8	76	30-130
62-53-3	Aniline	50	23.8	48	40-140
101-55-3	4-Bromophenyl phenyl ether	50	39.3	79	40-140
85-68-7	Butyl benzyl phthalate	50	41.5	83	40-140
100-51-6	Benzyl Alcohol	50	26.9	54	40-140
91-58-7	2-Chloronaphthalene	50	34.0	68	40-140
106-47-8	4-Chloroaniline	50	30.3	61	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	37.0	74	40-140
111-44-4	bis(2-Chloroethyl)ether	50	30.3	61	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	34.9	70	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	38.3	77	40-140
122-66-7	1,2-Diphenylhydrazine	50	34.2	68	40-140
121-14-2	2,4-Dinitrotoluene	50	42.5	85	40-140
606-20-2	2,6-Dinitrotoluene	50	38.3	77	40-140
91-94-1	3,3'-Dichlorobenzidine	50	41.4	83	40-140
132-64-9	Dibenzofuran	50	34.4	69	40-140
84-74-2	Di-n-butyl phthalate	50	40.0	80	40-140
117-84-0	Di-n-octyl phthalate	50	41.9	84	40-140
84-66-2	Diethyl phthalate	50	35.4	71	40-140
131-11-3	Dimethyl phthalate	50	22.3	45	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	44.3	89	40-140
118-74-1	Hexachlorobenzene	50	40.9	82	40-140

* = Outside of Control Limits.

7.2.1

7

Blank Spike Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35311-BS	W14923.D	1	10/21/13	KR	10/17/13	OP35311	MSW673

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

MC25284-1, MC25284-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	17.5	35* a	40-140
67-72-1	Hexachloroethane	50	19.7	39* a	40-140
78-59-1	Isophorone	50	32.4	65	40-140
88-74-4	2-Nitroaniline	50	39.4	79	40-140
99-09-2	3-Nitroaniline	50	38.5	77	40-140
100-01-6	4-Nitroaniline	50	40.4	81	40-140
98-95-3	Nitrobenzene	50	31.3	63	40-140
62-75-9	n-Nitrosodimethylamine	50	21.3	43	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	32.1	64	40-140
86-30-6	N-Nitrosodiphenylamine	50	80.9	81	40-140
110-86-1	Pyridine	50	16.8	34* a	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	41%	15-110%
4165-62-2	Phenol-d5	29%	15-110%
118-79-6	2,4,6-Tribromophenol	91%	15-110%
4165-60-0	Nitrobenzene-d5	67%	30-130%
321-60-8	2-Fluorobiphenyl	65%	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: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35312-BS	I86527.D	1	10/21/13	WK	10/19/13	OP35312	MSI3220

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

MC25284-1, MC25284-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	33.2	66	40-140
208-96-8	Acenaphthylene	50	27.2	54	40-140
120-12-7	Anthracene	50	37.6	75	40-140
56-55-3	Benzo(a)anthracene	50	42.7	85	40-140
50-32-8	Benzo(a)pyrene	50	41.4	83	40-140
205-99-2	Benzo(b)fluoranthene	50	43.7	87	40-140
191-24-2	Benzo(g,h,i)perylene	50	39.2	78	40-140
207-08-9	Benzo(k)fluoranthene	50	43.4	87	40-140
218-01-9	Chrysene	50	39.1	78	40-140
53-70-3	Dibenzo(a,h)anthracene	50	44.3	89	40-140
206-44-0	Fluoranthene	50	39.6	79	40-140
86-73-7	Fluorene	50	36.8	74	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	43.6	87	40-140
90-12-0	1-Methylnaphthalene	50	30.2	60	40-140
91-57-6	2-Methylnaphthalene	50	28.3	57	40-140
85-01-8	Phenanthrene	50	39.7	79	40-140
129-00-0	Pyrene	50	38.0	76	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	43%	15-110%
4165-62-2	Phenol-d5	29%	15-110%
118-79-6	2,4,6-Tribromophenol	99%	15-110%
4165-60-0	Nitrobenzene-d5	71%	30-130%
321-60-8	2-Fluorobiphenyl	65%	30-130%
1718-51-0	Terphenyl-d14	94%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35311-MS	W14924.D	1	10/21/13	KR	10/17/13	OP35311	MSW673
OP35311-MSD	W14925.D	1	10/21/13	KR	10/17/13	OP35311	MSW673
MC25100-6	W14926.D	1	10/21/13	KR	10/17/13	OP35311	MSW673

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

MC25284-1, MC25284-2

CAS No.	Compound	MC25100-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	10.9	22* [a]	16.7	33	42* [a]	30-130/20
95-57-8	2-Chlorophenol	ND		50	29.8	60	32.8	66	10	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	38.7	77	35.9	72	8	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	37.2	74	36.0	72	3	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	35.4	71	34.7	69	2	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	47.8	96	44.2	88	8	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	48.9	98	51.5	103	5	30-130/20
95-48-7	2-Methylphenol	ND		50	27.0	54	31.1	62	14	30-130/20
	3&4-Methylphenol	ND		100	52.9	53	61.1	61	14	30-130/20
88-75-5	2-Nitrophenol	ND		50	34.4	69	34.4	69	0	30-130/20
100-02-7	4-Nitrophenol	ND		50	19.7	39	19.7	39	0	30-130/20
87-86-5	Pentachlorophenol	ND		50	39.9	80	41.3	83	3	30-130/20
108-95-2	Phenol	ND		50	14.6	29* [a]	16.7	33	13	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	40.9	82	40.2	80	2	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	38.1	76	39.0	78	2	30-130/20
62-53-3	Aniline	ND		50	24.3	49	26.7	53	9	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	40.3	81	38.3	77	5	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	44.5	89	41.1	82	8	40-140/20
100-51-6	Benzyl Alcohol	ND		50	27.4	55	29.2	58	6	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	34.9	70	33.2	66	5	40-140/20
106-47-8	4-Chloroaniline	ND		50	33.5	67	31.1	62	7	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	38.7	77	35.3	71	9	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	31.4	63	30.9	62	2	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	35.7	71	35.6	71	0	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	40.5	81	35.1	70	14	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	34.7	69	34.8	70	0	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	46.9	94	40.6	81	14	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	41.1	82	36.6	73	12	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	44.2	88	43.6	87	1	40-140/20
132-64-9	Dibenzofuran	ND		50	36.8	74	33.4	67	10	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	42.1	84	38.8	78	8	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	44.0	88	40.9	82	7	40-140/20
84-66-2	Diethyl phthalate	ND		50	37.7	75	33.5	67	12	40-140/20
131-11-3	Dimethyl phthalate	ND		50	23.7	47	22.2	44	7	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	45.7	91	42.1	84	8	40-140/20
118-74-1	Hexachlorobenzene	ND		50	41.6	83	39.0	78	6	40-140/20

* = Outside of Control Limits.

7.3.1

7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35311-MS	W14924.D	1	10/21/13	KR	10/17/13	OP35311	MSW673
OP35311-MSD	W14925.D	1	10/21/13	KR	10/17/13	OP35311	MSW673
MC25100-6	W14926.D	1	10/21/13	KR	10/17/13	OP35311	MSW673

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

MC25284-1, MC25284-2

CAS No.	Compound	MC25100-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	17.9	36* [a]	17.4	35* [a]	3	40-140/20
67-72-1	Hexachloroethane	ND		50	21.2	42	21.3	43	0	40-140/20
78-59-1	Isophorone	ND		50	34.5	69	31.9	64	8	40-140/20
88-74-4	2-Nitroaniline	ND		50	44.1	88	38.8	78	13	40-140/20
99-09-2	3-Nitroaniline	ND		50	44.4	89	39.0	78	13	40-140/20
100-01-6	4-Nitroaniline	ND		50	43.4	87	38.7	77	11	40-140/20
98-95-3	Nitrobenzene	ND		50	31.7	63	30.1	60	5	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	21.4	43	20.8	42	3	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	33.3	67	36.1	72	8	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	82.8	166* [b]	78.7	157* [b]	5	40-140/20
110-86-1	Pyridine	ND		50	17.6	35* [a]	15.2	30* [a]	15	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25100-6	Limits
367-12-4	2-Fluoropbenol	42%	43%	38%	15-110%
4165-62-2	Phenol-d5	28%	33%	25%	15-110%
118-79-6	2,4,6-Tribromophenol	90%	92%	65%	15-110%
4165-60-0	Nitrobenzene-d5	70%	64%	60%	30-130%
321-60-8	2-Fluorobiphenyl	59%	62%	56%	30-130%
1718-51-0	Terphenyl-d14	91%	87%	90%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.
(b) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35312-MS	I86528.D	1	10/21/13	WK	10/19/13	OP35312	MSI3220
OP35312-MSD	I86529.D	1	10/21/13	WK	10/19/13	OP35312	MSI3220
MC25100-7	I86530.D	1	10/21/13	WK	10/19/13	OP35312	MSI3220

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

MC25284-1, MC25284-2

7.3.2

7

CAS No.	Compound	MC25100-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	35.0	70	32.1	64	9	40-140/20
208-96-8	Acenaphthylene	ND		50	28.8	58	26.6	53	8	40-140/20
120-12-7	Anthracene	ND		50	39.3	79	37.0	74	6	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	44.3	89	42.1	84	5	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	42.8	86	41.4	83	3	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	45.8	92	44.5	89	3	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	42.1	84	39.9	80	5	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	44.3	89	41.9	84	6	40-140/20
218-01-9	Chrysene	ND		50	40.5	81	38.7	77	5	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	46.4	93	44.2	88	5	40-140/20
206-44-0	Fluoranthene	ND		50	40.8	82	39.0	78	5	40-140/20
86-73-7	Fluorene	ND		50	38.8	78	35.7	71	8	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	45.9	92	43.6	87	5	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	31.9	64	29.7	59	7	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	30.1	60	28.1	56	7	40-140/20
85-01-8	Phenanthrene	ND		50	41.5	83	39.5	79	5	40-140/20
129-00-0	Pyrene	ND		50	39.2	78	37.4	75	5	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25100-7	Limits
367-12-4	2-Fluorophenol	42%	42%		15-110%
4165-62-2	Phenol-d5	29%	28%		15-110%
118-79-6	2,4,6-Tribromophenol	99%	101%		15-110%
4165-60-0	Nitrobenzene-d5	73%	69%	65%	30-130%
321-60-8	2-Fluorobiphenyl	62%	62%	56%	30-130%
1718-51-0	Terphenyl-d14	96%	93%	96%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3129-CC3124	Injection Date:	10/31/13
Lab File ID:	F70007.D	Injection Time:	09:09
Instrument ID:	GCMSF	Method:	SW846 8270C

	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	197081	4.48	713995	5.54	497084	7.07	927264	8.36	1145093	11.05	1011442	12.80
Upper Limit [a]	394162	4.98	1427990	6.04	994168	7.57	1854528	8.86	2290186	11.55	2022884	13.30
Lower Limit [b]	98541	3.98	356998	5.04	248542	6.57	463632	7.86	572547	10.55	505721	12.30
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP35485-MB	164648	4.48	608510	5.53	400720	7.07	744067	8.36	902958	11.04	790048	12.79
OP35485-BS	165761	4.48	603541	5.54	411532	7.07	770067	8.36	939966	11.04	820394	12.80
OP35455-MB	155662	4.48	557902	5.53	369831	7.07	693610	8.36	842089	11.04	761083	12.80
OP35455-BS	155192	4.48	556599	5.54	380720	7.07	711597	8.36	847573	11.04	748463	12.80
OP35455-MS	145496	4.48	539267	5.54	351768	7.07	671082	8.36	810650	11.04	713131	12.80
OP35455-MSD	159944	4.48	577291	5.54	378421	7.07	722455	8.36	835268	11.04	734059	12.80
MC25493-18	144244	4.48	534626	5.54	349808	7.07	643112	8.36	777154	11.04	709871	12.80
ZZZZZZ	160836	4.48	595831	5.54	390288	7.07	709608	8.36	855827	11.04	792893	12.80
ZZZZZZ	162943	4.48	601151	5.53	408349	7.07	772200	8.36	934393	11.04	838922	12.80
ZZZZZZ	155861	4.48	578593	5.54	386696	7.07	728885	8.36	895763	11.04	769552	12.80
ZZZZZZ	148174	4.48	540543	5.54	356447	7.07	655420	8.36	784626	11.04	727549	12.80
ZZZZZZ	156375	4.48	566149	5.54	373093	7.07	707341	8.36	843868	11.04	747116	12.80
ZZZZZZ	159395	4.48	565104	5.54	376427	7.07	720956	8.36	875408	11.04	785270	12.80
ZZZZZZ	154848	4.48	571104	5.54	385890	7.07	713483	8.36	878964	11.04	796029	12.80
ZZZZZZ	156632	4.48	574768	5.54	383480	7.07	711610	8.36	882091	11.04	768421	12.80
ZZZZZZ	150039	4.48	552901	5.54	364203	7.07	680815	8.36	808111	11.04	733061	12.80
ZZZZZZ	152311	4.48	557155	5.54	378434	7.07	692396	8.36	835687	11.04	750381	12.80
ZZZZZZ	147045	4.48	541779	5.54	362814	7.07	674021	8.36	817405	11.04	725846	12.80
ZZZZZZ	168117	4.48	611208	5.54	418777	7.07	764227	8.36	921320	11.04	798343	12.80
ZZZZZZ	165128	4.48	613034	5.54	412279	7.07	774372	8.36	937934	11.04	836622	12.80
MC25284-1 [c]	167924	4.48	609537	5.54	410392	7.07	742934	8.36	882969	11.04	796358	12.80
ZZZZZZ	157209	4.48	571206	5.54	387080	7.07	712277	8.36	849556	11.04	776441	12.80
ZZZZZZ	150104	4.48	556029	5.54	372820	7.07	685548	8.36	871776	11.04	771226	12.80
ZZZZZZ	163658	4.48	589143	5.54	404612	7.07	725908	8.36	885774	11.04	793613	12.80
ZZZZZZ	161394	4.48	579708	5.54	373969	7.07	713324	8.36	852713	11.05	796227	12.80

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

Semivolatile Internal Standard Area Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3129-CC3124	Injection Date:	10/31/13
Lab File ID:	F70007.D	Injection Time:	09:09
Instrument ID:	GCMSF	Method:	SW846 8270C

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

(c) Confirmation run.

Semivolatile Internal Standard Area Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3220-CC3155	Injection Date:	10/21/13
Lab File ID:	I86525.D	Injection Time:	08:53
Instrument ID:	GCMSI	Method:	SW846 8270C 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	192959	4.08	557935	5.06	331282	6.51	578586	7.85	499185	10.63	843875	12.12
Upper Limit [a]	385918	4.58	1115870	5.56	662564	7.01	1157172	8.35	998370	11.13	1687750	12.62
Lower Limit [b]	96480	3.58	278968	4.56	165641	6.01	289293	7.35	249593	10.13	421938	11.62
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
OP35312-MB	182526	4.08	521286	5.06	306114	6.51	516794	7.85	447830	10.63	765092	12.11
OP35312-BS	206667	4.08	588315	5.07	346269	6.51	591787	7.86	494389	10.64	861806	12.12
OP35312-MS	180823	4.08	519744	5.07	307780	6.51	534029	7.86	454017	10.64	781812	12.12
OP35312-MSD	176977	4.08	506480	5.07	298360	6.51	516136	7.86	439363	10.64	753959	12.12
MC25100-7	150335	4.08	437644	5.06	256364	6.51	438961	7.85	387743	10.63	650749	12.11
MC25284-1	160736	4.08	460813	5.06	269455	6.51	464270	7.85	407188	10.63	696994	12.11
MC25284-2	159699	4.08	457878	5.06	264543	6.51	451291	7.85	390494	10.63	677070	12.11
OP35216-MB	171512	4.08	487651	5.06	283039	6.51	484602	7.85	421513	10.64	692948	12.12
OP35216-BS	150091	4.08	430641	5.07	257027	6.51	448291	7.85	390407	10.64	663081	12.12
OP35216-BSD	164564	4.08	473595	5.06	280178	6.51	481249	7.85	417839	10.64	713639	12.12
OP35216-MS	147478	4.08	430292	5.07	256545	6.51	446374	7.85	392567	10.64	672949	12.12
OP35216-MSD	157549	4.08	456921	5.07	266183	6.51	458924	7.85	392981	10.64	688898	12.12
MC25107-8	167409	4.08	486544	5.06	282528	6.51	485940	7.85	417266	10.63	701837	12.11
ZZZZZZ	161393	4.08	468172	5.06	272631	6.51	469752	7.85	414113	10.63	712879	12.11
ZZZZZZ	145865	4.08	424507	5.06	247715	6.51	425371	7.85	375322	10.63	640534	12.11
ZZZZZZ	165717	4.08	478767	5.06	276385	6.51	476160	7.85	418350	10.64	714910	12.12
ZZZZZZ	147757	4.08	433866	5.07	252175	6.51	432778	7.85	385826	10.63	657293	12.11
ZZZZZZ	159759	4.08	463265	5.06	268889	6.51	461523	7.85	414802	10.64	674163	12.12
ZZZZZZ	162419	4.08	474721	5.07	277257	6.51	479082	7.85	422027	10.64	673624	12.12
ZZZZZZ	170299	4.08	497678	5.06	289774	6.51	501744	7.85	444294	10.64	737304	12.11

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: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSW673-CC672	Injection Date:	10/21/13
Lab File ID:	W14919.D	Injection Time:	17:53
Instrument ID:	GCMSW	Method:	SW846 8270C

	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	97606	4.91	363952	6.08	249283	7.74	501932	9.13	710528	12.66	733865	16.42
Upper Limit [a]	195212	5.41	727904	6.58	498566	8.24	1003864	9.63	1421056	13.16	1467730	16.92
Lower Limit [b]	48803	4.41	181976	5.58	124642	7.24	250966	8.63	355264	12.16	366933	15.92
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
OP35311-MB	159201	4.91	609285	6.08	384923	7.74	661596	9.13	862833	12.65	882106	16.41
OP35311-BS	132969	4.91	501257	6.08	349608	7.74	681753	9.13	963487	12.66	999567	16.42
OP35311-MS	126830	4.91	473918	6.08	363141	7.74	755396	9.13	1026211	12.66	1047542	16.42
OP35311-MSD	137616	4.91	602686	6.08	423009	7.74	800762	9.13	1143819	12.66	1195086	16.42
MC25100-6	116466	4.91	460598	6.08	299485	7.74	529339	9.13	784587	12.65	821860	16.41
ZZZZZZ	154333	4.91	566379	6.08	355408	7.74	627903	9.13	926425	12.65	923397	16.41

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

Semivolatile Internal Standard Area Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSW675-CC672	Injection Date:	10/22/13
Lab File ID:	W14960.D	Injection Time:	17:08
Instrument ID:	GCMSW	Method:	SW846 8270C

	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	130052	4.88	501364	6.04	323352	7.70	542996	9.09	620424	12.57	547595	16.33
Upper Limit [a]	260104	5.38	1002728	6.54	646704	8.20	1085992	9.59	1240848	13.07	1095190	16.83
Lower Limit [b]	65026	4.38	250682	5.54	161676	7.20	271498	8.59	310212	12.07	273798	15.83

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
OP35322-MB	135567	4.88	520004	6.04	322354	7.70	548864	9.09	631360	12.56	548674	16.32
OP35322-BS	137541	4.88	518443	6.04	332542	7.70	555652	9.09	630760	12.56	556615	16.32
OP35322-MS	120549	4.88	452581	6.04	295838	7.70	492065	9.09	543955	12.56	485921	16.32
OP35322-MSD	118470	4.88	453506	6.04	295467	7.70	498604	9.09	567350	12.57	498327	16.32
MC25100-11	125361	4.88	487081	6.04	311559	7.70	523713	9.09	603613	12.56	554303	16.32
ZZZZZZ	134485	4.88	508579	6.04	326155	7.70	542107	9.09	591578	12.56	524362	16.32
ZZZZZZ	123582	4.88	478976	6.04	294655	7.70	470678	9.09	515941	12.56	469407	16.32
ZZZZZZ	132293	4.88	506376	6.04	313261	7.70	502917	9.09	541199	12.56	495125	16.32
ZZZZZZ	122899	4.88	475191	6.04	299478	7.70	505461	9.09	568924	12.56	508819	16.32
ZZZZZZ	130046	4.88	497062	6.04	313844	7.70	526992	9.09	583676	12.56	519838	16.32
ZZZZZZ	135859	4.88	521679	6.04	330535	7.70	557129	9.09	608979	12.56	551347	16.32
ZZZZZZ	123028	4.88	468255	6.04	300636	7.70	483725	9.09	565622	12.56	529604	16.32
ZZZZZZ	134919	4.88	513761	6.04	328991	7.70	535536	9.09	592109	12.56	533779	16.32
MC25284-1	142442	4.88	537530	6.04	334082	7.70	558593	9.09	616373	12.56	562273	16.32
MC25284-2	138457	4.88	513250	6.04	315915	7.70	516847	9.09	566638	12.56	518129	16.32
ZZZZZZ	143818	4.88	546311	6.04	348720	7.70	571864	9.09	627824	12.56	565765	16.32
ZZZZZZ	137065	4.88	529880	6.04	334445	7.70	558047	9.09	606333	12.56	541865	16.32
ZZZZZZ	124149	4.88	477921	6.04	309687	7.70	521386	9.09	617169	12.56	561571	16.32
ZZZZZZ	132522	4.88	520041	6.04	326422	7.70	531601	9.09	595914	12.56	550260	16.32
ZZZZZZ	135803	4.88	528536	6.04	338231	7.70	564915	9.09	625510	12.56	574884	16.32

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: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC25284-1	F70029.D	11.0* a	9.0* a	44.0	65.0	60.0	78.0
MC25284-1	W14977.D	8.0* a	7.0* a	45.0	53.0	57.0	95.0
MC25284-2	W14978.D	40.0	29.0	99.0	64.0	68.0	97.0
OP35311-BS	W14923.D	41.0	29.0	91.0	67.0	65.0	88.0
OP35311-MB	W14922.D	31.0	22.0	68.0	56.0	53.0	95.0
OP35311-MS	W14924.D	42.0	28.0	90.0	70.0	59.0	91.0
OP35311-MSD	W14925.D	43.0	33.0	92.0	64.0	62.0	87.0

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

(a) Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.

Semivolatile Surrogate Recovery Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270C BY SIM Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC25284-1	I86531.D	59.0	54.0	88.0
MC25284-2	I86532.D	69.0	65.0	88.0
OP35312-BS	I86527.D	71.0	65.0	94.0
OP35312-MB	I86526.D	59.0	51.0	96.0
OP35312-MS	I86528.D	73.0	62.0	96.0
OP35312-MSD	I86529.D	69.0	62.0	93.0

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzeue-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

7.5.2

7

New England ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35265-MB	BK30963.D	1	10/16/13	NK	10/15/13	OP35265	GBK1020

The QC reported here applies to the following samples: Method: SW846 8011

MC25284-1, MC25284-2, MC25284-4

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	98%	36-173%
460-00-4	Bromofluorobenzene (S)	80%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35265-BS	BK30965.D	1	10/16/13	NK	10/15/13	OP35265	GBK1020

The QC reported here applies to the following samples: Method: SW846 8011

MC25284-1, MC25284-2, MC25284-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.061	86	60-140
106-93-4	1,2-Dibromoethane	0.071	0.074	104	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	98%	36-173%
460-00-4	Bromofluorobenzene (S)	71%	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35265-MS	BK30966.D	1	10/16/13	NK	10/15/13	OP35265	GBK1020
OP35265-MSD	BK30967.D	1	10/16/13	NK	10/15/13	OP35265	GBK1020
MC25237-1	BK30978.D	1	10/16/13	NK	10/15/13	OP35265	GBK1020

The QC reported here applies to the following samples: Method: SW846 8011

MC25284-1, MC25284-2, MC25284-4

CAS No.	Compound	MC25237-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.0692	0.067	97	0.062	88	8	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.0692	0.065	94	0.070	99	7	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC25237-1	Limits
460-00-4	Bromofluorobenzene (S)	89%	78%	69%	36-173%
460-00-4	Bromofluorobenzene (S)	76%	69%	66%	36-173%

8.3.1

8

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011 Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC25284-1	BK30985.D	85.0	69.0
MC25284-2	BK30987.D	84.0	78.0
MC25284-4	BK30988.D	95.0	78.0
OP35265-BS	BK30965.D	98.0	71.0
OP35265-MB	BK30963.D	98.0	80.0
OP35265-MS	BK30966.D	89.0	76.0
OP35265-MSD	BK30967.D	78.0	69.0

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBK1020-CC1020	Injection Date:	10/16/13
Lab File ID:	BK30953.D	Injection Time:	02:50
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.04	5.05

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BK30954.D	10/16/13	03:14	4.04	5.05
ZZZZZZ	BK30955.D	10/16/13	03:39	4.04	5.05
ZZZZZZ	BK30956.D	10/16/13	04:03	4.04	5.05
ZZZZZZ	BK30957.D	10/16/13	04:28	4.04	5.05
ZZZZZZ	BK30958.D	10/16/13	04:52	4.04	5.05
ZZZZZZ	BK30959.D	10/16/13	05:16	4.04	5.05
ZZZZZZ	BK30960.D	10/16/13	05:41	4.04	5.05
ZZZZZZ	BK30961.D	10/16/13	06:04	4.04	5.05
ZZZZZZ	BK30962.D	10/16/13	06:27	4.04	5.05
OP35265-MB	BK30963.D	10/16/13	06:50	4.04	5.05

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: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBK1020-CC1020	Injection Date:	10/16/13
Lab File ID:	BK30964.D	Injection Time:	07:13
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.05	5.05

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP35265-BS	BK30965.D	10/16/13	07:36	4.05	5.05
OP35265-MS	BK30966.D	10/16/13	07:59	4.05	5.05
OP35265-MSD	BK30967.D	10/16/13	08:22	4.04	5.05
ZZZZZZ	BK30968.D	10/16/13	08:45	4.05	5.05
ZZZZZZ	BK30969.D	10/16/13	09:09	4.05	5.05
ZZZZZZ	BK30970.D	10/16/13	09:32	4.05	5.05
ZZZZZZ	BK30971.D	10/16/13	09:55	4.05	5.05
ZZZZZZ	BK30972.D	10/16/13	10:19	4.05	5.05
ZZZZZZ	BK30973.D	10/16/13	10:42	4.05	5.05
ZZZZZZ	BK30974.D	10/16/13	11:06	4.05	5.05

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: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBK1020-CC1020	Injection Date:	10/16/13
Lab File ID:	BK30975.D	Injection Time:	11:30
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.05	5.05

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BK30976.D	10/16/13	11:54	4.05	5.05
ZZZZZZ	BK30977.D	10/16/13	12:18	4.05	5.05
MC25237-1	BK30978.D	10/16/13	12:42	4.05	5.05
ZZZZZZ	BK30979.D	10/16/13	13:06	4.05	5.06
ZZZZZZ	BK30980.D	10/16/13	13:30	4.05	5.06
ZZZZZZ	BK30981.D	10/16/13	13:55	4.05	5.06
ZZZZZZ	BK30982.D	10/16/13	14:19	4.05	5.05
ZZZZZZ	BK30983.D	10/16/13	14:43	4.05	5.06
ZZZZZZ	BK30984.D	10/16/13	15:08	4.05	5.06
MC25284-1	BK30985.D	10/16/13	15:32	4.05	5.06

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC25284
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBK1020-CC1020	Injection Date:	10/16/13
Lab File ID:	BK30986.D	Injection Time:	15:56
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.05	5.06

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC25284-2	BK30987.D	10/16/13	16:20	4.05	5.06
MC25284-4	BK30988.D	10/16/13	16:45	4.05	5.06
GBK1020-ECC102	BK30989.D	10/16/13	17:09	4.05	5.06

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.4

Roxana Groundwater Quarterly – 4th Quarter 2013 Data Review

Laboratory SDG: MC25314

Data Reviewer: Elizabeth Kunkel

Peer Reviewer: Steve Gragert

Date Reviewed: 11/15/2013

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

Sample Identification	Sample Identification
P74-ROX-101413	P57-ROX-101413
P58-ROX-101413	TB-ROX-101413-HCL
TB-ROX-101413-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 SVOC LCS recoveries were outside evaluation criteria. This issue is addressed further in the appropriate section below.

The cooler receipt form indicated that the cooler was received by the laboratory at a temperature of 0.5ºC, 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?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
OP35315-BS	SVOCs	Hexachlorocyclopentadiene	**16**	40-140
OP35315-BS	SVOCs	n-Nitrosodimethylamine	**30**	40-140
OP35315-BS	SVOCs	Pyridine	**28**	40-140

Analytical data that required qualification based on LCS data are included in the table

below.

Sample ID	Parameter	Analyte	Qualification
P74-ROX-101413	SVOCs	Hexachlorocyclopentadiene	**UJ**
P74-ROX-101413	SVOCs	n-Nitrosodimethylamine	**UJ**
P74-ROX-101413	SVOCs	Pyridine	**UJ**
P57-ROX-101413	SVOCs	Hexachlorocyclopentadiene	**UJ**
P57-ROX-101413	SVOCs	n-Nitrosodimethylamine	**UJ**
P57-ROX-101413	SVOCs	Pyridine	**UJ**
P58-ROX-101413	SVOCs	Hexachlorocyclopentadiene	**UJ**
P58-ROX-101413	SVOCs	n-Nitrosodimethylamine	**UJ**
P58-ROX-101413	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?

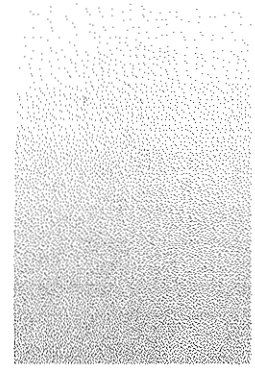
Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

No

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Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC25314

Sampling Date: 10/14/13

Report to:

URS Corporation

elizabeth.kunkel@URS.com

ATTN: Elizabeth Kunkel

Total number of pages in report: 91

Reviewed
on
11/22/2013

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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bob.billman@urs.com; melissa.mansker@urs.com
ATTN: Elizabeth Kunkel
November 20, 2013

Accutest Job MC25314 (revision 1)

Ms. Kunkel,

The report of Accutest job number MC25314 has been revised to include the following statement: "1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found." This request is per your email on 11/15/2013. This change has been incorporated into the revised report which is attached.

Sincerely,

Jennifer Dixon
Accutest Laboratories of New England, Inc.

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Sample Summary

Shell Oil

Job No: MC25314

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC25314-1	10/14/13	11:20	LRBL	10/15/13	AQ	Ground Water	P74-ROX-101413
MC25314-2	10/14/13	12:25	LRBL	10/15/13	AQ	Ground Water	P57-ROX-101413
MC25314-3	10/14/13	14:20	LRBL	10/15/13	AQ	Ground Water	P58-ROX-101413
MC25314-4	10/14/13	00:00	LRBL	10/15/13	AQ	Trip Blank Water	TB-ROX-101413-HCL
MC25314-5	10/14/13	00:00	LRBL	10/15/13	AQ	Trip Blank Water	TB-ROX-101413-ST

ACCUTEST LABORATORIES

2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	Job No	MC25314
Site:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central	Report Date	11/20/2013 10:23:11 AM

3 Sample(s) and 2 Trip Blank(s) were collected on 10/14/2013 and were received at Accutest on 10/15/2013 properly preserved, at 0.5 Deg. C and intact. These Samples received an Accutest job number of MC25314. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

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

Volatiles by GCMS By Method SW846 8260B

Matrix AQ **Batch ID:** MSU760

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- MC25339-2MS for 1,4-Dioxane, 2-Chloroethyl vinyl ether, Acetone are outside control limits due to possible matrix interference. Refer to Blank Spike.
- Sample(s) MC25339-2MS, MC25339-2MSD were used as the QC samples indicated.
- RPD(s) for MSD for 1,4-Dioxane are outside control limits for sample MC25339-2MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- MC25339-2MSD for 2-Chloroethyl vinyl ether, Acetone are outside control limits due to possible matrix interferenee. Refer to Blank Spike.

Matrix AQ **Batch ID:** MSU761

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC25328-1MS, MC25328-1MSD were used as the QC samples indicated.

Matrix AQ **Batch ID:** MSU762

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC25540-22MS, MC25540-22MSD were used as the QC samples indicated.

Extractables by GCMS By Method SW846 8270C

Matrix AQ **Batch ID:** OP35315

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25100-9MS, MC25100-9MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for Hexachlorocyclopentadiene, n-Nitrosodimethylamine, Pyridine are outside control limits. Blank Spike meets program technical requirements.
- OP35315-MS/MSD Recovery(s) for Benzoic Acid, Dimethyl phthalate, Hexachlorocyclopentadiene, n-Nitrosodimethylamine, Pyridine are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2,4-Dimethylphenol are outside control limits for sample OP35315-MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix AQ	Batch ID: OP35316

- 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) MC25100-10MS, MC25100-10MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8011

Matrix AQ	Batch ID: OP35343

- 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) MC25100-24MS, MC25100-24MSD 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(MC25314).

Summary of Hits

Job Number: MC25314
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Collected: 10/14/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC25314-1	P74-ROX-101413					
Benzene		1550	25	23	ug/l	SW846 8260B
n-Butylbenzene		15.8	5.0	0.54	ug/l	SW846 8260C
sec-Butylbenzene		3.0 J	5.0	0.58	ug/l	SW846 8260C
Ethylbenzene		65.3	1.0	0.38	ug/l	SW846 8260C
Isopropylbenzene		5.2	5.0	0.64	ug/l	SW846 8260C
p-Isopropyltoluene		3.1 J	5.0	0.55	ug/l	SW846 8260C
Methyl Tert Butyl Ether		1.1	1.0	0.43	ug/l	SW846 8260C
4-Methyl-2-pentanone (MIBK)		7.4	5.0	1.3	ug/l	SW846 8260C
Naphthalene		25.7	5.0	0.79	ug/l	SW846 8260C
n-Propylbenzene		9.4	5.0	0.59	ug/l	SW846 8260C
Toluene		34.4	1.0	0.46	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		192	5.0	0.47	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		73.9	5.0	1.1	ug/l	SW846 8260C
m,p-Xylene		237	1.0	0.70	ug/l	SW846 8260C
o-Xylene		48.3	1.0	0.41	ug/l	SW846 8260C
Xylene (total)		285	1.0	0.41	ug/l	SW846 8260C
2,4-Dichlorophenol		1.2 J	11	0.36	ug/l	SW846 8270C
2,4-Dimethylphenol		1.9 J	11	1.2	ug/l	SW846 8270C
Phenol		12.5	5.4	0.56	ug/l	SW846 8270C
Dibenzofuran		0.33 J	2.2	0.17	ug/l	SW846 8270C
Di-n-butyl phthalate		0.47 J	5.4	0.42	ug/l	SW846 8270C
bis(2-Ethylhexyl)phthalate		0.97 J	2.2	0.53	ug/l	SW846 8270C
Acenaphthene		0.20	0.11	0.075	ug/l	SW846 8270C BY SIM
Fluoranthene		0.15	0.11	0.044	ug/l	SW846 8270C BY SIM
Fluorene		0.25	0.11	0.11	ug/l	SW846 8270C BY SIM
1-Methylnaphthalene		7.3	0.22	0.054	ug/l	SW846 8270C BY SIM
2-Methylnaphthalene		7.9	0.22	0.081	ug/l	SW846 8270C BY SIM
Phenanthrene		0.079	0.054	0.014	ug/l	SW846 8270C BY SIM
Pyrene		0.057 J	0.11	0.042	ug/l	SW846 8270C BY SIM
MC25314-2	P57-ROX-101413					
Benzene		288000	500	450	ug/l	SW846 8260C
n-Butylbenzene		12.9	5.0	0.54	ug/l	SW846 8260C
sec-Butylbenzene		11.6	5.0	0.58	ug/l	SW846 8260C
tert-Butylbenzene		16.3	5.0	0.87	ug/l	SW846 8260C
Ethylbenzene		1100	1000	380	ug/l	SW846 8260C
Isopropylbenzene		53.9	5.0	0.64	ug/l	SW846 8260C
p-Isopropyltoluene		11.3	5.0	0.55	ug/l	SW846 8260C
Methyl Tert Butyl Ether		107	1.0	0.43	ug/l	SW846 8260C
Naphthalene		206	5.0	0.79	ug/l	SW846 8260C
n-Propylbenzene		58.6	5.0	0.59	ug/l	SW846 8260C
Toluene		42.1	1.0	0.46	ug/l	SW846 8260C

Summary of Hits

Job Number: MC25314
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Collected: 10/14/13

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
1,2,4-Trimethylbenzene	763 J	5000	470	ug/l	SW846 8260C
1,3,5-Trimethylbenzene	120	5.0	1.1	ug/l	SW846 8260C
m,p-Xylene	468	1.0	0.70	ug/l	SW846 8260C
o-Xylene	20.6	1.0	0.41	ug/l	SW846 8260C
Xylene (total)	489	1.0	0.41	ug/l	SW846 8260C
2,4-Dimethylphenol	2.9 J	11	1.2	ug/l	SW846 8270C
Phenol	202	27	2.8	ug/l	SW846 8270C
Dibenzofuran	0.82 J	2.2	0.17	ug/l	SW846 8270C
Di-n-butyl phthalate	0.49 J	5.4	0.42	ug/l	SW846 8270C
bis(2-Ethylhexyl)phthalate	1.2 J	2.2	0.53	ug/l	SW846 8270C
Acenaphthene	0.45	0.11	0.074	ug/l	SW846 8270C BY SIM
Acenaphthylene	0.071 J	0.11	0.053	ug/l	SW846 8270C BY SIM
Fluorene	0.67	0.11	0.11	ug/l	SW846 8270C BY SIM
1-Methylnaphthalene	25.2	0.22	0.054	ug/l	SW846 8270C BY SIM
2-Methylnaphthalene	32.4	0.22	0.080	ug/l	SW846 8270C BY SIM
Phenanthrene	0.49	0.054	0.014	ug/l	SW846 8270C BY SIM
Pyrene	0.047 J	0.11	0.041	ug/l	SW846 8270C BY SIM
MC25314-3 P58-ROX-101413					
Benzene	647000	5000	4500	ug/l	SW846 8260B
n-Butylbenzene	23.0	5.0	0.54	ug/l	SW846 8260C
sec-Butylbenzene	23.5	5.0	0.58	ug/l	SW846 8260C
tert-Butylbenzene	48.3	5.0	0.87	ug/l	SW846 8260C
Ethylbenzene	1530	1000	380	ug/l	SW846 8260C
Isopropylbenzene	99.9	5.0	0.64	ug/l	SW846 8260C
p-Isopropyltoluene	14.3	5.0	0.55	ug/l	SW846 8260C
Methyl Tert Butyl Ether	1.5	1.0	0.43	ug/l	SW846 8260C
4-Methyl-2-pentanone (MIBK)	5.5	5.0	1.3	ug/l	SW846 8260C
Naphthalene	234	5.0	0.79	ug/l	SW846 8260C
n-Propylbenzene	135	5.0	0.59	ug/l	SW846 8260C
Toluene	200	1.0	0.46	ug/l	SW846 8260C
1,2,4-Trimethylbenzene	1170 J	5000	470	ug/l	SW846 8260C
1,3,5-Trimethylbenzene	131	5.0	1.1	ug/l	SW846 8260C
m,p-Xylene	740	1.0	0.70	ug/l	SW846 8260C
o-Xylene	112	1.0	0.41	ug/l	SW846 8260C
Xylene (total)	852	1.0	0.41	ug/l	SW846 8260C
2,4-Dimethylphenol	1.6 J	11	1.2	ug/l	SW846 8270C
3&4-Methylphenol	48.1	11	2.2	ug/l	SW846 8270C
Phenol	213	27	2.8	ug/l	SW846 8270C
Dibenzofuran	2.4	2.2	0.17	ug/l	SW846 8270C
Di-n-butyl phthalate	0.58 J	5.4	0.42	ug/l	SW846 8270C
bis(2-Ethylhexyl)phthalate	9.9	2.2	0.53	ug/l	SW846 8270C
Acenaphthene	0.84	0.11	0.075	ug/l	SW846 8270C BY SIM
Benzo(a)pyrene	0.067 J	0.11	0.031	ug/l	SW846 8270C BY SIM

Summary of Hits

Job Number: MC25314
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Collected: 10/14/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Chrysene		0.099 J	0.11	0.026	ug/l	SW846 8270C BY SIM
Fluoranthene		0.066 J	0.11	0.044	ug/l	SW846 8270C BY SIM
Fluorene		1.4	0.11	0.11	ug/l	SW846 8270C BY SIM
1-Methylnaphthalene		48.8	0.22	0.054	ug/l	SW846 8270C BY SIM
2-Methylnaphthalene		62.8	0.22	0.081	ug/l	SW846 8270C BY SIM
Phenanthrene		0.95	0.054	0.014	ug/l	SW846 8270C BY SIM
Pyrene		0.21	0.11	0.042	ug/l	SW846 8270C BY SIM

MC25314-4 TB-ROX-101413-HCL

No hits reported in this sample.

MC25314-5 TB-ROX-101413-ST

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P74-ROX-101413		
Lab Sample ID:	MC25314-1	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U15343.D	1	10/23/13	GK	n/a	n/a	MSU760
Run #2	U15384.D	50	10/25/13	GK	n/a	n/a	MSU761

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

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	1550 [a]	25	23	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	15.8	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	3.0	5.0	0.58	ug/l	J
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

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

Report of Analysis

Client Sample ID:	P74-ROX-101413		
Lab Sample ID:	MC25314-1	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	65.3	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	5.2	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	3.1	5.0	0.55	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	1.1	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	7.4	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	25.7	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	9.4	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	34.4	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	192	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	73.9	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	237	1.0	0.70	ug/l	
95-47-6	o-Xylene	48.3	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	285	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	P74-ROX-101413		
Lab Sample ID:	MC25314-1	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%	115%	70-130%
2037-26-5	Toluene-D8	110%	111%	70-130%
460-00-4	4-Bromofluorobenzene	103%	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
RL = Reporting Limit
E = Indicates value exceeds calibratiou range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P74-ROX-101413		
Lab Sample ID:	MC25314-1	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U15343.D	1	10/23/13	GK	n/a	n/a	MSU760
Run #2	U15384.D	50	10/25/13	GK	n/a	n/a	MSU761

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

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	1550 [a]	25	23	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	15.8	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	3.0	5.0	0.58	ug/l	J
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

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

Report of Analysis

Client Sample ID:	P74-ROX-101413		
Lab Sample ID:	MC25314-1	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	65.3	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	5.2	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	3.1	5.0	0.55	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	1.1	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	7.4	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	25.7	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	9.4	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	34.4	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	192	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	73.9	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	237	1.0	0.70	ug/l	
95-47-6	o-Xylene	48.3	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	285	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	P74-ROX-101413		
Lab Sample ID:	MC25314-1	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%	115%	70-130%
2037-26-5	Toluene-D8	110%	111%	70-130%
460-00-4	4-Bromofluorobenzene	103%	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
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-101413		
Lab Sample ID:	MC25314-1	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W15109.D	1	10/28/13	KR	10/18/13	OP35315	MSW681
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	1.2	11	0.36	ug/l	J
105-67-9	2,4-Dimethylphenol	1.9	11	1.2	ug/l	J
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	12.5	5.4	0.56	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.93	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.71	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.70	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	0.33	2.2	0.17	ug/l	J
84-74-2	Di-n-butyl phthalate	0.47	5.4	0.42	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

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

Report of Analysis

Client Sample ID:	P74-ROX-101413		
Lab Sample ID:	MC25314-1	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

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ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.97	2.2	0.53	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.4	0.48	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	UJ
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.88	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.59	ug/l	
110-86-1	Pyridine	ND	11	0.56	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	37%		15-110%
4165-62-2	Phenol-d5	30%		15-110%
118-79-6	2,4,6-Tribromophenol	86%		15-110%
4165-60-0	Nitrobenzene-d5	55%		30-130%
321-60-8	2-Fluorobiphenyl	49%		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:	P74-ROX-101413		
Lab Sample ID:	MC25314-1	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86662.D	1	10/28/13	KR	10/18/13	OP35316	MSI3226
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	0.20	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	0.15	0.11	0.044	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	0.033	ug/l	
90-12-0	1-Methylnaphthalene	7.3	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	7.9	0.22	0.081	ug/l	
85-01-8	Phenanthrene	0.079	0.054	0.014	ug/l	
129-00-0	Pyrene	0.057	0.11	0.042	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	63%		30-130%
321-60-8	2-Fluorobiphenyl	55%		30-130%
1718-51-0	Terphenyl-d14	89%		30-130%

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

Report of Analysis

Client Sample ID:	P74-ROX-101413		
Lab Sample ID:	MC25314-1	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB51781.D	1	10/22/13	CZ	10/21/13	OP35343	GBB3049
Run #2							

	Initial Volume	Final Volume
Run #1	36.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	91%		36-173%
460-00-4	Bromofluorobenzene (S)	95%		36-173%

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

Report of Analysis

Client Sample ID:	P57-ROX-101413		
Lab Sample ID:	MC25314-2	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U15344.D	1	10/23/13	GK	n/a	n/a	MSU760
Run #2	U15387.D	1000	10/25/13	GK	n/a	n/a	MSU761

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

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	288000 [a]	500	450	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	12.9	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	11.6	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	16.3	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

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

Report of Analysis

Client Sample ID:	P57-ROX-101413		
Lab Sample ID:	MC25314-2	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	1100 [a]	1000	380	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	53.9	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	11.3	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	107	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	206	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	58.6	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	42.1	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorohenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	763 [a]	5000	470	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	120	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	468	1.0	0.70	ug/l	
95-47-6	o-Xylene	20.6	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	489	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	P57-ROX-101413		
Lab Sample ID:	MC25314-2	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%	116%	70-130%
2037-26-5	Toluene-D8	118%	108%	70-130%
460-00-4	4-Bromofluorobenzene	113%	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
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates 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-101413		
Lab Sample ID:	MC25314-2	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W15110.D	1	10/28/13	KR	10/18/13	OP35315	MSW681
Run #2	F70129.D	5	11/04/13	KR	10/18/13	OP35315	MSF3132

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	2.9	11	1.2	ug/l	J
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	202 [a]	27	2.8	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.92	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.99	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.70	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.69	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	0.82	2.2	0.17	ug/l	J
84-74-2	Di-n-butyl phthalate	0.49	5.4	0.42	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

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

Report of Analysis

Client Sample ID:	P57-ROX-101413		
Lab Sample ID:	MC25314-2	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	1.2	2.2	0.53	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.4	0.47	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	UJ
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.87	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.58	ug/l	
110-86-1	Pyridine	ND	11	0.55	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	34%	32%	15-110%
4165-62-2	Phenol-d5	29%	29%	15-110%
118-79-6	2,4,6-Tribromophenol	82%	74%	15-110%
4165-60-0	Nitrobenzene-d5	63%	64%	30-130%
321-60-8	2-Fluorobiphenyl	54%	48%	30-130%
1718-51-0	Terphenyl-d14	81%	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:	P57-ROX-101413		
Lab Sample ID:	MC25314-2	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86663.D	1	10/28/13	KR	10/18/13	OP35316	MSI3226
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	0.45	0.11	0.074	ug/l	
208-96-8	Acenaphthylene	0.071	0.11	0.053	ug/l	J
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	0.67	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ng/l	
90-12-0	1-Methylnaphthalene	25.2	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	32.4	0.22	0.080	ug/l	
85-01-8	Phenanthrene	0.49	0.054	0.014	ug/l	
129-00-0	Pyrene	0.047	0.11	0.041	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	71%		30-130%
321-60-8	2-Fluorobiphenyl	60%		30-130%
1718-51-0	Terphenyl-d14	88%		30-130%

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

Report of Analysis

Client Sample ID:	P57-ROX-101413		
Lab Sample ID:	MC25314-2	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB51782.D	1	10/22/13	CZ	10/21/13	OP35343	GBB3049
Run #2							

	Initial Volume	Final Volume
Run #1	34.8 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0055	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	89%		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

Report of Analysis

Client Sample ID:	P58-ROX-101413		
Lab Sample ID:	MC25314-3	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U15345.D	1	10/23/13	GK	n/a	n/a	MSU760
Run #2	U15388.D	1000	10/25/13	GK	n/a	n/a	MSU761
Run #3	U15397.D	10000	10/25/13	GK	n/a	n/a	MSU762

	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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	647000 [a]	5000	4500	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	23.0	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	23.5	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	48.3	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ng/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ng/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	

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

Report of Analysis

Client Sample ID:	P58-ROX-101413		
Lab Sample ID:	MC25314-3	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 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	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	1530 [b]	1000	380	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	99.9	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	14.3	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.5	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	5.5	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	234	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	135	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	200	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	1170 [b]	5000	470	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	131	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	740	1.0	0.70	ug/l	
95-47-6	o-Xylene	112	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	852	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	P58-ROX-101413		
Lab Sample ID:	MC25314-3	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	111%	115%	116%	70-130%
2037-26-5	Toluene-D8	112%	109%	110%	70-130%
460-00-4	4-Bromofluorobenzene	109%	105%	105%	70-130%

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

(a) Result is from Run# 3
(b) Result is from Run# 2

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

Report of Analysis

Client Sample ID:	P58-ROX-101413		
Lab Sample ID:	MC25314-3	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U15345.D	1	10/23/13	GK	n/a	n/a	MSU760
Run #2	U15388.D	1000	10/25/13	GK	n/a	n/a	MSU761
Run #3	U15397.D	10000	10/25/13	GK	n/a	n/a	MSU762

	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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	647000 [a]	5000	4500	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	23.0	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	23.5	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	48.3	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ng/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ng/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-101413		
Lab Sample ID:	MC25314-3	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 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	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropeue	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	1530 [b]	1000	380	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	99.9	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	14.3	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.5	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	5.5	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	234	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	135	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	200	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzeue	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	1170 [b]	5000	470	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	131	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	740	1.0	0.70	ug/l	
95-47-6	o-Xylene	112	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	852	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	P58-ROX-101413		
Lab Sample ID:	MC25314-3	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	111%	115%	116%	70-130%
2037-26-5	Toluene-D8	112%	109%	110%	70-130%
460-00-4	4-Bromofluorobenzene	109%	105%	105%	70-130%

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

(a) Result is from Run# 3
(b) Result is from Run# 2

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

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

Report of Analysis

Client Sample ID:	P58-ROX-101413		
Lab Sample ID:	MC25314-3	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W15111.D	1	10/28/13	KR	10/18/13	OP35315	MSW681
Run #2	F70130.D	5	11/04/13	KR	10/18/13	OP35315	MSF3132

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	1.6	11	1.2	ug/l	J
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	48.1	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	213 [a]	27	2.8	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.93	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.71	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.70	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	2.4	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	0.58	5.4	0.42	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

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

Report of Analysis

Client Sample ID:	P58-ROX-101413		
Lab Sample ID:	MC25314-3	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	9.9	2.2	0.53	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.4	0.48	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	UJ
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.88	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.59	ng/l	
110-86-1	Pyridine	ND	11	0.56	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	30%	28%	15-110%
4165-62-2	Phenol-d5	29%	27%	15-110%
118-79-6	2,4,6-Tribromophenol	89%	70%	15-110%
4165-60-0	Nitrobenzene-d5	61%	55%	30-130%
321-60-8	2-Fluorobiphenyl	52%	46%	30-130%
1718-51-0	Terphenyl-d14	77%	66%	30-130%

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

(a) Result is from Run# 2

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

Report of Analysis

Client Sample ID:	P58-ROX-101413		
Lab Sample ID:	MC25314-3	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86664.D	1	10/28/13	KR	10/18/13	OP35316	MSI3226
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	0.84	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	0.067	0.11	0.031	ug/l	J
205-99-2	Benzo(h)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)peryleue	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	0.099	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	0.066	0.11	0.044	ug/l	J
86-73-7	Fluorene	1.4	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	48.8	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	62.8	0.22	0.081	ug/l	
85-01-8	Phenanthrene	0.95	0.054	0.014	ug/l	
129-00-0	Pyrene	0.21	0.11	0.042	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	67%		30-130%
321-60-8	2-Fluorobiphenyl	59%		30-130%
1718-51-0	Terphenyl-d14	89%		30-130%

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

Report of Analysis

Client Sample ID:	P58-ROX-101413		
Lab Sample ID:	MC25314-3	Date Sampled:	10/14/13
Matrix:	AQ - Ground Water	Date Received:	10/15/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB51783.D	1	10/22/13	CZ	10/21/13	OP35343	GBB3049
Run #2							

	Initial Volume	Final Volume
Run #1	34.0 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	0.0056	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.012	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	78%		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:	TB-ROX-101413-HCL		
Lab Sample ID:	MC25314-4	Date Sampled:	10/14/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/15/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U15324.D	1	10/23/13	GK	n/a	n/a	MSU760
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

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

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

Report of Analysis

Client Sample ID:	TB-ROX-101413-HCL		
Lab Sample ID:	MC25314-4	Date Sampled:	10/14/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/15/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenne, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methyleue chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobeuzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimetbylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	TB-ROX-101413-HCL		
Lab Sample ID:	MC25314-4	Date Sampled:	10/14/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/15/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		70-130%
2037-26-5	Toluene-D8	110%		70-130%
460-00-4	4-Bromofluorobenzene	104%		70-130%

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

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

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

Report of Analysis

Client Sample ID:	TB-ROX-101413-ST		
Lab Sample ID:	MC25314-5	Date Sampled:	10/14/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/15/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB51784.D	1	10/22/13	CZ	10/21/13	OP35343	GBB3049
Run #2							

	Initial Volume	Final Volume
Run #1	36.0 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	86%		36-173%
460-00-4	Bromofluorobenzene (S)	103%		36-173%

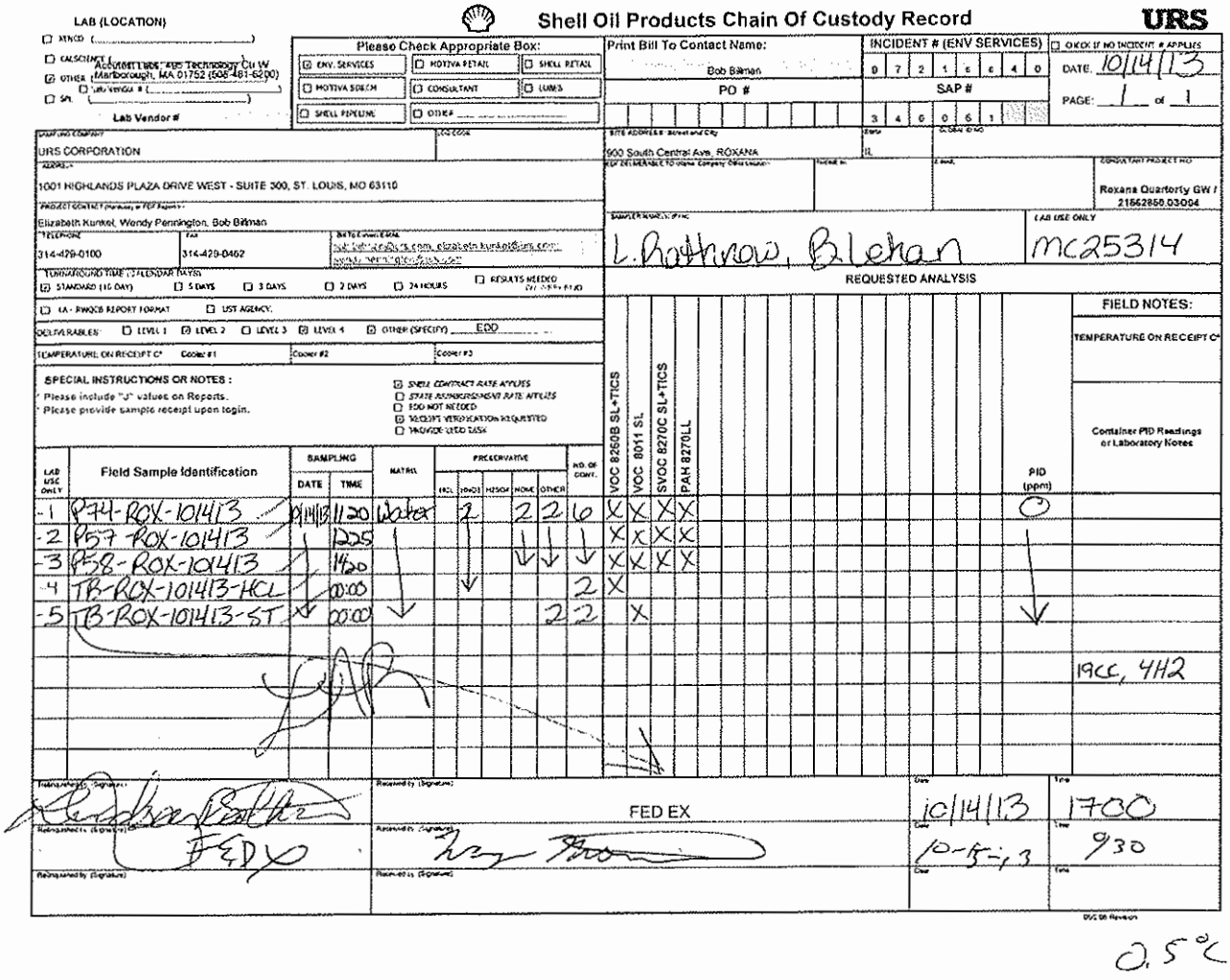
ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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



Shell Oil Products Chain Of Custody Record

URS

LAB (LOCATION)
☐ XENCO (_____)
☐ CALSCIENCE (_____)
☑ OTHER Accutest Labs: 495 Technology Ctr W (Marlborough, MA 01752 (508-481-6200))
☐ SPL (_____)
Lab Vendor #

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

Print Bill To Contact Name: Bob Billman
PO #

INCIDENT # (ENV SERVICES): 0 7 2 1 5 4 0
SAP #: 3 4 0 0 6 1
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 10/14/13
PAGE: 1 of 1

SAMPLING COMPANY: URS CORPORATION
ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110
PROJECT CONTACT (Hardcopy or PDF Report): Elizabeth Kunkel, Wendy Pennington, Bob Billman
TELEPHONE: 314-429-0100
FAX: 314-429-0462
SAMPLER(S) SIGNATURE(S): L. Rathman, B. Lehan
SITE ADDRESS (Street and City): 900 South Central Ave, ROXANA
STATE: IL
CONSULTANT PROJECT NO.: Roxana Quarterly GW / 21662850.03004
LAB USE ONLY: MC25314

TURNAROUND TIME (CALENDAR DAYS)
☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED (Rush TAT is subject to lab approval and surcharges)
☐ 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
☐ FAX NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEED DATA

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	PRESERVATIVE H2SO4	PRESERVATIVE HNO3	PRESERVATIVE OTHER	NO. OF CONT.	VOC 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	FIELD NOTES / Container PID Readings or Laboratory Notes
-1	P24-ROX-101413	10/14/13	1120	Water	2		2	2	6	X	X	X	X	0	
-2	P57-ROX-101413		1225							X	X	X	X		
-3	P58-ROX-101413		1420							X	X	X	X		
-4	TB-ROX-101413-HCL		0000						2	X					
-5	TB-ROX-101413-ST		0000					2	2		X				
															19CC, 4H2

Relinquished by (Signature): FEDX
Received by (Signature): FED EX
Date: 10/14/13 Time: 1700
Relinquished by (Signature): FEDX
Received by (Signature): [signature] Date: 10-15-13 Time: 930
Relinquished by (Signature): Received by (Signature): Date: Time:

0.5°C

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MC25314: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC25314 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 10/15/2013 **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

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MC25314: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC25314

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC25314-1 Collected: 14-OCT-13 11:20 By: LRBL Received: 15-OCT-13 By: P74-ROX-101413						
MC25314-1	SW846 8011	22-OCT-13 05:13	CZ	21-OCT-13	BJ	V8011SL
MC25314-1	SW846 8260C	23-OCT-13 20:43	GK			V8260SL+
MC25314-1	SW846 8260B	25-OCT-13 01:39	GK			V8260SL+
MC25314-1	SW846 8270C BY SIM	28-OCT-13 10:21	KR	18-OCT-13	TA	B8270SIMSL
MC25314-1	SW846 8270C	28-OCT-13 13:33	KR	18-OCT-13	TA	AB8270SL+
MC25314-2 Collected: 14-OCT-13 12:25 By: LRBL Received: 15-OCT-13 By: P57-ROX-101413						
MC25314-2	SW846 8011	22-OCT-13 05:43	CZ	21-OCT-13	BJ	V8011SL
MC25314-2	SW846 8260C	23-OCT-13 21:11	GK			V8260SL+
MC25314-2	SW846 8260C	25-OCT-13 03:00	GK			V8260SL+
MC25314-2	SW846 8270C BY SIM	28-OCT-13 10:45	KR	18-OCT-13	TA	B8270SIMSL
MC25314-2	SW846 8270C	28-OCT-13 13:57	KR	18-OCT-13	TA	AB8270SL+
MC25314-2	SW846 8270C	04-NOV-13 16:27	KR	18-OCT-13	TA	AB8270SL+
MC25314-3 Collected: 14-OCT-13 14:20 By: LRBL Received: 15-OCT-13 By: P58-ROX-101413						
MC25314-3	SW846 8011	22-OCT-13 06:11	CZ	21-OCT-13	BJ	V8011SL
MC25314-3	SW846 8260C	23-OCT-13 21:38	GK			V8260SL+
MC25314-3	SW846 8260C	25-OCT-13 03:27	GK			V8260SL+
MC25314-3	SW846 8260B	25-OCT-13 12:39	GK			V8260SL+
MC25314-3	SW846 8270C BY SIM	28-OCT-13 11:09	KR	18-OCT-13	TA	B8270SIMSL
MC25314-3	SW846 8270C	28-OCT-13 14:22	KR	18-OCT-13	TA	AB8270SL+
MC25314-3	SW846 8270C	04-NOV-13 16:51	KR	18-OCT-13	TA	AB8270SL+
MC25314-4 Collected: 14-OCT-13 00:00 By: LRBL Received: 15-OCT-13 By: TB-ROX-101413-HCL						
MC25314-4	SW846 8260B	23-OCT-13 12:06	GK			V8260SL+
MC25314-5 Collected: 14-OCT-13 00:00 By: LRBL Received: 15-OCT-13 By: TB-ROX-101413-ST						
MC25314-5	SW846 8011	22-OCT-13 06:39	CZ	21-OCT-13	BJ	V8011SL

Accutest Internal Chain of Custody

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Received: 10/15/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC25314-1.1	Walk In Ref #22	Michael Rolo	10/18/13 07:12	Retrieve from Storage
MC25314-1.1	Michael Rolo		10/21/13 07:03	Depleted
MC25314-1.2	Walk In Ref #22	Thomas Abruzzise	10/17/13 14:18	Retrieve from Storage
MC25314-1.2	Thomas Abruzzise	Walk In Ref #22	10/17/13 15:00	Return to Storage
MC25314-1.3	VOC Ref #4	Gary Krasinski	10/24/13 16:12	Retrieve from Storage
MC25314-1.3	Gary Krasinski	GCMSU	10/24/13 16:12	Load on Instrument
MC25314-1.3	GCMSU	Gary Krasinski	10/25/13 09:47	Unload from Instrument
MC25314-1.3	Gary Krasinski	VOC Ref #4	10/25/13 09:47	Return to Storage
MC25314-1.4	VOC Ref #10	Gary Krasinski	10/23/13 11:47	Retrieve from Storage
MC25314-1.4	Gary Krasinski	VOC Ref #10	10/24/13 09:39	Return to Storage
MC25314-1.5	VOC Ref #4	Michael Rolo	10/21/13 07:06	Retrieve from Storage
MC25314-1.5	Michael Rolo		10/21/13 10:56	Depleted
MC25314-2.1	Walk In Ref #22	Thomas Abruzzise	10/17/13 14:18	Retrieve from Storage
MC25314-2.1	Thomas Abruzzise	Walk In Ref #22	10/17/13 15:00	Return to Storage
MC25314-2.1	Walk In Ref #22	Michael Rolo	10/18/13 07:12	Retrieve from Storage
MC25314-2.1	Michael Rolo		10/21/13 07:03	Depleted
MC25314-2.3	VOC Ref #4	Gary Krasinski	10/24/13 16:12	Retrieve from Storage
MC25314-2.3	Gary Krasinski	GCMSU	10/24/13 16:12	Load on Instrument
MC25314-2.3	GCMSU	Gary Krasinski	10/25/13 09:47	Unload from Instrument
MC25314-2.3	Gary Krasinski	VOC Ref #4	10/25/13 09:47	Return to Storage
MC25314-2.4	VOC Ref #10	Gary Krasinski	10/23/13 11:47	Retrieve from Storage
MC25314-2.4	Gary Krasinski	VOC Ref #10	10/24/13 09:39	Return to Storage
MC25314-2.6	VOC Ref #4	Michael Rolo	10/21/13 07:06	Retrieve from Storage
MC25314-2.6	Michael Rolo		10/21/13 10:56	Depleted
MC25314-3.1	Walk In Ref #22	Thomas Abruzzise	10/17/13 14:18	Retrieve from Storage
MC25314-3.1	Thomas Abruzzise	Walk In Ref #22	10/17/13 15:00	Return to Storage
MC25314-3.1	Walk In Ref #22	Michael Rolo	10/18/13 07:12	Retrieve from Storage
MC25314-3.1	Michael Rolo		10/21/13 07:03	Depleted
MC25314-3.3	VOC Ref #10	Gary Krasinski	10/23/13 11:47	Retrieve from Storage
MC25314-3.3	Gary Krasinski	VOC Ref #10	10/24/13 09:39	Return to Storage
MC25314-3.4	VOC Ref #4	Gary Krasinski	10/24/13 16:12	Retrieve from Storage
MC25314-3.4	Gary Krasinski	GCMSU	10/24/13 16:12	Load on Instrument
MC25314-3.4	GCMSU	Gary Krasinski	10/25/13 09:47	Unload from Instrument

5.3

Accutest Internal Chain of Custody

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Received: 10/15/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC25314-3.4	Gary Krasinski	VOC Ref #4	10/25/13 09:47	Return to Storage
MC25314-3.4	VOC Ref #4	Gary Krasinski	10/25/13 14:42	Retrieve from Storage
MC25314-3.4	Gary Krasinski	GCMSU	10/25/13 14:42	Load on Instrument
MC25314-3.4	GCMSU	Gary Krasinski	10/25/13 16:10	Unload from Instrument
MC25314-3.4	Gary Krasinski	VOC Ref #4	10/25/13 16:10	Return to Storage
MC25314-3.6	VOC Ref #4	Michael Rolo	10/21/13 07:06	Retrieve from Storage
MC25314-3.6	Michael Rolo		10/21/13 10:56	Depleted
MC25314-4.1	VOC Ref #10	Gary Krasinski	10/23/13 11:47	Retrieve from Storage
MC25314-4.1	Gary Krasinski	VOC Ref #10	10/24/13 09:39	Return to 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: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU760-MB	U15323.D	1	10/23/13	GK	n/a	n/a	MSU760

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

MC25314-1, MC25314-2, MC25314-3, MC25314-4

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

6.1.1

Method Blank Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU760-MB	U15323.D	1	10/23/13	GK	n/a	n/a	MSU760

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

MC25314-1, MC25314-2, MC25314-3, MC25314-4

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

Method Blank Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU760-MB	U15323.D	1	10/23/13	GK	n/a	n/a	MSU760

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

MC25314-1, MC25314-2, MC25314-3, MC25314-4

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dihromofluoromethane	110%	70-130%
2037-26-5	Toluene-D8	109%	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	

6.1.1

Method Blank Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU761-MB	U15366.D	1	10/24/13	GK	n/a	n/a	MSU761

The QC reported here applies to the following samples: Method: SW846 8260B

MC25314-1, MC25314-2, MC25314-3

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.45	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	111%	70-130%
2037-26-5	Toluene-D8	109%	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	

6.1.2

Method Blank Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU762-MB	U15396.D	1	10/25/13	GK	n/a	n/a	MSU762

The QC reported here applies to the following samples: Method: SW846 8260B

MC25314-3

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.45	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	113%	70-130%
2037-26-5	Toluene-D8	110%	70-130%
460-00-4	4-Bromofluorobenzene	103%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU760-BS	U15321.D	1	10/23/13	GK	n/a	n/a	MSU760

The QC reported here applies to the following samples: Method: SW846 8260B

MC25314-1, MC25314-2, MC25314-3, MC25314-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	61.3	123	70-130
107-02-8	Acrolein	250	287	115	70-130
107-13-1	Acrylonitrile	50	51.4	103	70-130
71-43-2	Benzene	50	55.2	110	70-130
108-86-1	Bromobenzene	50	55.5	111	70-130
74-97-5	Bromochloromethane	50	55.4	111	70-130
75-27-4	Bromodichloromethane	50	52.3	105	70-130
75-25-2	Bromoform	50	51.7	103	70-130
74-83-9	Bromomethane	50	57.9	116	70-130
78-93-3	2-Butanone (MEK)	50	54.8	110	70-130
104-51-8	n-Butylbenzene	50	54.6	109	70-130
135-98-8	sec-Butylbenzene	50	54.5	109	70-130
98-06-6	tert-Butylbenzene	50	52.0	104	70-130
75-15-0	Carbon disulfide	50	55.8	112	70-130
56-23-5	Carbon tetrachloride	50	54.3	109	70-130
108-90-7	Chlorobenzene	50	51.5	103	70-130
75-00-3	Chloroethane	50	56.4	113	70-130
110-75-8	2-Chloroethyl vinyl ether	50	60.9	122	70-130
67-66-3	Chloroform	50	50.2	100	70-130
74-87-3	Chloromethane	50	60.4	121	70-130
95-49-8	o-Chlorotoluene	50	51.4	103	70-130
106-43-4	p-Chlorotoluene	50	52.2	104	70-130
124-48-1	Dibromochloromethane	50	51.9	104	70-130
95-50-1	1,2-Dichlorobenzene	50	52.4	105	70-130
541-73-1	1,3-Dichlorobenzene	50	54.8	110	70-130
106-46-7	1,4-Dichlorobenzene	50	56.0	112	70-130
75-71-8	Dichlorodifluoromethane	50	47.7	95	70-130
75-34-3	1,1-Dichloroethane	50	55.2	110	70-130
107-06-2	1,2-Dichloroethane	50	51.6	103	70-130
75-35-4	1,1-Dichloroethene	50	56.2	112	70-130
156-59-2	cis-1,2-Dichloroethene	50	52.7	105	70-130
156-60-5	trans-1,2-Dichloroethene	50	55.4	111	70-130
78-87-5	1,2-Dichloropropane	50	52.9	106	70-130
142-28-9	1,3-Dichloropropane	50	52.8	106	70-130
594-20-7	2,2-Dichloropropane	50	60.4	121	70-130
563-58-6	1,1-Dichloropropene	50	54.2	108	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU760-BS	U15321.D	1	10/23/13	GK	n/a	n/a	MSU760

The QC reported here applies to the following samples: Method: SW846 8260B

MC25314-1, MC25314-2, MC25314-3, MC25314-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	48.5	97	70-130
10061-02-6	trans-1,3-Dichloropropene	50	52.2	104	70-130
123-91-1	1,4-Dioxane	250	247	99	70-130
97-63-2	Ethyl methacrylate	50	49.1	98	77-137
100-41-4	Ethylbenzene	50	51.9	104	70-130
87-68-3	Hexachlorobutadiene	50	53.3	107	70-130
591-78-6	2-Hexanone	50	52.0	104	70-130
98-82-8	Isopropylbenzene	50	55.0	110	70-130
99-87-6	p-Isopropyltoluene	50	56.5	113	70-130
1634-04-4	Methyl Tert Butyl Ether	50	49.8	100	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	48.1	96	70-130
74-95-3	Methylene bromide	50	54.8	110	70-130
75-09-2	Methylene chloride	50	52.8	106	70-130
91-20-3	Naphthalene	50	48.9	98	70-130
103-65-1	n-Propylbenzene	50	51.7	103	70-130
100-42-5	Styrene	50	54.3	109	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	56.8	114	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	51.5	103	70-130
127-18-4	Tetrachloroethene	50	54.1	108	70-130
108-88-3	Toluene	50	52.4	105	70-130
87-61-6	1,2,3-Trichlorobenzene	50	51.3	103	70-130
120-82-1	1,2,4-Trichlorobenzene	50	53.3	107	70-130
71-55-6	1,1,1-Trichloroethane	50	53.7	107	70-130
79-00-5	1,1,2-Trichloroethane	50	51.4	103	70-130
79-01-6	Trichloroethene	50	55.2	110	70-130
75-69-4	Trichlorofluoromethane	50	50.9	102	70-130
96-18-4	1,2,3-Trichloropropane	50	51.0	102	70-130
95-63-6	1,2,4-Trimethylbenzene	50	53.1	106	70-130
108-67-8	1,3,5-Trimethylbenzene	50	53.6	107	70-130
108-05-4	Vinyl Acetate	50	52.9	106	70-130
75-01-4	Vinyl chloride	50	46.1	92	70-130
	m,p-Xylene	100	103	103	70-130
95-47-6	o-Xylene	50	51.8	104	70-130
1330-20-7	Xylene (total)	150	154	103	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU760-BS	U15321.D	1	10/23/13	GK	n/a	n/a	MSU760

The QC reported here applies to the following samples: Method: SW846 8260B

MC25314-1, MC25314-2, MC25314-3, MC25314-4

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	107%	70-130%
2037-26-5	Toluene-D8	111%	70-130%
460-00-4	4-Bromofluorobenzene	106%	70-130%

6.2.1

6

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU761-BS	U15363.D	1	10/24/13	GK	n/a	n/a	MSU761

The QC reported here applies to the following samples: Method: SW846 8260C

MC25314-1, MC25314-2, MC25314-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	59.4	119	70-130
100-41-4	Ethylbenzene	50	56.7	113	70-130
95-63-6	1,2,4-Trimethylbenzene	50	54.4	109	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	112%	70-130%
2037-26-5	Toluene-D8	112%	70-130%
460-00-4	4-Bromofluorobenzene	102%	70-130%

* = Outside of Control Limits.

6.2.2

Blank Spike Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU762-BS	U15394.D	1	10/25/13	GK	n/a	n/a	MSU762

The QC reported here applies to the following samples: Method: SW846 8260C

MC25314-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	57.4	115	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	111%	70-130%
2037-26-5	Toluene-D8	111%	70-130%
460-00-4	4-Bromofluorobenzene	105%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25339-2MS	U15332.D	5	10/23/13	GK	n/a	n/a	MSU760
MC25339-2MSD	U15333.D	5	10/23/13	GK	n/a	n/a	MSU760
MC25339-2	U15326.D	1	10/23/13	GK	n/a	n/a	MSU760

The QC reported here applies to the following samples: Method: SW846 8260C

MC25314-1, MC25314-2, MC25314-3, MC25314-4

CAS No.	Compound	MC25339-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	152	61* [a]	167	67* [a]	9	70-130/30
107-02-8	Acrolein	ND		1250	1080	86	1190	95	10	70-130/30
107-13-1	Acrylonitrile	ND		250	251	100	256	102	2	70-130/30
71-43-2	Benzene	ND		250	284	114	282	113	1	70-130/30
108-86-1	Bromobenzene	ND		250	283	113	286	114	1	70-130/30
74-97-5	Bromochloromethane	ND		250	291	116	290	116	0	70-130/30
75-27-4	Bromodichloromethane	ND		250	262	105	270	108	3	70-130/30
75-25-2	Bromoform	ND		250	242	97	243	97	0	70-130/30
74-83-9	Bromomethane	ND		250	290	116	287	115	1	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	198	79	205	82	3	70-130/30
104-51-8	n-Butylbenzene	ND		250	276	110	275	110	0	70-130/30
135-98-8	sec-Butylbenzene	ND		250	280	112	278	111	1	70-130/30
98-06-6	tert-Butylbenzene	ND		250	270	108	272	109	1	70-130/30
75-15-0	Carbon disulfide	ND		250	276	110	274	110	1	70-130/30
56-23-5	Carbon tetrachloride	ND		250	275	110	280	112	2	70-130/30
108-90-7	Chlorobenzene	ND		250	274	110	271	108	1	70-130/30
75-00-3	Chloroethane	ND		250	280	112	275	110	2	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	ND	0* [a]	ND	0* [a]	nc	70-130/30
67-66-3	Chloroform	ND		250	251	100	259	104	3	70-130/30
74-87-3	Chloromethane	ND		250	301	120	297	119	1	70-130/30
95-49-8	o-Chlorotoluene	ND		250	264	106	266	106	1	70-130/30
106-43-4	p-Chlorotoluene	ND		250	266	106	271	108	2	70-130/30
124-48-1	Dibromochloromethane	ND		250	256	102	257	103	0	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	271	108	276	110	2	70-130/30
541-73-1	1,3-Dichlorohenzene	ND		250	272	109	280	112	3	70-130/30
106-46-7	1,4-Dichlorohenzene	ND		250	281	112	286	114	2	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	244	98	242	97	1	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	282	113	278	111	1	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	263	105	262	105	0	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	291	116	290	116	0	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	273	109	279	112	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	288	115	285	114	1	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	266	106	271	108	2	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	279	112	278	111	0	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	310	124	302	121	3	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	284	114	285	114	0	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25339-2MS	U15332.D	5	10/23/13	GK	n/a	n/a	MSU760
MC25339-2MSD	U15333.D	5	10/23/13	GK	n/a	n/a	MSU760
MC25339-2	U15326.D	1	10/23/13	GK	n/a	n/a	MSU760

The QC reported here applies to the following samples: Method: SW846 8260C

MC25314-1, MC25314-2, MC25314-3, MC25314-4

CAS No.	Compound	MC25339-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	241	96	237	95	2	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	254	102	258	103	2	70-130/30
123-91-1	1,4-Dioxane	ND		1250	707	57* [a]	1060	85	40* [b]	70-130/30
97-63-2	Ethyl methacrylate	ND		250	251	100	249	100	1	72-139/30
100-41-4	Ethylbenzene	ND		250	278	111	271	108	3	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	273	109	275	110	1	70-130/30
591-78-6	2-Hexanone	ND		250	199	80	202	81	1	70-130/30
98-82-8	Isopropylbenzene	ND		250	282	113	282	113	0	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	283	113	288	115	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	249	100	258	103	4	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	238	95	237	95	0	70-130/30
74-95-3	Methylene hromide	ND		250	273	109	281	112	3	70-130/30
75-09-2	Methylene chloride	ND		250	271	108	275	110	1	70-130/30
91-20-3	Naphthalene	ND		250	257	103	266	106	3	70-130/30
103-65-1	n-Propylbenzene	ND		250	264	106	265	106	0	70-130/30
100-42-5	Styrene	ND		250	278	111	275	110	1	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	296	118	295	118	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	285	114	288	115	1	70-130/30
127-18-4	Tetrachloroethene	ND		250	286	114	275	110	4	70-130/30
108-88-3	Toluene	ND		250	266	106	269	108	1	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	258	103	273	109	6	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	271	108	280	112	3	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	274	110	268	107	2	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	264	106	268	107	2	70-130/30
79-01-6	Trichloroethene	ND		250	274	110	273	109	0	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	245	98	244	98	0	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	237	95	244	98	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	270	108	270	108	0	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	273	109	275	110	1	70-130/30
108-05-4	Vinyl Acetate	ND		250	278	111	273	109	2	70-130/30
75-01-4	Vinyl chloride	ND		250	232	93	231	92	0	70-130/30
	m,p-Xylene	ND		500	532	106	522	104	2	70-130/30
95-47-6	o-Xylene	ND		250	274	110	268	107	2	70-130/30
1330-20-7	Xylene (total)	ND		750	805	107	790	105	2	70-130/30

* = Outside of Control Limits.

6.3.1

6

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25339-2MS	U15332.D	5	10/23/13	GK	n/a	n/a	MSU760
MC25339-2MSD	U15333.D	5	10/23/13	GK	n/a	n/a	MSU760
MC25339-2	U15326.D	1	10/23/13	GK	n/a	n/a	MSU760

The QC reported here applies to the following samples: Method: SW846 8260C

MC25314-1, MC25314-2, MC25314-3, MC25314-4

CAS No.	Surrogate Recoveries	MS	MSD	MC25339-2	Limits
1868-53-7	Dibromofluoromethane	111%	110%	115%	70-130%
2037-26-5	Toluene-D8	109%	110%	105%	70-130%
460-00-4	4-Bromofluorobenzene	106%	108%	105%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25328-1MS	U15380.D	5	10/24/13	GK	n/a	n/a	MSU761
MC25328-1MSD	U15381.D	5	10/25/13	GK	n/a	n/a	MSU761
MC25328-1	U15371.D	1	10/24/13	GK	n/a	n/a	MSU761

The QC reported here applies to the following samples: Method: SW846 8260C

MC25314-1, MC25314-2, MC25314-3

CAS No.	Compound	MC25328-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		250	294	118	293	117	0	70-130/30
100-41-4	Ethylbenzene	ND		250	285	114	283	113	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	274	110	272	109	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC25328-1	Limits
1868-53-7	Dibromofluoromethane	116%	115%	115%	70-130%
2037-26-5	Toluene-D8	109%	110%	111%	70-130%
460-00-4	4-Bromofluorobenzene	104%	105%	107%	70-130%

* = Outside of Control Limits.

6.3.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25540-22MS	U15403.D	5	10/25/13	GK	n/a	n/a	MSU762
MC25540-22MSD	U15404.D	5	10/25/13	GK	n/a	n/a	MSU762
MC25540-22	U15402.D	1	10/25/13	GK	n/a	n/a	MSU762

6.3.3

The QC reported here applies to the following samples: Method: SW846 8260C

MC25314-3

CAS No.	Compound	MC25540-22 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		250	285	114	288	115	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC25540-22	Limits
1868-53-7	Dibromofluoromethane	115%	114%	114%	70-130%
2037-26-5	Toluene-D8	112%	108%	111%	70-130%
460-00-4	4-Bromofluorobenzene	103%	103%	102%	70-130%

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSU760-CC756	Injection Date:	10/23/13
Lab File ID:	U15320.D	Injection Time:	10:15
Instrument ID:	GCMSU	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	129996	8.97	204979	9.85	101468	13.12	99475	15.69	54082	6.54
Upper Limit [a]	259992	9.47	409958	10.35	202936	13.62	198950	16.19	108164	7.04
Lower Limit [b]	64998	8.47	102490	9.35	50734	12.62	49738	15.19	27041	6.04
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSU760-BS	132131	8.98	205744	9.85	103711	13.12	100351	15.69	54045	6.54
MSU760-MB	127398	8.98	195998	9.85	97369	13.12	94980	15.69	52765	6.55
MC25314-4	118863	8.98	185701	9.85	90571	13.12	91576	15.69	42884	6.55
ZZZZZZ	121395	8.98	189416	9.85	94417	13.12	93419	15.69	46091	6.55
MC25339-2	120966	8.98	186218	9.85	93690	13.12	93336	15.69	47542	6.54
ZZZZZZ	119134	8.98	183103	9.85	89966	13.12	91903	15.69	47343	6.55
ZZZZZZ	118751	8.98	186466	9.85	93321	13.12	90912	15.69	51680	6.56
ZZZZZZ	121238	8.98	188594	9.85	93748	13.12	94377	15.69	54822	6.55
ZZZZZZ	123985	8.98	192172	9.85	97195	13.12	95096	15.69	53472	6.55
ZZZZZZ	126514	8.98	196013	9.85	99687	13.12	98443	15.69	48843	6.55
MC25339-2MS	131706	8.97	204796	9.85	100731	13.12	99377	15.69	49341	6.54
MC25339-2MSD	127970	8.98	199347	9.85	99001	13.12	95484	15.69	50279	6.55
ZZZZZZ	133560	8.98	212092	9.85	104773	13.12	98017	15.69	52932	6.54
ZZZZZZ	130732	8.98	199965	9.85	98752	13.12	97168	15.69	51928	6.55
ZZZZZZ	130912	8.98	203090	9.85	100864	13.12	97564	15.69	51728	6.55
ZZZZZZ	123366	8.98	190567	9.85	94912	13.12	93336	15.69	50252	6.55
ZZZZZZ	123846	8.98	193388	9.85	96295	13.12	93735	15.69	49963	6.55
ZZZZZZ	123135	8.98	192126	9.85	97521	13.12	93370	15.69	47814	6.55
ZZZZZZ	120606	8.98	186953	9.85	92178	13.12	92494	15.69	48092	6.54
ZZZZZZ	122777	8.98	195733	9.85	92943	13.12	92256	15.69	49212	6.55
ZZZZZZ	121924	8.98	192413	9.85	91525	13.12	88805	15.69	48653	6.55
MC25314-1	123331	8.98	188770	9.85	95733	13.12	95176	15.69	51845	6.55
MC25314-2	131727	9.00	195873	9.87	105713	13.12	98336	15.69	53135	6.56
MC25314-3	140212	9.05	211007	9.91	108591	13.13	100448	15.69	56205	6.57

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: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSU761-CC756	Injection Date:	10/24/13
Lab File ID:	U15363.D	Injection Time:	16:06
Instrument ID:	GCMSU	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	125917	8.97	194976	9.85	98370	13.12	100714	15.68	50776	6.54
Upper Limit [a]	251834	9.47	389952	10.35	196740	13.62	201428	16.18	101552	7.04
Lower Limit [b]	62959	8.47	97488	9.35	49185	12.62	50357	15.18	25388	6.04
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSU761-BS	125917	8.97	194976	9.85	98370	13.12	100714	15.68	50776	6.54
MSU761-MB	125223	8.98	193028	9.85	94477	13.12	94227	15.69	49693	6.55
ZZZZZZ	124170	8.98	186939	9.85	91764	13.12	91092	15.69	47039	6.54
ZZZZZZ	121933	8.98	188864	9.85	92577	13.12	90640	15.69	48009	6.54
ZZZZZZ	122649	8.98	190029	9.85	94657	13.12	93483	15.69	46384	6.54
ZZZZZZ	117614	8.98	184829	9.85	90545	13.12	90825	15.69	47929	6.55
MC25328-1	120946	8.98	185229	9.85	92138	13.12	89183	15.69	48614	6.55
ZZZZZZ	118686	8.98	181424	9.85	89789	13.12	89676	15.69	48017	6.55
ZZZZZZ	118262	8.98	184315	9.85	91637	13.12	89490	15.69	47527	6.54
ZZZZZZ	118536	8.98	180948	9.85	89164	13.12	89893	15.69	48113	6.54
ZZZZZZ	114826	8.98	179137	9.85	88921	13.12	89958	15.69	47707	6.54
ZZZZZZ	113518	8.97	176771	9.85	87463	13.12	86628	15.69	48001	6.55
ZZZZZZ	116783	8.98	178769	9.85	90129	13.12	89313	15.69	51931	6.55
ZZZZZZ	111186	8.98	172485	9.85	85297	13.12	86028	15.69	45444	6.54
ZZZZZZ	112800	8.98	173992	9.85	85389	13.12	83921	15.69	47202	6.54
MC25328-1MS	116835	8.97	183389	9.85	88713	13.12	89894	15.68	49677	6.54
MC25328-1MSD	115078	8.97	182551	9.85	90134	13.12	88222	15.68	49109	6.55
ZZZZZZ	116548	8.98	182716	9.85	92060	13.12	89559	15.69	48854	6.54
ZZZZZZ	116189	8.98	178456	9.85	87630	13.12	86014	15.68	46731	6.54
MC25314-1	118364	8.98	179841	9.85	90594	13.12	87917	15.69	49345	6.54
ZZZZZZ	112750	8.97	177594	9.85	88819	13.12	86543	15.69	47344	6.54
ZZZZZZ	110154	8.98	169387	9.85	83536	13.12	83307	15.69	44650	6.54
MC25314-2	110805	8.98	172907	9.85	84279	13.12	83528	15.69	45513	6.54
MC25314-3	108319	8.98	169681	9.85	84155	13.12	83167	15.69	43171	6.54

IS 1 = Pentafluorohenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

6.4.2

Volatile Internal Standard Area Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSU762-CC756	Injection Date:	10/25/13
Lab File ID:	U15393.D	Injection Time:	10:50
Instrument ID:	GCMSU	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	122558	8.97	192388	9.85	95601	13.12	95445	15.68	47427	6.54
Upper Limit [a]	245116	9.47	384776	10.35	191202	13.62	190890	16.18	94854	7.04
Lower Limit [b]	61279	8.47	96194	9.35	47801	12.62	47723	15.18	23714	6.04
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSU762-BS	125071	8.97	191195	9.85	96046	13.12	94496	15.68	45939	6.54
MSU762-MB	121474	8.98	184641	9.85	93074	13.12	93825	15.69	47020	6.54
MC25314-3	119178	8.97	185448	9.85	92519	13.12	91179	15.69	46603	6.55
ZZZZZZ	119340	8.98	183132	9.85	91695	13.12	91535	15.68	43627	6.54
ZZZZZZ	119033	8.98	185187	9.85	91474	13.12	93154	15.69	52109	6.54
ZZZZZZ	123493	8.97	190981	9.85	94624	13.12	92414	15.69	48489	6.54
MC25540-22	120476	8.97	181570	9.85	91463	13.12	94044	15.69	48172	6.54
MC25540-22MS	122558	8.97	186188	9.85	94314	13.12	94662	15.68	47892	6.55
MC25540-22MSD	119987	8.97	191162	9.85	95214	13.12	93514	15.68	46549	6.54

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260B Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC25314-1	U15384.D	115.0	111.0	107.0
MC25314-1	U15343.D	115.0	110.0	103.0
MC25314-2	U15387.D	116.0	108.0	106.0
MC25314-2	U15344.D	112.0	118.0	113.0
MC25314-3	U15397.D	116.0	110.0	105.0
MC25314-3	U15388.D	115.0	109.0	105.0
MC25314-3	U15345.D	111.0	112.0	109.0
MC25314-4	U15324.D	110.0	110.0	104.0
MC25328-1MS	U15380.D	116.0	109.0	104.0
MC25328-1MSD	U15381.D	115.0	110.0	105.0
MC25339-2MS	U15332.D	111.0	109.0	106.0
MC25339-2MSD	U15333.D	110.0	110.0	108.0
MC25540-22MS	U15403.D	115.0	112.0	103.0
MC25540-22MSD	U15404.D	114.0	108.0	103.0
MSU760-BS	U15321.D	107.0	111.0	106.0
MSU760-MB	U15323.D	110.0	109.0	108.0
MSU761-BS	U15363.D	112.0	112.0	102.0
MSU761-MB	U15366.D	111.0	109.0	106.0
MSU762-BS	U15394.D	111.0	111.0	105.0
MSU762-MB	U15396.D	113.0	110.0	103.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

Volatile Surrogate Recovery Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC25314-1	U15384.D	115.0	111.0	107.0
MC25314-1	U15343.D	115.0	110.0	103.0
MC25314-2	U15387.D	116.0	108.0	106.0
MC25314-2	U15344.D	112.0	118.0	113.0
MC25314-3	U15397.D	116.0	110.0	105.0
MC25314-3	U15388.D	115.0	109.0	105.0
MC25314-3	U15345.D	111.0	112.0	109.0
MC25314-4	U15324.D	110.0	110.0	104.0
MC25328-1MS	U15380.D	116.0	109.0	104.0
MC25328-1MSD	U15381.D	115.0	110.0	105.0
MC25339-2MS	U15332.D	111.0	109.0	106.0
MC25339-2MSD	U15333.D	110.0	110.0	108.0
MC25540-22MS	U15403.D	115.0	112.0	103.0
MC25540-22MSD	U15404.D	114.0	108.0	103.0
MSU760-BS	U15321.D	107.0	111.0	106.0
MSU760-MB	U15323.D	110.0	109.0	108.0
MSU761-BS	U15363.D	112.0	112.0	102.0
MSU761-MB	U15366.D	111.0	109.0	106.0
MSU762-BS	U15394.D	111.0	111.0	105.0
MSU762-MB	U15396.D	113.0	110.0	103.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

New England ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35315-MB	W15103.D	1	10/28/13	KR	10/18/13	OP35315	MSW681

The QC reported here applies to the following samples: Method: SW846 8270C

MC25314-1, MC25314-2, MC25314-3

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.39	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	

Method Blank Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35315-MB	W15103.D	1	10/28/13	KR	10/18/13	OP35315	MSW681

The QC reported here applies to the following samples: Method: SW846 8270C

MC25314-1, MC25314-2, MC25314-3

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	26%	15-110%
4165-62-2	Phenol-d5	19%	15-110%
118-79-6	2,4,6-Tribromophenol	59%	15-110%
4165-60-0	Nitrobenzene-d5	53%	30-130%
321-60-8	2-Fluorobiphenyl	47%	30-130%
1718-51-0	Terphenyl-d14	66%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

Method Blank Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35316-MB	I86657.D	1	10/28/13	KR	10/18/13	OP35316	MSI3226

The QC reported here applies to the following samples: Method: SW846 8270C BY SIM

MC25314-1, MC25314-2, MC25314-3

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.032	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	ug/l	
85-01-8	Phenanthrene	ND	0.050	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	59%	30-130%
321-60-8	2-Fluorobiphenyl	53%	30-130%
1718-51-0	Terphenyl-d14	70%	30-130%

Blank Spike Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35315-BS	W15104.D	1	10/28/13	KR	10/18/13	OP35315	MSW681

The QC reported here applies to the following samples: Method: SW846 8270C

MC25314-1, MC25314-2, MC25314-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	15.3	31	30-130
95-57-8	2-Chlorophenol	50	34.3	69	30-130
59-50-7	4-Chloro-3-methyl phenol	50	37.7	75	30-130
120-83-2	2,4-Dichlorophenol	50	39.1	78	30-130
105-67-9	2,4-Dimethylphenol	50	26.0	52	30-130
51-28-5	2,4-Dinitrophenol	50	31.1	62	30-130
534-52-1	4,6-Dinitro-o-cresol	50	36.7	73	30-130
95-48-7	2-Methylphenol	50	29.5	59	30-130
	3&4-Methylphenol	100	57.0	57	30-130
88-75-5	2-Nitrophenol	50	37.6	75	30-130
100-02-7	4-Nitrophenol	50	18.2	36	30-130
87-86-5	Pentachlorophenol	50	40.0	80	30-130
108-95-2	Phenol	50	16.2	32	30-130
95-95-4	2,4,5-Trichlorophenol	50	42.0	84	30-130
88-06-2	2,4,6-Trichlorophenol	50	40.1	80	30-130
62-53-3	Aniline	50	29.0	58	40-140
101-55-3	4-Bromophenyl phenyl ether	50	49.2	98	40-140
85-68-7	Bntyl benzyl phthalate	50	47.1	94	40-140
100-51-6	Benzyl Alcohol	50	30.4	61	40-140
91-58-7	2-Chloronaphthalene	50	38.7	77	40-140
106-47-8	4-Chloroaniline	50	36.9	74	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	35.4	71	40-140
111-44-4	bis(2-Chloroethyl)ether	50	35.2	70	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	38.4	77	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	42.9	86	40-140
122-66-7	1,2-Diphenylhydrazine	50	39.1	78	40-140
121-14-2	2,4-Dinitrotoluene	50	43.8	88	40-140
606-20-2	2,6-Dinitrotoluene	50	41.0	82	40-140
91-94-1	3,3'-Dichlorobenzidine	50	45.6	91	40-140
132-64-9	Dibenzofuran	50	38.9	78	40-140
84-74-2	Di-n-butyl phthalate	50	42.3	85	40-140
117-84-0	Di-n-octyl phthalate	50	46.7	93	40-140
84-66-2	Diethyl phthalate	50	38.6	77	40-140
131-11-3	Dimethyl phthalate	50	22.0	44	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	48.8	98	40-140
118-74-1	Hexachlorobenzene	50	48.1	96	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35315-BS	W15104.D	1	10/28/13	KR	10/18/13	OP35315	MSW681

The QC reported here applies to the following samples: Method: SW846 8270C

MC25314-1, MC25314-2, MC25314-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	7.8	16* a	40-140
67-72-1	Hexachloroethane	50	20.6	41	40-140
78-59-1	Isophorone	50	39.2	78	40-140
88-74-4	2-Nitroaniline	50	40.5	81	40-140
99-09-2	3-Nitroaniline	50	39.0	78	40-140
100-01-6	4-Nitroaniline	50	40.2	80	40-140
98-95-3	Nitrobenzene	50	38.2	76	40-140
62-75-9	n-Nitrosodimethylamine	50	14.9	30* a	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	38.3	77	40-140
86-30-6	N-Nitrosodiphenylamine	50	44.6	89	40-140
110-86-1	Pyridine	50	14.1	28* a	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	30%	15-110%
4165-62-2	Phenol-d5	21%	15-110%
118-79-6	2,4,6-Tribromophenol	74%	15-110%
4165-60-0	Nitrobenzene-d5	58%	30-130%
321-60-8	2-Fluorobiphenyl	57%	30-130%
1718-51-0	Terphenyl-d14	75%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

7.2.1

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Blank Spike Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35316-BS	I86658.D	1	10/28/13	KR	10/18/13	OP35316	MSI3226

The QC reported here applies to the following samples: Method: SW846 8270C BY SIM

MC25314-1, MC25314-2, MC25314-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	39.3	79	40-140
208-96-8	Acenaphthylene	50	32.4	65	40-140
120-12-7	Anthracene	50	42.0	84	40-140
56-55-3	Benzo(a)anthracene	50	48.5	97	40-140
50-32-8	Benzo(a)pyrene	50	46.2	92	40-140
205-99-2	Benzo(b)fluoranthene	50	47.5	95	40-140
191-24-2	Benzo(g,h,i)perylene	50	51.3	103	40-140
207-08-9	Benzo(k)fluoranthene	50	47.8	96	40-140
218-01-9	Chrysene	50	44.5	89	40-140
53-70-3	Dibenzo(a,h)anthracene	50	53.2	106	40-140
206-44-0	Fluoranthene	50	43.7	87	40-140
86-73-7	Fluorene	50	42.6	85	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	53.2	106	40-140
90-12-0	1-Methylnaphthalene	50	36.2	72	40-140
91-57-6	2-Methylnaphthalene	50	34.2	68	40-140
85-01-8	Phenanthrene	50	45.7	91	40-140
129-00-0	Pyrene	50	43.0	86	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	67%	30-130%
321-60-8	2-Fluorobiphenyl	61%	30-130%
1718-51-0	Terphenyl-d14	80%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35315-MS	W15106.D	1	10/28/13	KR	10/18/13	OP35315	MSW681
OP35315-MSD	W15107.D	1	10/28/13	KR	10/18/13	OP35315	MSW681
MC25100-9	W15108.D	1	10/28/13	KR	10/18/13	OP35315	MSW681

The QC reported here applies to the following samples: Method: SW846 8270C

MC25314-1, MC25314-2, MC25314-3

7.3.1

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CAS No.	Compound	MC25100-9 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	13.6	27* [a]	14.5	29* [a]	6	30-130/20
95-57-8	2-Chlorophenol	ND		50	31.1	62	33.7	67	8	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	35.5	71	36.9	74	4	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	36.0	72	38.6	77	7	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	26.7	53	19.2	38	33* [b]	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	23.4	47	25.8	52	10	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	29.3	59	29.6	59	1	30-130/20
95-48-7	2-Methylphenol	ND		50	28.2	56	29.3	59	4	30-130/20
	3&4-Methylphenol	ND		100	53.6	54	57.2	57	6	30-130/20
88-75-5	2-Nitrophenol	ND		50	34.1	68	36.6	73	7	30-130/20
100-02-7	4-Nitrophenol	ND		50	18.9	38	18.9	38	0	30-130/20
87-86-5	Pentachlorophenol	ND		50	37.9	76	37.6	75	1	30-130/20
108-95-2	Phenol	ND		50	14.8	30	16.0	32	8	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	37.2	74	40.8	82	9	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	36.8	74	38.0	76	3	30-130/20
62-53-3	Aniline	ND		50	27.2	54	30.0	60	10	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	45.1	90	45.6	91	1	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	44.8	90	46.0	92	3	40-140/20
100-51-6	Benzyl Alcohol	ND		50	27.8	56	30.6	61	10	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	34.8	70	38.1	76	9	40-140/20
106-47-8	4-Chloroaniline	ND		50	35.2	70	36.3	73	3	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	32.4	65	36.4	73	12	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	32.7	65	36.9	74	12	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	36.1	72	42.1	84	15	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	38.5	77	41.2	82	7	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	36.6	73	38.2	76	4	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	39.7	79	42.5	85	7	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	37.9	76	39.2	78	3	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	46.7	93	48.0	96	3	40-140/20
132-64-9	Dibenzofuran	ND		50	34.6	69	37.3	75	8	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	40.1	80	43.5	87	8	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	44.0	88	46.2	92	5	40-140/20
84-66-2	Diethyl phthalate	ND		50	34.1	68	36.1	72	6	40-140/20
131-11-3	Dimethyl phthalate	ND		50	18.4	37* [a]	19.7	39* [a]	7	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	0.86	J	50	44.8	88	48.1	94	7	40-140/20
118-74-1	Hexachlorobenzene	ND		50	45.0	90	46.4	93	3	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35315-MS	W15106.D	1	10/28/13	KR	10/18/13	OP35315	MSW681
OP35315-MSD	W15107.D	1	10/28/13	KR	10/18/13	OP35315	MSW681
MC25100-9	W15108.D	1	10/28/13	KR	10/18/13	OP35315	MSW681

The QC reported here applies to the following samples: Method: SW846 8270C

MC25314-1, MC25314-2, MC25314-3

CAS No.	Compound	MC25100-9 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	7.0	14* [a]	8.4	17* [a]	18	40-140/20
67-72-1	Hexachloroethane	ND		50	20.6	41	22.6	45	9	40-140/20
78-59-1	Isophorone	ND		50	35.3	71	39.5	79	11	40-140/20
88-74-4	2-Nitroaniline	ND		50	36.3	73	39.2	78	8	40-140/20
99-09-2	3-Nitroaniline	ND		50	35.2	70	37.2	74	6	40-140/20
100-01-6	4-Nitroaniline	ND		50	35.0	70	38.5	77	10	40-140/20
98-95-3	Nitrobenzene	ND		50	35.2	70	38.5	77	9	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	13.5	27* [a]	12.1	24* [a]	11	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	35.2	70	40.1	80	13	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	40.8	82	40.9	82	0	40-140/20
110-86-1	Pyridine	ND		50	12.9	26* [a]	11.2	22* [a]	14	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25100-9	Limits
367-12-4	2-Fluorophenol	32%	35%	29%	15-110%
4165-62-2	Phenol-d5	22%	25%	21%	15-110%
118-79-6	2,4,6-Tribromophenol	79%	77%	72%	15-110%
4165-60-0	Nitrobenzene-d5	63%	67%	58%	30-130%
321-60-8	2-Fluorobiphenyl	60%	64%	53%	30-130%
1718-51-0	Terphenyl-d14	86%	82%	82%	30-130%

(a) Outside control limits dne to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35316-MS	I86659.D	1	10/28/13	KR	10/18/13	OP35316	MSI3226
OP35316-MSD	I86660.D	1	10/28/13	KR	10/18/13	OP35316	MSI3226
MC25100-10	I86661.D	1	10/28/13	KR	10/18/13	OP35316	MSI3226

The QC reported here applies to the following samples: Method: SW846 8270C BY SIM

MC25314-1, MC25314-2, MC25314-3

7.3.2

7

CAS No.	Compound	MC25100-10 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	35.3	71	38.7	77	9	40-140/20
208-96-8	Acenaphthylene	ND		50	29.2	58	31.5	63	8	40-140/20
120-12-7	Anthracene	ND		50	38.0	76	40.7	81	7	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	44.7	89	48.1	96	7	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	42.6	85	45.9	92	7	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	44.3	89	47.5	95	7	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	47.7	95	51.2	102	7	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	44.1	88	47.7	95	8	40-140/20
218-01-9	Chrysene	ND		50	41.1	82	44.4	89	8	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	49.1	98	53.5	107	9	40-140/20
206-44-0	Fluoranthene	ND		50	40.4	81	43.5	87	7	40-140/20
86-73-7	Fluorene	ND		50	38.8	78	41.8	84	7	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	49.4	99	53.1	106	7	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	33.3	67	36.3	73	9	40-140/20
91-57-6	2-Methylnaphtbalene	ND		50	31.4	63	34.6	69	10	40-140/20
85-01-8	Phenanthrene	ND		50	41.3	83	44.2	88	7	40-140/20
129-00-0	Pyrene	ND		50	39.3	79	42.0	84	7	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25100-10	Limits
367-12-4	2-Fluorophenol			36%	15-110%
4165-62-2	Phenol-d5			24%	15-110%
118-79-6	2,4,6-Tribromophenol			82%	15-110%
4165-60-0	Nitrobenzene-d5	72%	77%	68%	30-130%
321-60-8	2-Fluorobiphenyl	65%	70%	60%	30-130%
1718-51-0	Terphenyl-d14	87%	90%	88%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3132-CC3124	Injection Date:	11/04/13
Lab File ID:	F70108.D	Injection Time:	08:05
Instrument ID:	GCMSF	Method:	SW846 8270C

	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	127116	4.45	463409	5.50	320663	7.04	625764	8.33	793836	11.00	672472	12.76
Upper Limit [a]	254232	4.95	926818	6.00	641326	7.54	1251528	8.83	1587672	11.50	1344944	13.26
Lower Limit [b]	63558	3.95	231705	5.00	160332	6.54	312882	7.83	396918	10.50	336236	12.26
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP35545-MB	133313	4.44	487234	5.50	328431	7.03	633061	8.33	785825	11.00	703393	12.75
OP35545-BS	142032	4.45	509032	5.50	337262	7.04	657288	8.33	792318	11.00	670571	12.75
OP35526-MB	151992	4.45	557405	5.50	383045	7.04	711655	8.32	859409	11.00	793445	12.75
OP35526-BS	132543	4.45	485548	5.50	324976	7.04	641162	8.33	766378	11.00	640364	12.75
OP35526-MS	131037	4.44	480143	5.50	321206	7.03	613138	8.33	699647	11.00	649077	12.76
OP35526-MSD	138021	4.44	496254	5.50	341431	7.03	626456	8.33	750235	11.00	697110	12.76
MC25900-4	121256	4.44	448477	5.50	303326	7.03	574996	8.33	649323	11.00	608890	12.76
ZZZZZZ	122167	4.44	450649	5.50	308579	7.03	588310	8.33	705888	11.00	644047	12.76
ZZZZZZ	120069	4.45	454846	5.50	304460	7.04	575782	8.32	678535	11.00	609137	12.75
ZZZZZZ	117243	4.45	440619	5.50	293343	7.04	556256	8.32	678888	11.00	635791	12.75
ZZZZZZ	116356	4.44	421920	5.50	288358	7.03	554744	8.33	683263	11.00	634164	12.76
ZZZZZZ	119199	4.45	438543	5.50	293662	7.04	573166	8.32	710204	11.00	687150	12.75
ZZZZZZ	135352	4.45	507947	5.50	340950	7.04	651603	8.32	794129	11.00	759005	12.75
MC25837-2	148223	4.44	560689	5.50	374130	7.03	720034	8.33	866943	11.00	798922	12.76
ZZZZZZ	130400	4.44	490313	5.50	333312	7.04	643029	8.33	793326	11.00	755203	12.76
ZZZZZZ	138818	4.44	504576	5.50	340558	7.03	647384	8.33	778079	11.00	720803	12.76
ZZZZZZ	150554	4.44	568312	5.50	382452	7.03	729177	8.33	849376	11.00	796756	12.75
ZZZZZZ	135414	4.44	503702	5.50	343731	7.03	648562	8.33	775034	11.00	686141	12.76
MC25314-2	114481	4.45	409256	5.50	284859	7.04	552385	8.32	733878	11.00	711476	12.75
MC25314-3	120222	4.44	426196	5.50	280060	7.03	539595	8.33	735489	11.00	690594	12.75
ZZZZZZ	142032	4.44	524872	5.50	353579	7.03	672757	8.33	815160	11.00	743898	12.76
ZZZZZZ	143698	4.45	533792	5.50	356000	7.04	687545	8.32	843529	11.00	779098	12.75
ZZZZZZ	144455	4.44	546903	5.50	360186	7.03	694432	8.33	853832	11.00	789810	12.75
ZZZZZZ	134138	4.44	489758	5.50	335250	7.03	629401	8.32	713615	10.99	673295	12.75

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.4.1

Semivolatile Internal Standard Area Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3226-CC3155	Injection Date:	10/28/13
Lab File ID:	I86656.D	Injection Time:	08:01
Instrument ID:	GCMSI	Method:	SW846 8270C 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	162860	4.06	468696	5.05	277676	6.49	482177	7.83	432540	10.62	753836	12.09
Upper Limit [a]	325720	4.56	937392	5.55	555352	6.99	964354	8.33	865080	11.12	1507672	12.59
Lower Limit [b]	81430	3.56	234348	4.55	138838	5.99	241089	7.33	216270	10.12	376918	11.59
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
OP35316-MB	131907	4.06	385357	5.05	224942	6.49	383547	7.83	353664	10.61	613293	12.09
OP35316-BS	134497	4.06	387016	5.05	227925	6.49	389822	7.84	343240	10.62	596455	12.09
OP35316-MS	135002	4.06	389915	5.05	227549	6.49	396460	7.83	343291	10.62	594726	12.09
OP35316-MSD	136819	4.06	394065	5.05	231907	6.49	402003	7.84	347211	10.62	600900	12.09
MC25100-10	136363	4.06	394343	5.05	229534	6.49	394850	7.83	356734	10.61	626279	12.09
MC25314-1	139215	4.06	400062	5.05	234286	6.49	407510	7.83	369494	10.61	638598	12.09
MC25314-2	129805	4.06	377567	5.05	219872	6.49	380910	7.83	345426	10.61	607823	12.09
MC25314-3	137704	4.06	397067	5.05	226362	6.49	394128	7.84	351792	10.62	620042	12.09
ZZZZZZ	133725	4.06	384200	5.05	225628	6.49	386015	7.83	350885	10.61	605695	12.09
ZZZZZZ	131755	4.06	382797	5.05	223627	6.49	387337	7.83	343635	10.61	588289	12.09
ZZZZZZ	147381	4.06	426748	5.05	249265	6.49	424714	7.83	381607	10.61	644722	12.09
OP35437-MB	168579	4.06	490506	5.05	286520	6.49	490843	7.83	429291	10.61	705953	12.09
OP35437-BS	150638	4.06	435205	5.05	255665	6.49	445081	7.84	377303	10.62	635323	12.09
OP35437-MS	147446	4.06	419282	5.05	245008	6.49	411584	7.84	335284	10.62	517095	12.09
OP35437-MSD	149229	4.06	429546	5.05	246609	6.49	404087	7.84	322106	10.62	413559	12.10
MC25493-14	156179	4.06	452042	5.05	260714	6.49	430824	7.84	368316	10.62	439836	12.10
ZZZZZZ	148659	4.06	433854	5.05	251468	6.49	414670	7.84	327017	10.62	508556	12.09
ZZZZZZ	160400	4.06	467225	5.05	271421	6.49	443131	7.84	349369	10.62	544033	12.09
ZZZZZZ	146184	4.06	428631	5.05	252237	6.49	417981	7.84	341162	10.62	528054	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

(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: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSW681-CC679	Injection Date:	10/28/13
Lab File ID:	W15095.D	Injection Time:	07:55
Instrument ID:	GCMSW	Method:	SW846 8270C

	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	78076	4.27	334792	5.33	195305	6.86	329925	8.15	327579	10.78	281869	12.51
Upper Limit [a]	156152	4.77	669584	5.83	390610	7.36	659850	8.65	655158	11.28	563738	13.01
Lower Limit [b]	39038	3.77	167396	4.83	97653	6.36	164963	7.65	163790	10.28	140935	12.01
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP35414-MB	99735	4.27	427026	5.33	240036	6.86	388839	8.15	381340	10.78	336660	12.50
OP35414-BS	95921	4.27	414664	5.33	235656	6.86	386868	8.15	357386	10.78	301704	12.50
OP35414-MS	82714	4.27	319209	5.33	165125	6.86	269536	8.15	243890	10.78	193925	12.51
OP35414-MSD	84344	4.27	353843	5.33	189807	6.86	285337	8.16	217795	10.78	215559	12.52
MC25514-3	86960	4.27	385871	5.33	213893	6.86	337605	8.16	315315	10.78	269430	12.52
ZZZZZZ	75429	4.27	321486	5.33	168724	6.86	306653	8.16	248784	10.78	245914	12.52
ZZZZZZ	82040	4.27	359351	5.33	206041	6.86	316267	8.16	252177	10.78	194194	12.52
OP35315-MB	73130	4.27	319297	5.33	183531	6.87	279913	8.16	243872	10.79	205218	12.52
OP35315-BS	58824	4.27	259393	5.33	147674	6.87	226442	8.16	203066	10.79	172993	12.52
ZZZZZZ	87958	4.27	379761	5.33	210783	6.86	321930	8.16	253325	10.79	189222	12.52
OP35315-MS	60776	4.27	264515	5.33	154167	6.87	226216	8.16	188070	10.79	188003	12.52
OP35315-MSD	78247	4.27	345253	5.33	200740	6.87	318263	8.16	288423	10.79	242877	12.52
MC25100-9	69633	4.27	306193	5.33	180009	6.86	291867	8.16	274934	10.78	231850	12.52
MC25314-1	67919	4.27	294946	5.33	172066	6.86	277727	8.16	272942	10.78	230916	12.52
MC25314-2	65951	4.27	278155	5.33	160680	6.86	260110	8.16	247603	10.78	206720	12.52
MC25314-3	58008	4.27	242423	5.33	127391	6.86	196803	8.16	206778	10.78	174598	12.52
ZZZZZZ	55846	4.27	238457	5.33	152382	6.86	243126	8.16	215706	10.78	178434	12.52
ZZZZZZ	72697	4.27	303856	5.33	167378	6.86	244875	8.16	180511	10.78	176077	12.52
ZZZZZZ	67586	4.27	275822	5.33	146552	6.86	218131	8.16	221470	10.79	186942	12.52
ZZZZZZ	62675	4.27	272948	5.33	156032	6.86	227512	8.16	253403	10.78	208940	12.52
ZZZZZZ	70612	4.27	301779	5.33	159363	6.86	232413	8.16	197146	10.79	167613	12.52
ZZZZZZ	84666	4.27	365454	5.33	202497	6.86	305454	8.16	241344	10.79	189795	12.52
ZZZZZZ	68237	4.27	297938	5.33	171919	6.86	267459	8.16	234747	10.79	202430	12.52
ZZZZZZ	63956	4.27	263167	5.33	145827	6.86	235607	8.16	214199	10.79	176149	12.52
ZZZZZZ	75396	4.27	334553	5.33	190434	6.86	302461	8.16	286715	10.78	245638	12.52
ZZZZZZ	62918	4.27	269072	5.33	143642	6.87	214430	8.16	181355	10.79	151133	12.52
ZZZZZZ	58593	4.27	237990	5.34	131996	6.86	181350	8.16	189960	10.78	150772	12.52

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Napbthalene-d8
IS 3 = Acenaphtbene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

7.4.3

7

Semivolatile Internal Standard Area Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSW681-CC679	Injection Date:	10/28/13
Lab File ID:	W15095.D	Injection Time:	07:55
Instrument ID:	GCMSW	Method:	SW846 8270C

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Surrogate Recovery Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC25314-1	W15109.D	37.0	30.0	86.0	55.0	49.0	81.0
MC25314-2	F70129.D	32.0	29.0	74.0	64.0	48.0	72.0
MC25314-2	W15110.D	34.0	29.0	82.0	63.0	54.0	81.0
MC25314-3	F70130.D	28.0	27.0	70.0	55.0	46.0	66.0
MC25314-3	W15111.D	30.0	29.0	89.0	61.0	52.0	77.0
OP35315-BS	W15104.D	30.0	21.0	74.0	58.0	57.0	75.0
OP35315-MB	W15103.D	26.0	19.0	59.0	53.0	47.0	66.0
OP35315-MS	W15106.D	32.0	22.0	79.0	63.0	60.0	86.0
OP35315-MSD	W15107.D	35.0	25.0	77.0	67.0	64.0	82.0

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

Semivolatile Surrogate Recovery Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270C BY SIM Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC25314-1	I86662.D	63.0	55.0	89.0
MC25314-2	I86663.D	71.0	60.0	88.0
MC25314-3	I86664.D	67.0	59.0	89.0
OP35316-BS	I86658.D	67.0	61.0	80.0
OP35316-MB	I86657.D	59.0	53.0	70.0
OP35316-MS	I86659.D	72.0	65.0	87.0
OP35316-MSD	I86660.D	77.0	70.0	90.0

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

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GC Volatiles

QC Data Summaries

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: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35343-MB	BB51768A.D	1	10/21/13	CZ	10/21/13	OP35343	GBB3049

The QC reported here applies to the following samples: Method: SW846 8011

MC25314-1, MC25314-2, MC25314-3, MC25314-5

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	86%	36-173%
460-00-4	Bromofluorobenzene (S)	83%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35343-BS	BB51769A.D	1	10/21/13	CZ	10/21/13	OP35343	GBB3049

The QC reported here applies to the following samples: Method: SW846 8011

MC25314-1, MC25314-2, MC25314-3, MC25314-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.071	100	60-140
106-93-4	1,2-Dibromoethane	0.071	0.079	111	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	81%	36-173%
460-00-4	Bromofluorobenzene (S)	83%	36-173%

8.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35343-MS	BB51770A.D	1	10/21/13	CZ	10/21/13	OP35343	GBB3049
OP35343-MSD	BB51771A.D	1	10/22/13	CZ	10/21/13	OP35343	GBB3049
MC25100-24	BB51772A.D	1	10/22/13	CZ	10/21/13	OP35343	GBB3049

The QC reported here applies to the following samples: Method: SW846 8011

MC25314-1, MC25314-2, MC25314-3, MC25314-5

CAS No.	Compound	MC25100-24 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.076	107	0.076	107	0	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.085	120	0.086	121	1	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC25100-24	Limits
460-00-4	Bromofluorobenzene (S)	96%	92%	88%	36-173%
460-00-4	Bromofluorobenzene (S)	94%	93%	99%	36-173%

8.3.1

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011 Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC25314-1	BB51781.D	91.0	95.0
MC25314-2	BB51782.D	89.0	98.0
MC25314-3	BB51783.D	78.0	97.0
MC25314-5	BB51784.D	86.0	103.0
OP35343-BS	BB51769A.D	81.0	83.0
OP35343-MB	BB51768A.D	86.0	83.0
OP35343-MS	BB51770A.D	96.0	94.0
OP35343-MSD	BB51771A.D	92.0	93.0

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3049-ICC3049	Injection Date:	10/21/13
Lab File ID:	BB51763.D	Injection Time:	19:56
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	5.85	4.87

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB51766A.D	10/21/13	21:25	5.86	4.87
ZZZZZZ	BB51766B.D	10/21/13	21:25	5.86	4.87
OP35343-MB	BB51768A.D	10/21/13	22:29	5.86	4.87
OP35342-MB	BB51768.D	10/21/13	22:29	5.86	4.87
OP35342-BS	BB51769.D	10/21/13	23:01	5.86	4.87
OP35343-BS	BB51769A.D	10/21/13	23:01	5.86	4.87
OP35342-MS	BB51770.D	10/21/13	23:32	5.87	4.87
OP35343-MS	BB51770A.D	10/21/13	23:32	5.87	4.87
OP35342-MSD	BB51771.D	10/22/13	00:04	5.87	4.87
OP35343-MSD	BB51771A.D	10/22/13	00:04	5.87	4.87
MC25100-20	BB51772.D	10/22/13	00:36	5.87	4.87
MC25100-24	BB51772A.D	10/22/13	00:36	5.87	4.87
ZZZZZZ	BB51773.D	10/22/13	01:07	5.86	4.87
ZZZZZZ	BB51774.D	10/22/13	01:39	5.87	4.87
ZZZZZZ	BB51775.D	10/22/13	02:10	5.88	4.87
ZZZZZZ	BB51777.D	10/22/13	03:12	5.90	4.87

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: MC25314
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3049-CC3049	Injection Date:	10/22/13
Lab File ID:	BB51778.D	Injection Time:	03:43
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	5.90	4.87

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB51779.D	10/22/13	04:13	5.91	4.87
ZZZZZZ	BB51780.D	10/22/13	04:43	5.92	4.87
MC25314-1	BB51781.D	10/22/13	05:13	5.91	4.87
MC25314-2	BB51782.D	10/22/13	05:43	5.91	4.87
MC25314-3	BB51783.D	10/22/13	06:11	5.91	4.87
MC25314-5	BB51784.D	10/22/13	06:39	5.90	4.87
ZZZZZZ	BB51785.D	10/22/13	07:06	5.92	4.87
GBB3049-ECC3048	BB51786.D	10/22/13	07:34	5.92	4.87

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.2

Roxana Groundwater Quarterly – 4th Quarter 2013 Data Review

Laboratory SDG: MC25355

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/20/2013

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008

Sample Identification	Sample Identification
T12-ROX-101513	TB-ROX-101513-HCL
TB-ROX-101513-ST	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated VOC and SVOC LCS recoveries were outside evaluation criteria. Sample T12-ROX-101513 was diluted due to high levels of target analytes. These issues are addressed further in the appropriate sections below. Additionally, the initial calibration verification for acrolein, acrylonitrile, and 2-chloroethyl vinyl ether exceeded 30 percent difference (%D).

The cooler receipt form indicated that one of one cooler was received by the laboratory at a temperatures 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?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV939-BS	VOCs	Acrolein	**18**	70-130
MSV939-BS	VOCs	Acrylonitrile	**192**	70-130
MSV939-BS	VOCs	2-Chloroethyl vinyl ether	**189**	70-130

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV939-BS	VOCs	Naphthalene	**133**	70-130
OP35322-BS	SVOCs	4-Nitrophenol	**29**	30-130
OP35322-BS	SVOCs	n-Nitrosodiphenylamine	**185**	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 MSV939-BS was associated with the trip blank. Trip blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
T12-ROX-101513	VOCs	Acrolein	**UJ**
T12-ROX-101513	VOCs	Naphthalene	**J**
T12-ROX-101513	SVOCs	4-Nitrophenol	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

No



Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC25355

Sampling Date: 10/15/13

Report to:

URS Corporation

elizabeth.kunkel@URS.com

ATTN: Elizabeth Kunkel

Total number of pages in report: **60**

Reviewed on 11/20/2013

Reza Tand
Lab Director

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

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) ISO 17025:2005 (L2235)

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Test results relate only to samples analyzed.

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Sample Summary

Shell Oil

Job No: MC25355

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC25355-1	10/15/13	14:55	LRBL	10/16/13	AQ	Ground Water	T12-ROX-101513
MC25355-2	10/15/13	00:00	LRBL	10/16/13	AQ	Trip Blank Water	TB-ROX-101513-HCL
MC25355-3	10/15/13	00:00	LRBL	10/16/13	AQ	Trip Blank Water	TB-ROX-101513-ST

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2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC25355
Site:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central	**Report Date**	10/30/2013 12:49:27 PM

1 Sample(s) and 2 Trip Blank(s) were collected on 10/15/2013 and were received at Accutest on 10/16/2013 properly preserved, at 1.3 Deg. C and intact. These Samples received an Accutest job number of MC25355. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ **Batch ID:** MSV939

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC25469-31MS, MC25469-31MSD were used as the QC samples indicated.
- MSV939-BS Recovery(s) for Acrolein, Naphthalene are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2-Chloroethyl vinyl ether, Acetone, Acrolein, Acrylonitrile, Dichlorodifluoromethane are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for Acetone, Acrolein, Acrylonitrile, Naphthalene, 2-Chloroethyl vinyl ether are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2-Chloroethyl vinyl ether are outside control limits for sample MC25469-31MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- Initial calibration verification standard MSV937-ICV937 for acrolein, acrylonitrile, 2-chloroethyl vinyl ether exceed 30% Difference. These compouns are within criteria in continuing calibration check standard MSV939-CC937 .
- MSV939-BS for Acrylonitrile, 2-Chloroethyl vinyl ether: Outside control limits. Associated samples are non-detect for this compound.
- Analysis is performed and evaluated by SW846 8260C.

Extractables by GCMS By Method SW846 8270C

Matrix AQ **Batch ID:** OP35322

- 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) MC25100-11MS, MC25100-11MSD were used as the QC samples indicated.
- OP35322-BS Recovery(s) for 4-Nitrophenol are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 4-Nitrophenol, N-Nitrosodiphenylamine, Pyridine are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 4-Nitrophenol, N-Nitrosodiphenylamine are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- OP35322-BS for N-Nitrosodiphenylamine: Outside control limits. Associated samples are non-detect for this compound.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix AQ	Batch ID: OP35323

- 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) MC25100-12MS, MC25100-12MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8011

Matrix AQ	Batch ID: OP35343

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25100-24MS, MC25100-24MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Continuing calibration check standard GBB3049-CC3049 and GBB3049-ECC3049 for 4-Bromofluorobenzene exceed criteria. Target analyte is within criteria.

Matrix AQ	Batch ID: OP35363

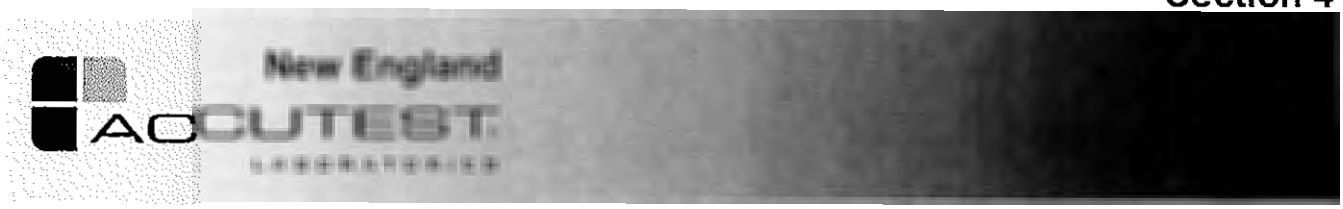
- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25100-22MS, MC25100-22MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Continuing calibration check standard GBB3050-CC3050 for 4-Bromofluorobenzene exceed criteria. Target analyte is within 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(MC25355).

Summary of Hits

Job Number: MC25355
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Collected: 10/15/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC25355-1	T12-ROX-101513					
Acetone		80.3	50	14	ug/l	SW846 8260B
Benzene		2020	500	450	ug/l	SW846 8260B
2-Butanone (MEK)		24.6 J	25	8.0	ug/l	SW846 8260B
n-Butylbenzene		9.8 J	25	2.7	ug/l	SW846 8260B
sec-Butylbenzene		3.8 J	25	2.9	ug/l	SW846 8260B
Ethylbenzene		1820	5.0	1.9	ug/l	SW846 8260B
Isopropylbenzene		61.8	25	3.2	ug/l	SW846 8260B
Naphthalene		215 J	25	3.9	ug/l	SW846 8260B
n-Propylbenzene		114	25	2.9	ug/l	SW846 8260B
Toluene		697	5.0	2.3	ug/l	SW846 8260B
1,2,4-Trimethylbenzene		575	25	2.3	ug/l	SW846 8260B
1,3,5-Trimethylbenzene		60.7	25	5.4	ug/l	SW846 8260B
m,p-Xylene		2430	5.0	3.5	ug/l	SW846 8260B
o-Xylene		139	5.0	2.0	ug/l	SW846 8260B
Xylene (total)		2570	5.0	2.0	ug/l	SW846 8260B
2,4-Dimethylphenol		4.7 J	11	1.2	ug/l	SW846 8270C
2-Methylphenol		1.8 J	11	1.4	ug/l	SW846 8270C
3&4-Methylphenol		3.2 J	11	2.2	ug/l	SW846 8270C
Phenol		8.3	5.4	0.55	ug/l	SW846 8270C
Dibenzofuran		0.29 J	2.2	0.17	ug/l	SW846 8270C
Acenaphthene		0.36	0.11	0.074	ug/l	SW846 8270C BY SIM
Anthracene		0.12	0.11	0.099	ug/l	SW846 8270C BY SIM
Chrysene		0.028 J	0.11	0.026	ug/l	SW846 8270C BY SIM
Fluorene		0.29	0.11	0.11	ug/l	SW846 8270C BY SIM
1-Methylnaphthalene		19.9	0.22	0.054	ug/l	SW846 8270C BY SIM
2-Methylnaphthalene		31.9	0.22	0.080	ug/l	SW846 8270C BY SIM
Phenanthrene		0.77	0.054	0.014	ug/l	SW846 8270C BY SIM
Pyrene		0.090 J	0.11	0.041	ug/l	SW846 8270C BY SIM
MC25355-2	TB-ROX-101513-HCL					
No hits reported in this sample.						
MC25355-3	TB-ROX-101513-ST					
No hits reported in this sample.						



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	T12-ROX-101513		
Lab Sample ID:	MC25355-1	Date Sampled:	10/15/13
Matrix:	AQ - Ground Water	Date Received:	10/16/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V24595.D	5	10/28/13	AMY	n/a	n/a	MSV939
Run #2	V24591.D	1000	10/28/13	AMY	n/a	n/a	MSV939

	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	80.3	50	14	ug/l	
107-02-8	Acrolein	ND	130	31	ug/l	UJ
107-13-1	Acrylonitrile	ND	25	18	ug/l	
71-43-2	Benzene	2020 [a]	500	450	ug/l	
108-86-1	Bromobenzene	ND	25	2.2	ug/l	
74-97-5	Bromochloromethane	ND	25	3.2	ug/l	
75-27-4	Bromodichloromethane	ND	5.0	1.7	ug/l	
75-25-2	Bromoform	ND	5.0	2.1	ug/l	
74-83-9	Bromomethane	ND	10	7.6	ug/l	
78-93-3	2-Butanone (MEK)	24.6	25	8.0	ug/l	J
104-51-8	n-Butylbenzene	9.8	25	2.7	ug/l	J
135-98-8	sec-Butylbenzene	3.8	25	2.9	ug/l	J
98-06-6	tert-Butylbenzene	ND	25	4.4	ug/l	
75-15-0	Carbon disulfide	ND	25	3.0	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	3.1	ug/l	
108-90-7	Chlorobenzene	ND	5.0	2.4	ug/l	
75-00-3	Chloroethane	ND	10	4.2	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	25	6.3	ug/l	
67-66-3	Chloroform	ND	5.0	2.5	ug/l	
74-87-3	Chloromethane	ND	10	7.2	ug/l	
95-49-8	o-Chlorotoluene	ND	25	2.7	ug/l	
106-43-4	p-Chlorotoluene	ND	25	2.4	ug/l	
124-48-1	Dibromochloromethane	ND	5.0	1.6	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.7	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.5	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.3	ug/l	
75-71-8	Dichlorodifluoromethane	ND	10	6.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	5.0	1.9	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	1.8	ug/l	
75-35-4	1,1-Dichloroethene	ND	5.0	3.3	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	5.0	2.7	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	2.7	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-101513		
Lab Sample ID:	MC25355-1	Date Sampled:	10/15/13
Matrix:	AQ - Ground Water	Date Received:	10/16/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	10	2.3	ug/l	
142-28-9	1,3-Dichloropropane	ND	25	4.8	ng/l	
594-20-7	2,2-Dichloropropane	ND	25	6.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	25	3.2	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.5	1.1	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.5	1.4	ug/l	
123-91-1	1,4-Dioxane	ND	130	78	ug/l	
97-63-2	Ethyl methacrylate	ND	25	4.0	ug/l	
100-41-4	Ethylbenzene	1820	5.0	1.9	ug/l	
87-68-3	Hexachlorobutadiene	ND	25	6.3	ug/l	
591-78-6	2-Hexanone	ND	25	11	ug/l	
98-82-8	Isopropylbenzene	61.8	25	3.2	ug/l	
99-87-6	p-Isopropyltoluene	ND	25	2.7	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	2.2	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	25	6.4	ug/l	
74-95-3	Methylene bromide	ND	25	2.1	ug/l	
75-09-2	Methylene chloride	ND	10	2.0	ug/l	
91-20-3	Naphthalene	215	25	3.9	ug/l	J
103-65-1	n-Propylbenzene	114	25	2.9	ug/l	
100-42-5	Styrene	ND	25	2.4	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	2.3	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.5	2.1	ug/l	
127-18-4	Tetrachloroethene	ND	5.0	3.1	ug/l	
108-88-3	Toluene	697	5.0	2.3	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	25	3.8	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	25	2.3	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5.0	4.7	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5.0	2.5	ug/l	
79-01-6	Trichloroethene	ND	5.0	2.2	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	3.1	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	25	3.5	ug/l	
95-63-6	1,2,4-Trimethylbenzene	575	25	2.3	ug/l	
108-67-8	1,3,5-Trimethylbenzene	60.7	25	5.4	ug/l	
108-05-4	Vinyl Acetate	ND	25	6.6	ug/l	
75-01-4	Vinyl chloride	ND	5.0	3.0	ug/l	
	m,p-Xylene	2430	5.0	3.5	ug/l	
95-47-6	o-Xylene	139	5.0	2.0	ug/l	
1330-20-7	Xylene (total)	2570	5.0	2.0	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:	T12-ROX-101513		
Lab Sample ID:	MC25355-1	Date Sampled:	10/15/13
Matrix:	AQ - Ground Water	Date Received:	10/16/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	99%	70-130%
2037-26-5	Toluene-D8	99%	97%	70-130%
460-00-4	4-Bromofluorobenzene	100%	99%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	T12-ROX-101513		
Lab Sample ID:	MC25355-1	Date Sampled:	10/15/13
Matrix:	AQ - Ground Water	Date Received:	10/16/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W14975.D	1	10/23/13	KR	10/18/13	OP35322	MSW675
Run #2							

	Initial Volume	Final Volume
Run #1	930 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	4.7	11	1.2	ug/l	J
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	1.8	11	1.4	ug/l	J
	3&4-Methylphenol	3.2	11	2.2	ug/l	J
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	UJ
87-86-5	Pentachloropheuol	ND	11	1.3	ug/l	
108-95-2	Pheuol	8.3	5.4	0.55	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.92	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthaleue	ND	5.4	0.99	ug/l	
106-47-8	4-Chloroaniliue	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.70	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotolueue	ND	11	0.69	ug/l	
91-94-1	3,3'-Dichlorobenzidiue	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	0.29	2.2	0.17	ug/l	J
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

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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:	T12-ROX-101513		
Lab Sample ID:	MC25355-1	Date Sampled:	10/15/13
Matrix:	AQ - Ground Water	Date Received:	10/16/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.54	ng/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.53	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.47	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ng/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.87	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.58	ug/l	
110-86-1	Pyridine	ND	11	0.55	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	39%		15-110%
4165-62-2	Phenol-d5	27%		15-110%
118-79-6	2,4,6-Tribromophenol	91%		15-110%
4165-60-0	Nitrobenzene-d5	65%		30-130%
321-60-8	2-Fluorobiphenyl	64%		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	

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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:	T12-ROX-101513		
Lab Sample ID:	MC25355-1	Date Sampled:	10/15/13
Matrix:	AQ - Ground Water	Date Received:	10/16/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenne, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86554.D	1	10/22/13	WK	10/18/13	OP35323	MSI3221
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	0.36	0.11	0.074	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.053	ug/l	
120-12-7	Anthracene	0.12	0.11	0.099	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	0.028	0.11	0.026	ug/l	J
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	0.29	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthaleue	19.9	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	31.9	0.22	0.080	ug/l	
85-01-8	Phenanthrene	0.77	0.054	0.014	ug/l	
129-00-0	Pyrene	0.090	0.11	0.041	ug/l	J

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	88%		15-110%
4165-60-0	Nitrobenzene-d5	71%		30-130%
321-60-8	2-Fluorobiphenyl	62%		30-130%
1718-51-0	Terphenyl-d14	86%		30-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration rauge
J = Indicates an estimated value
B = Indicates analyte fouud in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	T12-ROX-101513		
Lab Sample ID:	MC25355-1	Date Sampled:	10/15/13
Matrix:	AQ - Ground Water	Date Received:	10/16/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB51785.D	1	10/22/13	CZ	10/21/13	OP35343	GBB3049
Run #2							

	Initial Volume	Final Volume
Run #1	36.1 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromoflnorobenzene (S)	87%		36-173%
460-00-4	Bromofluorobenzene (S)	107%		36-173%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-101513-HCL		
Lab Sample ID:	MC25355-2	Date Sampled:	10/15/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/16/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V24594.D	1	10/28/13	AMY	n/a	n/a	MSV939
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-101513-HCL		
Lab Sample ID:	MC25355-2	Date Sampled:	10/15/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/16/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ng/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ng/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-101513-HCL		
Lab Sample ID:	MC25355-2	Date Sampled:	10/15/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/16/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		70-130%
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	100%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-101513-ST		
Lab Sample ID:	MC25355-3	Date Sampled:	10/15/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/16/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB51800.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050
Run #2							

	Initial Volume	Final Volume
Run #1	36.7 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

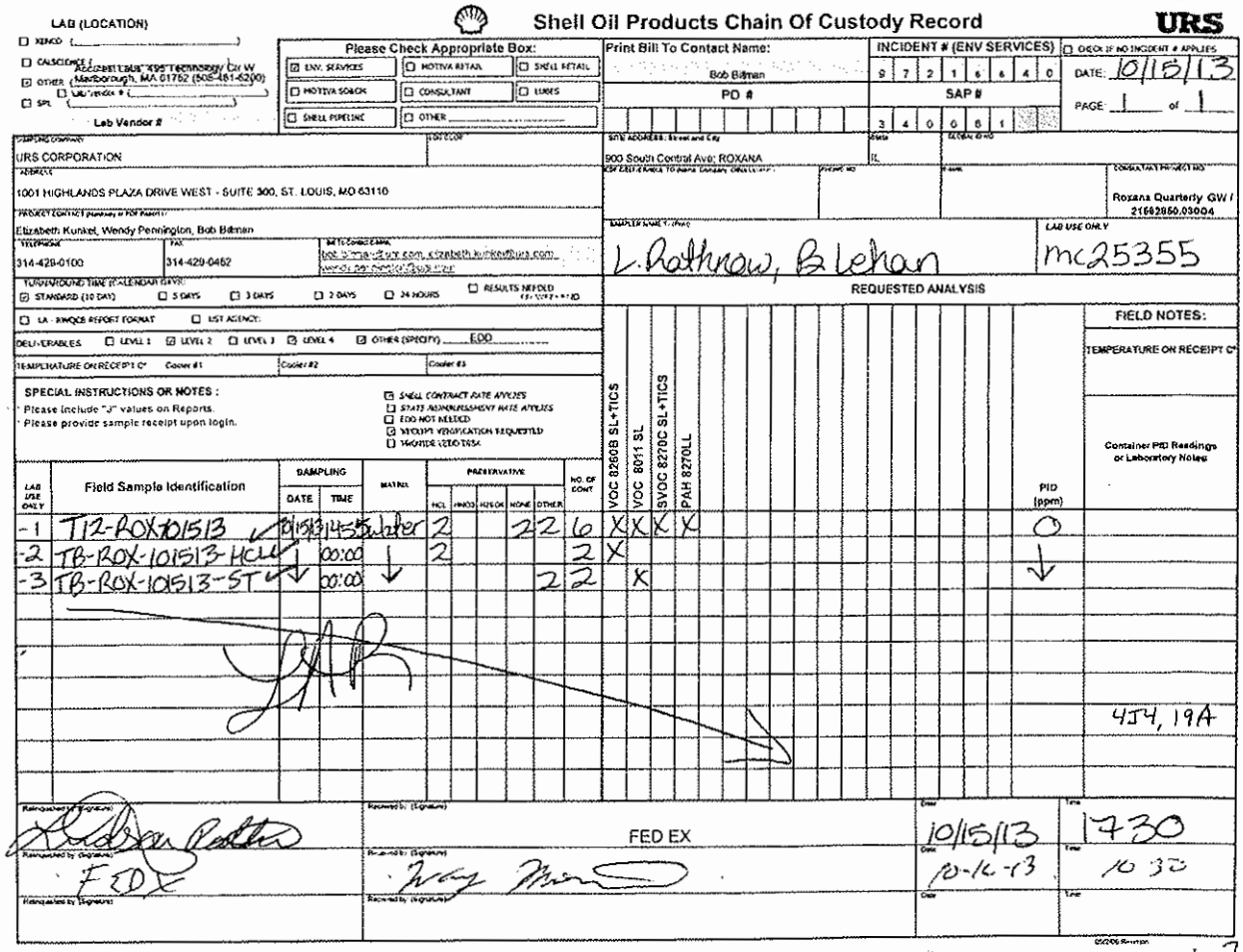
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	98%		36-173%
460-00-4	Bromofluorobenzene (S)	97%		36-173%

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

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody



LAB (LOCATION)
☐ XENCO (_____)
☐ CALSCIENCE (_____)
☑ OTHER (Accutest Laboratories, 495 Technology Ctr W, Marlborough, MA 01752 (508-481-6200))
☐ SPL (_____)
Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:
☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SOA/CH ☐ CONSULTANT ☐ URS
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Bilman
PO #

INCIDENT # (ENV SERVICES): 9 7 2 1 6 6 4 0
SAP #: 3 4 0 0 6 1
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 10/15/13
PAGE: 1 of 1

SAMPLING COMPANY: URS CORPORATION
LOG CODE:
SITE ADDRESS: Street and City: 900 South Central Ave; ROXANA
STATE: IL
GLOBAL ID NO.:
ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110
CONSULTANT PROJECT NO.: Roxana Quarterly GW / 21662950.03004
PROJECT CONTACT (Hardcopy or PDF Report to): Elizabeth Kunkel, Wendy Pennington, Bob Bilman
TELEPHONE: 314-429-0100
FAX: 314-429-0462
SAMPLER NAME(S) (Print): L. Rathbun, B. Lehan
LAB USE ONLY: mc25355
TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (10 DAYS) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED (SURCHARGE MAY APPLY)
☐ 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
☑ SPECIFY VERIFICATION REQUESTED
☐ MONITOR TEXAS TRRP

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	PRESERVATIVE HNO3	PRESERVATIVE H2SO4	PRESERVATIVE NONE	PRESERVATIVE OTHER	NO. OF CONT	VOC 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	TI2-ROX101513	10/15/13	14:55	Water	2			2	2	6	X	X	X	X	0	
-2	TB-ROX-101513-HCL	↓	00:00	↓	2					2	X				↓	
-3	TB-ROX-10513-ST	↓	00:00	↓				2	2	2		X			↓	

FIELD NOTES:
TEMPERATURE ON RECEIPT C°: 4J4, 19A

Relinquished by (Signature)	Received by (Signature)	Date	Time
[signature]	FED EX	10/15/13	1730
FEDX	[signature]	10-16-13	10 30

05/2006 Revision

1.3°

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MC25355: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC25355 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 10/16/2013 **Delivery Method:** **Client Service Action Required at Login:** No

Project: 900 SOUTH CENTRAL **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y or N		Y or N
1. Custody Seals Present:	☑ ☐	3. COC Present:	☑ ☐
2. Custody Seals Intact:	☑ ☐	4. Smpl Dates/Time OK	☑ ☐

Cooler Temperature	Y or N
1. Temp criteria achieved:	☑ ☐
2. Cooler temp verification:	Infared gun
3. Cooler media:	Ice (bag)

Quality Control Preservation	Y or N	N/A
1. Trip Blank present / cooler:	☑ ☐	☐
2. Trip Blank listed on COC:	☑ ☐	☐
3. Samples preserved properly:	☑ ☐	
4. VOCs headspace free:	☑ ☐	☐

Sample Integrity - Documentation	Y or N
1. Sample labels present on bottles:	☑ ☐
2. Container labeling complete:	☑ ☐
3. Sample container label / COC agree:	☑ ☐

Sample Integrity - Condition	Y or N
1. Sample recvd within HT:	☑ ☐
2. All containers accounted for:	☑ ☐
3. Condition of sample:	Intact

Sample Integrity - Instructions	Y or N	N/A
1. Analysis requested is clear:	☑ ☐	
2. Bottles received for unspecified tests	☐ ☑	
3. Sufficient volume recvd for analysis:	☑ ☐	
4. Compositing instructions clear:	☐ ☐	☑
5. Filtering instructions clear:	☐ ☐	☑

Comments

5.1

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MC25355: Chain of Custody
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Internal Sample Tracking Chronicle

Shell Oil

Job No: MC25355

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC25355-1 Collected: 15-OCT-13 14:55 By: LRBL Received: 16-OCT-13 By: T12-ROX-101513						
MC25355-1	SW846 8011	22-OCT-13 07:06	CZ	21-OCT-13	BJ	V8011SL
MC25355-1	SW846 8270C BY SIM	22-OCT-13 11:23	WK	18-OCT-13	MEW	B8270SIMSL
MC25355-1	SW846 8270C	23-OCT-13 00:22	KR	18-OCT-13	MEW	AB8270SL+
MC25355-1	SW846 8260B	28-OCT-13 13:35	AMY			V8260SL+
MC25355-1	SW846 8260B	28-OCT-13 15:21	AMY			V8260SL+
MC25355-2 Collected: 15-OCT-13 00:00 By: LRBL Received: 16-OCT-13 By: TB-ROX-101513-HCL						
MC25355-2	SW846 8260B	28-OCT-13 14:54	AMY			V8260SL+
MC25355-3 Collected: 15-OCT-13 00:00 By: LRBL Received: 16-OCT-13 By: TB-ROX-101513-ST						
MC25355-3	SW846 8011	22-OCT-13 18:03	CZ	22-OCT-13	MR	V8011SL

Accutest Internal Chain of Custody

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Received: 10/16/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC25355-1.1	Walk In Ref #22	Thomas Abruzzise	10/17/13 14:18	Retrieve from Storage
MC25355-1.1	Thomas Abruzzise	Walk In Ref #22	10/17/13 15:00	Return to Storage
MC25355-1.1	Walk In Ref #22	Thomas Abruzzise	10/18/13 15:08	Retrieve from Storage
MC25355-1.4	VOC Ref #4	Amy Min Yang	10/28/13 12:46	Retrieve from Storage
MC25355-1.4	Amy Min Yang	GCMSV	10/28/13 12:46	Load on Instrument
MC25355-1.4	GCMSV	Amy Min Yang	10/29/13 16:42	Unload from Instrument
MC25355-1.4	Amy Min Yang	VOC Ref #4	10/29/13 16:42	Return to Storage
MC25355-1.6	VOC Ref #4	Michael Rolo	10/21/13 07:06	Retrieve from Storage
MC25355-1.6	Michael Rolo		10/21/13 10:56	Depleted
MC25355-2.2	VOC Ref #4	Amy Min Yang	10/28/13 12:46	Retrieve from Storage
MC25355-2.2	Amy Min Yang	GCMSV	10/28/13 12:46	Load on Instrument
MC25355-2.2	GCMSV	Amy Min Yang	10/29/13 16:42	Unload from Instrument
MC25355-2.2	Amy Min Yang	VOC Ref #4	10/29/13 16:42	Return to Storage
MC25355-3.2	VOC Ref #4	Michael Rolo	10/22/13 07:15	Retrieve from Storage
MC25355-3.2	Michael Rolo		10/23/13 10:44	Depleted

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: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV939-MB	V24579.D	1	10/28/13	AMY	n/a	n/a	MSV939

The QC reported here applies to the following samples: Method: SW846 8260B

MC25355-1, MC25355-2

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobeuzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethaue	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV939-MB	V24579.D	1	10/28/13	AMY	n/a	n/a	MSV939

The QC reported here applies to the following samples: Method: SW846 8260B

MC25355-1, MC25355-2

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzeue	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropaue	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbeuzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV939-MB	V24579.D	1	10/28/13	AMY	n/a	n/a	MSV939

The QC reported here applies to the following samples: Method: SW846 8260B

MC25355-1, MC25355-2

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	70-130%
2037-26-5	Toluene-D8	98%	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: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV939-BS	V24575.D	1	10/28/13	AMY	n/a	n/a	MSV939

The QC reported here applies to the following samples: Method: SW846 8260B

MC25355-1, MC25355-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	34.8	70	70-130
107-02-8	Acrolein	250	44.0	18* a	70-130
107-13-1	Acrylonitrile	50	96.0	192* b	70-130
71-43-2	Benzene	50	55.7	111	70-130
108-86-1	Bromobenzene	50	58.0	116	70-130
74-97-5	Bromochloromethane	50	57.8	116	70-130
75-27-4	Bromodichloromethane	50	59.3	119	70-130
75-25-2	Bromoform	50	39.6	79	70-130
74-83-9	Bromomethane	50	56.9	114	70-130
78-93-3	2-Butanone (MEK)	50	42.6	85	70-130
104-51-8	n-Butylbenzene	50	58.6	117	70-130
135-98-8	sec-Butylbenzene	50	56.9	114	70-130
98-06-6	tert-Butylbenzene	50	57.8	116	70-130
75-15-0	Carbon disulfide	50	58.7	117	70-130
56-23-5	Carbon tetrachloride	50	57.9	116	70-130
108-90-7	Chlorobenzene	50	52.8	106	70-130
75-00-3	Chloroethane	50	57.6	115	70-130
110-75-8	2-Chloroethyl vinyl ether	50	94.3	189* b	70-130
67-66-3	Chloroform	50	57.9	116	70-130
74-87-3	Chloromethane	50	57.8	116	70-130
95-49-8	o-Chlorotoluene	50	55.0	110	70-130
106-43-4	p-Chlorotoluene	50	56.9	114	70-130
124-48-1	Dibromochloromethane	50	45.3	91	70-130
95-50-1	1,2-Dichlorobenzene	50	54.9	110	70-130
541-73-1	1,3-Dichlorobenzene	50	55.5	111	70-130
106-46-7	1,4-Dichlorobenzene	50	56.1	112	70-130
75-71-8	Dichlorodifluoromethane	50	58.6	117	70-130
75-34-3	1,1-Dichloroethane	50	59.6	119	70-130
107-06-2	1,2-Dichloroethane	50	57.6	115	70-130
75-35-4	1,1-Dichloroethene	50	57.2	114	70-130
156-59-2	cis-1,2-Dichloroethene	50	57.9	116	70-130
156-60-5	trans-1,2-Dichloroethene	50	58.1	116	70-130
78-87-5	1,2-Dichloropropane	50	55.8	112	70-130
142-28-9	1,3-Dichloropropane	50	51.0	102	70-130
594-20-7	2,2-Dichloropropane	50	43.5	87	70-130
563-58-6	1,1-Dichloropropene	50	59.8	120	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV939-BS	V24575.D	1	10/28/13	AMY	n/a	n/a	MSV939

The QC reported here applies to the following samples: Method: SW846 8260B

MC25355-1, MC25355-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	56.5	113	70-130
10061-02-6	trans-1,3-Dichloropropene	50	47.7	95	70-130
123-91-1	1,4-Dioxane	250	231	92	70-130
97-63-2	Ethyl methacrylate	50	51.8	104	77-137
100-41-4	Ethylbenzene	50	55.0	110	70-130
87-68-3	Hexachlorobutadiene	50	60.9	122	70-130
591-78-6	2-Hexanone	50	40.2	80	70-130
98-82-8	Isopropylbenzene	50	58.5	117	70-130
99-87-6	p-Isopropyltoluene	50	59.2	118	70-130
1634-04-4	Methyl Tert Butyl Ether	50	49.9	100	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	52.6	105	70-130
74-95-3	Methylene bromide	50	56.9	114	70-130
75-09-2	Methylene chloride	50	54.0	108	70-130
91-20-3	Naphthalene	50	66.7	133* [a]	70-130
103-65-1	n-Propylbenzene	50	55.7	111	70-130
100-42-5	Styrene	50	49.9	100	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	48.9	98	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	59.1	118	70-130
127-18-4	Tetrachloroethene	50	54.4	109	70-130
108-88-3	Toluene	50	56.2	112	70-130
87-61-6	1,2,3-Trichlorobenzene	50	62.6	125	70-130
120-82-1	1,2,4-Trichlorobenzene	50	62.3	125	70-130
71-55-6	1,1,1-Trichloroethane	50	61.1	122	70-130
79-00-5	1,1,2-Trichloroethane	50	55.4	111	70-130
79-01-6	Trichloroethene	50	59.2	118	70-130
75-69-4	Trichlorofluoromethane	50	56.9	114	70-130
96-18-4	1,2,3-Trichloropropane	50	54.6	109	70-130
95-63-6	1,2,4-Trimethylbenzene	50	57.3	115	70-130
108-67-8	1,3,5-Trimethylbenzene	50	58.5	117	70-130
108-05-4	Vinyl Acetate	50	54.1	108	70-130
75-01-4	Vinyl chloride	50	45.9	92	70-130
	m,p-Xylene	100	107	107	70-130
95-47-6	o-Xylene	50	52.0	104	70-130
1330-20-7	Xylene (total)	150	159	106	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV939-BS	V24575.D	1	10/28/13	AMY	n/a	n/a	MSV939

The QC reported here applies to the following samples: Method: SW846 8260B

MC25355-1, MC25355-2

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	70-130%
2037-26-5	Toluene-D8	97%	70-130%
460-00-4	4-Bromofluorobenzene	96%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.
(b) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25469-31MS	V24585.D	5	10/28/13	AMY	n/a	n/a	MSV939
MC25469-31MSD	V24586.D	5	10/28/13	AMY	n/a	n/a	MSV939
MC25469-31	V24580.D	1	10/28/13	AMY	n/a	n/a	MSV939

The QC reported here applies to the following samples: Method: SW846 8260B

MC25355-1, MC25355-2

CAS No.	Compound	MC25469-31 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	120	48* [a]	122	49* [a]	2	70-130/30
107-02-8	Acrolein	ND		1250	268	21* [a]	268	21* [a]	0	70-130/30
107-13-1	Acrylonitrile	ND		250	509	204* [a]	505	202* [a]	1	70-130/30
71-43-2	Benzene	ND		250	272	109	267	107	2	70-130/30
108-86-1	Bromohenzene	ND		250	275	110	274	110	0	70-130/30
74-97-5	Bromochloromethane	ND		250	283	113	277	111	2	70-130/30
75-27-4	Bromodichloromethane	ND		250	286	114	282	113	1	70-130/30
75-25-2	Bromoform	ND		250	190	76	193	77	2	70-130/30
74-83-9	Bromomethane	ND		250	298	119	290	116	3	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	195	78	193	77	1	70-130/30
104-51-8	n-Butylhenzene	ND		250	291	116	290	116	0	70-130/30
135-98-8	sec-Butylbenzene	ND		250	276	110	273	109	1	70-130/30
98-06-6	tert-Butylbenzene	ND		250	279	112	278	111	0	70-130/30
75-15-0	Carbon disulfide	ND		250	292	117	284	114	3	70-130/30
56-23-5	Carbon tetrachloride	ND		250	289	116	284	114	2	70-130/30
108-90-7	Chlorobenzene	ND		250	255	102	250	100	2	70-130/30
75-00-3	Chloroethane	ND		250	296	118	284	114	4	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	40.2	16* [a]	9.3	4* [a]	125* [b]	70-130/30
67-66-3	Chloroform	ND		250	289	116	282	113	2	70-130/30
74-87-3	Chloromethane	ND		250	312	125	306	122	2	70-130/30
95-49-8	o-Chlorotoluene	ND		250	269	108	265	106	1	70-130/30
106-43-4	p-Chlorotoluene	ND		250	279	112	276	110	1	70-130/30
124-48-1	Dibromochloromethane	ND		250	219	88	218	87	0	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	261	104	264	106	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	265	106	262	105	1	70-130/30
106-46-7	1,4-Dichlorobenzeue	ND		250	272	109	270	108	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	335	134* [a]	326	130	3	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	297	119	289	116	3	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	293	117	289	116	1	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	287	115	280	112	2	70-130/30
156-59-2	cis-1,2-Dichloroethene	1.3		250	288	115	279	111	3	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	287	115	279	112	3	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	272	109	268	107	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	254	102	253	101	0	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	276	110	275	110	0	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	302	121	296	118	2	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25469-31MS	V24585.D	5	10/28/13	AMY	n/a	n/a	MSV939
MC25469-31MSD	V24586.D	5	10/28/13	AMY	n/a	n/a	MSV939
MC25469-31	V24580.D	1	10/28/13	AMY	n/a	n/a	MSV939

The QC reported here applies to the following samples: Method: SW846 8260B

MC25355-1, MC25355-2

CAS No.	Compound	MC25469-31 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	285	114	283	113	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	242	97	242	97	0	70-130/30
123-91-1	1,4-Dioxane	ND		1250	1080	86	1020	82	6	70-130/30
97-63-2	Ethyl methacrylate	ND		250	267	107	268	107	0	72-139/30
100-41-4	Ethylbenzene	ND		250	273	109	267	107	2	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	291	116	303	121	4	70-130/30
591-78-6	2-Hexanone	ND		250	201	80	202	81	0	70-130/30
98-82-8	Isopropylbenzene	ND		250	282	113	278	111	1	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	291	116	285	114	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	244	98	243	97	0	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	291	116	293	117	1	70-130/30
74-95-3	Methylene bromide	ND		250	282	113	281	112	0	70-130/30
75-09-2	Methylene chloride	ND		250	267	107	260	104	3	70-130/30
91-20-3	Naphthalene	ND		250	279	112	340	136* [a]	20	70-130/30
103-65-1	n-Propylbenzene	ND		250	272	109	269	108	1	70-130/30
100-42-5	Styrene	ND		250	242	97	239	96	1	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	233	93	231	92	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	299	120	301	120	1	70-130/30
127-18-4	Tetrachloroethene	ND		250	268	107	266	106	1	70-130/30
108-88-3	Toluene	ND		250	274	110	270	108	1	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	263	105	310	124	16	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	280	112	306	122	9	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	300	120	295	118	2	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	277	111	275	110	1	70-130/30
79-01-6	Trichloroethene	ND		250	291	116	286	114	2	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	312	125	300	120	4	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	278	111	280	112	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	274	110	271	108	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	280	112	279	112	0	70-130/30
108-05-4	Vinyl Acetate	ND		250	287	115	285	114	1	70-130/30
75-01-4	Vinyl chloride	13.2		250	258	98	249	94	4	70-130/30
	m,p-Xylene	ND		500	519	104	510	102	2	70-130/30
95-47-6	o-Xylene	ND		250	253	101	250	100	1	70-130/30
1330-20-7	Xylene (total)	ND		750	772	103	760	101	2	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25469-31MS	V24585.D	5	10/28/13	AMY	n/a	n/a	MSV939
MC25469-31MSD	V24586.D	5	10/28/13	AMY	n/a	n/a	MSV939
MC25469-31	V24580.D	1	10/28/13	AMY	n/a	n/a	MSV939

The QC reported here applies to the following samples: Method: SW846 8260B

MC25355-1, MC25355-2

CAS No.	Surrogate Recoveries	MS	MSD	MC25469-31	Limits
1868-53-7	Dibromofluoromethane	99%	99%	97%	70-130%
2037-26-5	Toluene-D8	98%	98%	98%	70-130%
460-00-4	4-Bromofluorobenzene	96%	96%	99%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSV939-CC937	Injection Date:	10/28/13
Lab File ID:	V24574.D	Injection Time:	05:56
Instrument ID:	GCMSV	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	655820	6.56	965855	7.75	484531	11.08	476636	13.29	83430	3.51
Upper Limit [a]	1311640	7.06	1931710	8.25	969062	11.58	953272	13.79	166860	4.01
Lower Limit [b]	327910	6.06	482928	7.25	242266	10.58	238318	12.79	41715	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
MSV939-BS	601528	6.56	883540	7.74	442049	11.08	441171	13.29	76734	3.50
MSV939-MB	560560	6.56	838833	7.74	425380	11.07	400252	13.29	68308	3.50
MC25469-31	551627	6.55	816697	7.73	419316	11.07	395762	13.29	67284	3.51
ZZZZZZ	560765	6.56	828346	7.74	413589	11.07	390014	13.29	50337	3.51
ZZZZZZ	543695	6.55	816789	7.74	411309	11.07	385235	13.29	56281	3.50
ZZZZZZ	544124	6.56	817872	7.74	412393	11.07	387885	13.29	63311	3.51
ZZZZZZ	531006	6.56	799453	7.74	405084	11.07	381538	13.29	66064	3.50
MC25469-31MS	535486	6.56	787811	7.74	399439	11.08	401625	13.29	73145	3.51
MC25469-31MSD	537416	6.56	787560	7.74	398256	11.07	402155	13.29	71859	3.50
ZZZZZZ	540290	6.56	806478	7.74	408609	11.08	394079	13.29	69410	3.51
ZZZZZZ	528447	6.56	782836	7.74	402190	11.08	389389	13.29	77962	3.50
ZZZZZZ	523483	6.56	792565	7.74	396628	11.08	377710	13.29	68856	3.51
ZZZZZZ	532028	6.56	797369	7.74	402677	11.08	379875	13.29	70191	3.51
MC25355-1	514391	6.56	777330	7.74	395772	11.07	371135	13.29	69668	3.50
MC25355-2	511340	6.56	772739	7.74	392453	11.07	366790	13.29	67208	3.50
MC25355-1	498975	6.56	753526	7.74	388187	11.08	364750	13.29	103198	3.53
ZZZZZZ	500160	6.56	753065	7.74	381955	11.07	359904	13.29	65891	3.50
ZZZZZZ	501526	6.56	752821	7.74	383568	11.07	359870	13.29	66321	3.51
ZZZZZZ	493928	6.55	750028	7.73	381317	11.07	355818	13.29	65108	3.49
ZZZZZZ	484023	6.56	737287	7.74	379853	11.07	351868	13.29	62928	3.50

IS 1 = Pentafluorohenzene
IS 2 = 1,4-Difluorobenzene
1S 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
1S 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260B Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC25355-1	V24595.D	97.0	99.0	100.0
MC25355-1	V24591.D	99.0	97.0	99.0
MC25355-2	V24594.D	99.0	97.0	100.0
MC25469-31MS	V24585.D	99.0	98.0	96.0
MC25469-31MSD	V24586.D	99.0	98.0	96.0
MSV939-BS	V24575.D	98.0	97.0	96.0
MSV939-MB	V24579.D	96.0	98.0	99.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

6.5.1

6

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35322-MB	W14961.D	1	10/22/13	KR	10/18/13	OP35322	MSW675

The QC reported here applies to the following samples: Method: SW846 8270C

MC25355-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.39	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	

Method Blank Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35322-MB	W14961.D	1	10/22/13	KR	10/18/13	OP35322	MSW675

The QC reported here applies to the following samples: Method: SW846 8270C

MC25355-1

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ng/l	
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ng/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	46%	15-110%
4165-62-2	Phenol-d5	32%	15-110%
118-79-6	2,4,6-Tribromophenol	95%	15-110%
4165-60-0	Nitrobenzene-d5	76%	30-130%
321-60-8	2-Fluorobipheuyl	82%	30-130%
1718-51-0	Terphenyl-d14	105%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

Method Blank Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35323-MB	I86549.D	1	10/22/13	WK	10/18/13	OP35323	MSI3221

The QC reported here applies to the following samples: Method: SW846 8270C BY SIM

MC25355-1

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.032	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluoreue	ND	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	ug/l	
85-01-8	Phenanthrene	ND	0.050	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	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	84%	30-130%
321-60-8	2-Fluorobiphenyl	76%	30-130%
1718-51-0	Terphenyl-d14	93%	30-130%

Blank Spike Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35322-BS	W14962.D	1	10/22/13	KR	10/18/13	OP35322	MSW675

The QC reported here applies to the following samples: Method: SW846 8270C

MC25355-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	17.6	35	30-130
95-57-8	2-Chlorophenol	50	37.5	75	30-130
59-50-7	4-Chloro-3-methyl phenol	50	34.0	68	30-130
120-83-2	2,4-Dichlorophenol	50	42.3	85	30-130
105-67-9	2,4-Dimethylphenol	50	37.7	75	30-130
51-28-5	2,4-Dinitrophenol	50	43.2	86	30-130
534-52-1	4,6-Dinitro-o-cresol	50	50.2	100	30-130
95-48-7	2-Methylphenol	50	32.1	64	30-130
	3&4-Methylphenol	100	59.4	59	30-130
88-75-5	2-Nitrophenol	50	42.4	85	30-130
100-02-7	4-Nitrophenol	50	14.3	29* [a]	30-130
87-86-5	Pentachlorophenol	50	40.9	82	30-130
108-95-2	Phenol	50	17.1	34	30-130
95-95-4	2,4,5-Trichlorophenol	50	42.7	85	30-130
88-06-2	2,4,6-Trichlorophenol	50	44.7	89	30-130
62-53-3	Aniline	50	30.0	60	40-140
101-55-3	4-Bromophenyl phenyl ether	50	50.3	101	40-140
85-68-7	Butyl benzyl phthalate	50	47.6	95	40-140
100-51-6	Benzyl Alcohol	50	34.3	69	40-140
91-58-7	2-Chloronaphthalene	50	43.0	86	40-140
106-47-8	4-Chloroaniline	50	36.2	72	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	46.7	93	40-140
111-44-4	bis(2-Chloroethyl)ether	50	40.5	81	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	42.0	84	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	41.7	83	40-140
122-66-7	1,2-Diphenylhydrazine	50	41.2	82	40-140
121-14-2	2,4-Dinitrotoluene	50	42.2	84	40-140
606-20-2	2,6-Dinitrotoluene	50	41.2	82	40-140
91-94-1	3,3'-Dichlorobenzidine	50	41.4	83	40-140
132-64-9	Dibenzofuran	50	40.2	80	40-140
84-74-2	Di-n-butyl phthalate	50	41.7	83	40-140
117-84-0	Di-n-octyl phthalate	50	52.3	105	40-140
84-66-2	Diethyl phthalate	50	36.8	74	40-140
131-11-3	Dimethyl phthalate	50	28.4	57	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	49.1	98	40-140
118-74-1	Hexachlorobenzene	50	48.8	98	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35322-BS	W14962.D	1	10/22/13	KR	10/18/13	OP35322	MSW675

The QC reported here applies to the following samples: Method: SW846 8270C

MC25355-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	26.8	54	40-140
67-72-1	Hexachloroethane	50	27.3	55	40-140
78-59-1	Isophorone	50	38.2	76	40-140
88-74-4	2-Nitroaniline	50	44.5	89	40-140
99-09-2	3-Nitroaniline	50	38.8	78	40-140
100-01-6	4-Nitroaniline	50	36.2	72	40-140
98-95-3	Nitrobenzene	50	37.5	75	40-140
62-75-9	n-Nitrosodimethylamine	50	24.6	49	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	38.5	77	40-140
86-30-6	N-Nitrosodiphenylamine	50	92.6	185* [b]	40-140
110-86-1	Pyridine	50	20.0	40	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	51%	15-110%
4165-62-2	Phenol-d5	34%	15-110%
118-79-6	2,4,6-Tribromophenol	104%	15-110%
4165-60-0	Nitrobenzene-d5	82%	30-130%
321-60-8	2-Fluorobiphenyl	83%	30-130%
1718-51-0	Terphenyl-d14	107%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.
(b) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

7.2.1

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Blank Spike Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35323-BS	I86550.D	1	10/22/13	WK	10/18/13	OP35323	MSI3221

The QC reported here applies to the following samples: Method: SW846 8270C BY SIM

MC25355-I

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	38.9	78	40-140
208-96-8	Acenaphthylene	50	32.4	65	40-140
120-12-7	Anthracene	50	41.7	83	40-140
56-55-3	Benzo(a)anthracene	50	46.0	92	40-140
50-32-8	Benzo(a)pyrene	50	45.3	91	40-140
205-99-2	Benzo(b)fluoranthene	50	48.2	96	40-140
191-24-2	Benzo(g,h,i)perylene	50	44.6	89	40-140
207-08-9	Benzo(k)fluoranthene	50	46.6	93	40-140
218-01-9	Chrysene	50	42.3	85	40-140
53-70-3	Dibenzo(a,h)anthracene	50	49.0	98	40-140
206-44-0	Fluoranthene	50	42.8	86	40-140
86-73-7	Fluorene	50	42.2	84	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	48.8	98	40-140
90-12-0	1-Methylnaphthalene	50	37.8	76	40-140
91-57-6	2-Methylnaphthalene	50	35.5	71	40-140
85-01-8	Phenanthrene	50	44.4	89	40-140
129-00-0	Pyrene	50	41.0	82	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	52%	15-110%
4165-62-2	Phenol-d5	34%	15-110%
118-79-6	2,4,6-Tribromophenol	104%	15-110%
4165-60-0	Nitrobenzene-d5	89%	30-130%
321-60-8	2-Fluorobiphenyl	77%	30-130%
1718-51-0	Terphenyl-d14	101%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35322-MS	W14963.D	1	10/22/13	KR	10/18/13	OP35322	MSW675
OP35322-MSD	W14964.D	1	10/22/13	KR	10/18/13	OP35322	MSW675
MC25100-11	W14965.D	1	10/22/13	KR	10/18/13	OP35322	MSW675

The QC reported here applies to the following samples: Method: SW846 8270C

MC25355-1

CAS No.	Compound	MC25100-11 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	22.8	46	21.4	43	6	30-130/20
95-57-8	2-Chlorophenol	ND		50	38.4	77	40.3	81	5	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	36.1	72	34.9	70	3	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	43.6	87	44.6	89	2	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	39.5	79	39.1	78	1	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	43.6	87	44.7	89	2	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	52.7	105	52.8	106	0	30-130/20
95-48-7	2-Methylphenol	ND		50	33.9	68	34.0	68	0	30-130/20
	3&4-Methylphenol	ND		100	61.9	62	63.1	63	2	30-130/20
88-75-5	2-Nitrophenol	ND		50	44.7	89	45.7	91	2	30-130/20
100-02-7	4-Nitrophenol	ND		50	14.5	29* [a]	14.6	29* [a]	1	30-130/20
87-86-5	Pentachlorophenol	ND		50	39.9	80	41.0	82	3	30-130/20
108-95-2	Phenol	ND		50	17.9	36	18.1	36	1	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	43.8	88	44.3	89	1	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	46.6	93	46.8	94	0	30-130/20
62-53-3	Aniline	ND		50	29.8	60	30.4	61	2	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	49.4	99	48.4	97	2	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	47.7	95	47.0	94	1	40-140/20
100-51-6	Benzyl Alcohol	ND		50	34.1	68	34.7	69	2	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	43.3	87	43.5	87	0	40-140/20
106-47-8	4-Chloroaniline	ND		50	36.2	72	36.5	73	1	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	47.0	94	47.7	95	1	40-140/20
111-44-4	his(2-Chloroethyl)ether	ND		50	39.3	79	41.8	84	6	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	41.6	83	43.3	87	4	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	41.4	83	41.3	83	0	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	41.0	82	39.7	79	3	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	41.0	82	41.1	82	0	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	40.4	81	41.3	83	2	40-140/20
91-94-1	3,3'-Dichlorobenzidiue	ND		50	41.4	83	39.4	79	5	40-140/20
132-64-9	Dibenzofuran	ND		50	39.9	80	39.7	79	1	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	40.4	81	41.2	82	2	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	52.1	104	52.9	106	2	40-140/20
84-66-2	Diethyl phthalate	ND		50	35.7	71	36.0	72	1	40-140/20
131-11-3	Dimethyl phthalate	ND		50	26.6	53	27.3	55	3	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	49.2	98	49.0	98	0	40-140/20
118-74-1	Hexachlorobenzene	ND		50	47.3	95	47.0	94	1	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35322-MS	W14963.D	1	10/22/13	KR	10/18/13	OP35322	MSW675
OP35322-MSD	W14964.D	1	10/22/13	KR	10/18/13	OP35322	MSW675
MC25100-11	W14965.D	1	10/22/13	KR	10/18/13	OP35322	MSW675

The QC reported here applies to the following samples: Method: SW846 8270C

MC25355-1

CAS No.	Compound	MC25100-11 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	26.5	53	26.9	54	1	40-140/20
67-72-1	Hexachloroethane	ND		50	27.0	54	26.4	53	2	40-140/20
78-59-1	Isophorone	ND		50	38.9	78	39.1	78	1	40-140/20
88-74-4	2-Nitroaniline	ND		50	43.2	86	43.2	86	0	40-140/20
99-09-2	3-Nitroaniline	ND		50	38.6	77	38.5	77	0	40-140/20
100-01-6	4-Nitroaniline	ND		50	35.7	71	35.6	71	0	40-140/20
98-95-3	Nitrobenzene	ND		50	38.5	77	38.6	77	0	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	24.6	49	24.7	49	0	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	39.0	78	39.8	80	2	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	92.3	185* [a]	90.8	182* [a]	2	40-140/20
110-86-1	Pyridine	ND		50	19.7	39* [a]	20.8	42	5	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25100-11	Limits
367-12-4	2-Fluorophenol	54%	55%	44%	15-110%
4165-62-2	Phenol-d5	36%	37%	30%	15-110%
118-79-6	2,4,6-Tribromophenol	110%	109%	91%	15-110%
4165-60-0	Nitrobenzene-d5	85%	86%	80%	30-130%
321-60-8	2-Fluorobiphenyl	88%	86%	81%	30-130%
1718-51-0	Terphenyl-d14	112%	109%	112%	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: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35323-MS	I86551.D	1	10/22/13	WK	10/18/13	OP35323	MSI3221
OP35323-MSD	I86552.D	1	10/22/13	WK	10/18/13	OP35323	MSI3221
MC25100-12	I86553.D	1	10/22/13	WK	10/18/13	OP35323	MSI3221

The QC reported here applies to the following samples: Method: SW846 8270C BY SIM

MC25355-1

CAS No.	Compound	MC25100-12 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	39.2	78	39.3	79	0	40-140/20
208-96-8	Acenaphthylene	ND		50	32.5	65	32.4	65	0	40-140/20
120-12-7	Anthracene	ND		50	40.8	82	40.2	80	1	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	45.6	91	45.6	91	0	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	44.9	90	44.8	90	0	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	44.6	89	45.2	90	1	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	45.8	92	45.0	90	2	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	43.8	88	49.0	98	11	40-140/20
218-01-9	Chrysene	ND		50	41.8	84	42.0	84	0	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	49.1	98	48.4	97	1	40-140/20
206-44-0	Fluoranthene	ND		50	41.0	82	41.0	82	0	40-140/20
86-73-7	Fluorene	ND		50	42.2	84	42.4	85	0	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	48.7	97	47.9	96	2	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	38.1	76	38.5	77	1	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	35.9	72	36.3	73	1	40-140/20
85-01-8	Phenanthrene	ND		50	43.4	87	42.7	85	2	40-140/20
129-00-0	Pyrene	ND		50	39.5	79	40.0	80	1	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25100-12	Limits
367-12-4	2-Fluorophenol	54%	56%	47%	15-110%
4165-62-2	Phenol-d5	37%	37%	31%	15-110%
118-79-6	2,4,6-Tribromophenol	107%	105%	88%	15-110%
4165-60-0	Nitrobenzene-d5	93%	95%	90%	30-130%
321-60-8	2-Fluorobiphenyl	81%	81%	76%	30-130%
1718-51-0	Terphenyl-d14	101%	102%	100%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3221-CC3155	Injection Date:	10/22/13
Lab File ID:	I86548.D	Injection Time:	08:58
Instrument ID:	GCMSI	Method:	SW846 8270C 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	190033	4.08	556279	5.06	333683	6.51	585272	7.85	543416	10.64	924507	12.12
Upper Limit [a]	380066	4.58	1112558	5.56	667366	7.01	1170544	8.35	1086832	11.14	1849014	12.62
Lower Limit [b]	95017	3.58	278140	4.56	166842	6.01	292636	7.35	271708	10.14	462254	11.62
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
OP35323-MB	154889	4.08	456860	5.06	269921	6.51	467286	7.85	437277	10.63	724399	12.11
OP35323-BS	160008	4.08	465389	5.07	277398	6.51	482852	7.86	415579	10.64	702780	12.12
OP35323-MS	131089	4.08	383855	5.07	228780	6.51	401502	7.85	363028	10.64	620271	12.12
OP35323-MSD	134596	4.08	395116	5.07	236154	6.51	419993	7.86	371753	10.64	629623	12.12
MC25100-12	143088	4.08	419802	5.07	252614	6.51	439643	7.85	403949	10.63	694857	12.11
MC25355-1	150191	4.08	436058	5.07	258344	6.51	448229	7.85	391629	10.63	674487	12.11
ZZZZZZ	153109	4.08	443412	5.06	257973	6.51	443082	7.85	395216	10.63	667185	12.11
ZZZZZZ	128362	4.08	376571	5.06	220626	6.51	382024	7.85	353629	10.63	623285	12.11
ZZZZZZ	133736	4.08	386925	5.06	231082	6.51	407377	7.85	363504	10.63	616173	12.11
ZZZZZZ	151675	4.08	439192	5.06	256345	6.51	442512	7.85	390679	10.63	660811	12.11
ZZZZZZ	155848	4.08	452126	5.06	264850	6.51	450106	7.85	407456	10.63	692794	12.11

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSW675-CC672	Injection Date:	10/22/13
Lab File ID:	W14960.D	Injection Time:	17:08
Instrument ID:	GCMSW	Method:	SW846 8270C

	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	130052	4.88	501364	6.04	323352	7.70	542996	9.09	620424	12.57	547595	16.33
Upper Limit [a]	260104	5.38	1002728	6.54	646704	8.20	1085992	9.59	1240848	13.07	1095190	16.83
Lower Limit [b]	65026	4.38	250682	5.54	161676	7.20	271498	8.59	310212	12.07	273798	15.83

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
OP35322-MB	135567	4.88	520004	6.04	322354	7.70	548864	9.09	631360	12.56	548674	16.32
OP35322-BS	137541	4.88	518443	6.04	332542	7.70	555652	9.09	630760	12.56	556615	16.32
OP35322-MS	120549	4.88	452581	6.04	295838	7.70	492065	9.09	543955	12.56	485921	16.32
OP35322-MSD	118470	4.88	453506	6.04	295467	7.70	498604	9.09	567350	12.57	498327	16.32
MC25100-11	125361	4.88	487081	6.04	311559	7.70	523713	9.09	603613	12.56	554303	16.32
ZZZZZZ	134485	4.88	508579	6.04	326155	7.70	542107	9.09	591578	12.56	524362	16.32
ZZZZZZ	123582	4.88	478976	6.04	294655	7.70	470678	9.09	515941	12.56	469407	16.32
ZZZZZZ	132293	4.88	506376	6.04	313261	7.70	502917	9.09	541199	12.56	495125	16.32
ZZZZZZ	122899	4.88	475191	6.04	299478	7.70	505461	9.09	568924	12.56	508819	16.32
ZZZZZZ	130046	4.88	497062	6.04	313844	7.70	526992	9.09	583676	12.56	519838	16.32
ZZZZZZ	135859	4.88	521679	6.04	330535	7.70	557129	9.09	608979	12.56	551347	16.32
MC25355-1	123028	4.88	468255	6.04	300636	7.70	483725	9.09	565622	12.56	529604	16.32
ZZZZZZ	134919	4.88	513761	6.04	328991	7.70	535536	9.09	592109	12.56	533779	16.32
ZZZZZZ	142442	4.88	537530	6.04	334082	7.70	558593	9.09	616373	12.56	562273	16.32
ZZZZZZ	138457	4.88	513250	6.04	315915	7.70	516847	9.09	566638	12.56	518129	16.32
ZZZZZZ	143818	4.88	546311	6.04	348720	7.70	571864	9.09	627824	12.56	565765	16.32
ZZZZZZ	137065	4.88	529880	6.04	334445	7.70	558047	9.09	606333	12.56	541865	16.32
ZZZZZZ	124149	4.88	477921	6.04	309687	7.70	521386	9.09	617169	12.56	561571	16.32
ZZZZZZ	132522	4.88	520041	6.04	326422	7.70	531601	9.09	595914	12.56	550260	16.32
ZZZZZZ	135803	4.88	528536	6.04	338231	7.70	564915	9.09	625510	12.56	574884	16.32

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: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC25355-1	W14975.D	39.0	27.0	91.0	65.0	64.0	92.0
OP35322-BS	W14962.D	51.0	34.0	104.0	82.0	83.0	107.0
OP35322-MB	W14961.D	46.0	32.0	95.0	76.0	82.0	105.0
OP35322-MS	W14963.D	54.0	36.0	110.0	85.0	88.0	112.0
OP35322-MSD	W14964.D	55.0	37.0	109.0	86.0	86.0	109.0

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

Semivolatile Surrogate Recovery Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270C BY SIM Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC25355-1	I86554.D	37.0	26.0	88.0	71.0	62.0	86.0
OP35323-BS	I86550.D	52.0	34.0	104.0	89.0	77.0	101.0
OP35323-MB	I86549.D	49.0	33.0	91.0	84.0	76.0	93.0
OP35323-MS	I86551.D	54.0	37.0	107.0	93.0	81.0	101.0
OP35323-MSD	I86552.D	56.0	37.0	105.0	95.0	81.0	102.0

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

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: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35343-MB	BB51768A.D	1	10/21/13	CZ	10/21/13	OP35343	GBB3049

The QC reported here applies to the following samples: Method: SW846 8011

MC25355-1

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	86%	36-173%
460-00-4	Bromofluorobenzene (S)	83%	36-173%

8.1.1

8

Method Blank Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35363-MB	BB51795.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050

The QC reported here applies to the following samples: Method: SW846 8011

MC25355-3

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	85%	36-173%
460-00-4	Bromofluorobenzene (S)	91%	36-173%

8.1.2

8

Blank Spike Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35343-BS	BB51769A.D	1	10/21/13	CZ	10/21/13	OP35343	GBB3049

The QC reported here applies to the following samples: Method: SW846 8011

MC25355-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.071	100	60-140
106-93-4	1,2-Dibromoethane	0.071	0.079	111	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	81%	36-173%
460-00-4	Bromofluorobenzene (S)	83%	36-173%

8.2.1

8

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35363-BS	BB51796.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050

The QC reported here applies to the following samples: Method: SW846 8011

MC25355-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.070	99	60-140
106-93-4	1,2-Dibromoethane	0.071	0.074	104	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	85%	36-173%
460-00-4	Bromofluorobenzene (S)	86%	36-173%

8.2.2

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35343-MS	BB51770A.D	1	10/21/13	CZ	10/21/13	OP35343	GBB3049
OP35343-MSD	BB51771A.D	1	10/22/13	CZ	10/21/13	OP35343	GBB3049
MC25100-24	BB51772A.D	1	10/22/13	CZ	10/21/13	OP35343	GBB3049

The QC reported here applies to the following samples: Method: SW846 8011

MC25355-1

CAS No.	Compound	MC25100-24 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.076	107	0.076	107	0	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.085	120	0.086	121	1	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC25100-24	Limits
460-00-4	Bromofluorobenzene (S)	96%	92%	88%	36-173%
460-00-4	Bromofluorobenzene (S)	94%	93%	99%	36-173%

8.3.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35363-MS	BB51797.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050
OP35363-MSD	BB51798.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050
MC25100-22	BB51799.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050

The QC reported here applies to the following samples: Method: SW846 8011

MC25355-3

CAS No.	Compound	MC25100-22 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.064	90	0.072	101	12	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.068	96	0.081	114	17	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC25100-22	Limits
460-00-4	Bromofluorobenzene (S)	79%	92%	89%	36-173%
460-00-4	Bromofluorobenzene (S)	78%	91%	85%	36-173%

8.3.2

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011 Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC25355-1	BB51785.D	87.0	107.0
MC25355-3	BB51800.D	98.0	97.0
OP35343-BS	BB51769A.D	81.0	83.0
OP35343-MB	BB51768A.D	86.0	83.0
OP35343-MS	BB51770A.D	96.0	94.0
OP35343-MSD	BB51771A.D	92.0	93.0
OP35363-BS	BB51796.D	85.0	86.0
OP35363-MB	BB51795.D	85.0	91.0
OP35363-MS	BB51797.D	79.0	78.0
OP35363-MSD	BB51798.D	92.0	91.0

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3049-ICC3049	Injection Date:	10/21/13
Lab File ID:	BB51763.D	Injection Time:	19:56
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	5.85	4.87

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB51766A.D	10/21/13	21:25	5.86	4.87
ZZZZZZ	BB51766B.D	10/21/13	21:25	5.86	4.87
OP35343-MB	BB51768A.D	10/21/13	22:29	5.86	4.87
OP35342-MB	BB51768.D	10/21/13	22:29	5.86	4.87
OP35342-BS	BB51769.D	10/21/13	23:01	5.86	4.87
OP35343-BS	BB51769A.D	10/21/13	23:01	5.86	4.87
OP35342-MS	BB51770.D	10/21/13	23:32	5.87	4.87
OP35343-MS	BB51770A.D	10/21/13	23:32	5.87	4.87
OP35342-MSD	BB51771.D	10/22/13	00:04	5.87	4.87
OP35343-MSD	BB51771A.D	10/22/13	00:04	5.87	4.87
MC25100-20	BB51772.D	10/22/13	00:36	5.87	4.87
MC25100-24	BB51772A.D	10/22/13	00:36	5.87	4.87
ZZZZZZ	BB51773.D	10/22/13	01:07	5.86	4.87
ZZZZZZ	BB51774.D	10/22/13	01:39	5.87	4.87
ZZZZZZ	BB51775.D	10/22/13	02:10	5.88	4.87
ZZZZZZ	BB51777.D	10/22/13	03:12	5.90	4.87

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3049-CC3049	Injection Date:	10/22/13
Lab File ID:	BB51778.D	Injection Time:	03:43
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	5.90	4.87

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB51779.D	10/22/13	04:13	5.91	4.87
ZZZZZZ	BB51780.D	10/22/13	04:43	5.92	4.87
ZZZZZZ	BB51781.D	10/22/13	05:13	5.91	4.87
ZZZZZZ	BB51782.D	10/22/13	05:43	5.91	4.87
ZZZZZZ	BB51783.D	10/22/13	06:11	5.91	4.87
ZZZZZZ	BB51784.D	10/22/13	06:39	5.90	4.87
MC25355-1	BB51785.D	10/22/13	07:06	5.92	4.87
GBB3049-ECC3048	BB51786.D	10/22/13	07:34	5.92	4.87

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: MC25355
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3050-ICC3050	Injection Date:	10/22/13
Lab File ID:	BB51790.D	Injection Time:	13:17
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	5.95	4.87

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB51793A.D	10/22/13	14:43	5.97	4.87
OP35363-MB	BB51795.D	10/22/13	15:39	5.97	4.87
OP35363-BS	BB51796.D	10/22/13	16:08	5.96	4.87
OP35363-MS	BB51797.D	10/22/13	16:36	5.96	4.87
OP35363-MSD	BB51798.D	10/22/13	17:05	5.94	4.87
MC25100-22	BB51799.D	10/22/13	17:34	5.93	4.87
MC25355-3	BB51800.D	10/22/13	18:03	5.93	4.87
ZZZZZZ	BB51801.D	10/22/13	18:33	5.93	4.87
ZZZZZZ	BB51802.D	10/22/13	19:02	5.94	4.87
ZZZZZZ	BB51803.D	10/22/13	19:31	5.93	4.87
ZZZZZZ	BB51804.D	10/22/13	19:59	5.94	4.87

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.3

Roxana Groundwater Quarterly – 4th Quarter 2013 Data Review

Laboratory SDG: MC25396

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/21/2013

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008

Sample Identification	Sample Identification
MW4-ROX-101613	MW7-ROX-101613
MW8-ROX-101613	MW8-ROX-101613-Dup
P93B-ROX-101613	P93B-ROX-101613-Dup
P93C-ROX-101613	TB-ROX-101613-HCL
TB-ROX-101613-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. SVOC acid fraction surrogate recoveries were outside evaluation criteria in sample MW4-ROX-101613-Run#1. SVOC sample MW4-ROX-101613 was re-extracted outside of hold time. Samples were diluted due to high levels of VOC target analytes. Although not indicated in the laboratory case narrative, 4-nitrophenol was detected in the method blank. These issues are addressed further in the appropriate sections below. The laboratory case narrative was revised to include a statement regarding library searches for (TICs) tentatively identified compounds. Additionally, the laboratory report was revised to include missing acid-fraction surrogate recoveries in the original analysis of sample MW4-ROX-101613.

The cooler receipt form indicated did not indicate any problems.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

No, sample MW4-ROX-101613 was re-extracted 5 days outside of extraction holding time criteria (7 days) due to low recoveries of acid fraction surrogates in the original analysis. The re-extracted/re-analysis confirmation run indicates matrix interference. Holding time exceedances were not greater than two times (2X) holding time criteria; data requiring qualification is summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
MW4-ROX-101613	SVOCs	Benzoic acid	**UJ**
MW4-ROX-101613	SVOCs	2-Chlorophenol	**UJ**
MW4-ROX-101613	SVOCs	4-Chloro-3-methyl phenol	**UJ**

Sample ID	Parameter	Analyte	Qualification
MW4-ROX-101613	SVOCs	2,4-Dichlorophenol	**UJ**
MW4-ROX-101613	SVOCs	2,4-Dimethylphenol	**UJ**
MW4-ROX-101613	SVOCs	2,4-Dinitrophenol	**UJ**
MW4-ROX-101613	SVOCs	4,6-Dinitro-o-cresol	**UJ**
MW4-ROX-101613	SVOCs	2-Methylphenol	**UJ**
MW4-ROX-101613	SVOCs	3&4-Methylphenol	**UJ**
MW4-ROX-101613	SVOCs	2-Nitrophenol	**UJ**
MW4-ROX-101613	SVOCs	4-Nitrophenol	**UJ**
MW4-ROX-101613	SVOCs	Pentachlorophenol	**UJ**
MW4-ROX-101613	SVOCs	Phenol	**J**
MW4-ROX-101613	SVOCs	2,4,5-Trichlorophenol	**UJ**
MW4-ROX-101613	SVOCs	2,4,6-Trichlorophenol	**UJ**

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
OP35455-MB	SVOCs	4-Nitrophenol	0.85 ug/L

Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not required qualification. No qualification of data was required.

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSN3056-BS	VOCs	Acrolein	**17**	70-130
MSN3056-BS	VOCs	Acrylonitrile	**137**	70-130
MSN3056-BS	VOCs	Ethyl methacrylate	**74**	77-137
MSN3056-BS	VOCs	Methyl tert butyl ether	**64**	40-140
MSN3056-BS	VOCs	Vinyl acetate	**62**	70-130
OP35455-BS	SVOCs	Benzoic acid	**25**	30-130
OP35455-BS	SVOCs	Phenol	**29**	30-130

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS OP35455-BS was associated with MW4-ROX-101613-Run#2 (confirmation run).

Sample ID	Parameter	Analyte	Qualification
MW4-ROX-101613	VOCs	Acrolein	**UJ**
MW4-ROX-101613	VOCs	Ethyl methacrylate	**UJ**

Sample ID	Parameter	Analyte	Qualification
MW4-ROX-101613	VOCs	Methyl tert butyl ether	**J**
MW4-ROX-101613	VOCs	Vinyl acetate	**UJ**
MW7-ROX-101613	VOCs	Acrolein	**UJ**
MW7-ROX-101613	VOCs	Ethyl methacrylate	**UJ**
MW7-ROX-101613	VOCs	Methyl tert butyl ether	**UJ**
MW7-ROX-101613	VOCs	Vinyl acetate	**UJ**
MW8-ROX-101613	VOCs	Acrolein	**UJ**
MW8-ROX-101613	VOCs	Ethyl methacrylate	**UJ**
MW8-ROX-101613	VOCs	Methyl tert butyl ether	**UJ**
MW8-ROX-101613	VOCs	Vinyl acetate	**UJ**
MW8-ROX-101613-Dup	VOCs	Acrolein	**UJ**
MW8-ROX-101613-Dup	VOCs	Ethyl methacrylate	**UJ**
MW8-ROX-101613-Dup	VOCs	Methyl tert butyl ether	**UJ**
MW8-ROX-101613-Dup	VOCs	Vinyl acetate	**UJ**
P93B-ROX-101613	VOCs	Acrolein	**UJ**
P93B-ROX-101613	VOCs	Ethyl methacrylate	**UJ**
P93B-ROX-101613	VOCs	Methyl tert butyl ether	**UJ**
P93B-ROX-101613	VOCs	Vinyl acetate	**UJ**
P93B-ROX-101613-Dup	VOCs	Acrolein	**UJ**
P93B-ROX-101613-Dup	VOCs	Ethyl methacrylate	**UJ**
P93B-ROX-101613-Dup	VOCs	Methyl tert butyl ether	**UJ**
P93B-ROX-101613-Dup	VOCs	Vinyl acetate	**UJ**
P93C-ROX-101613	VOCs	Acrolein	**UJ**
P93C-ROX-101613	VOCs	Ethyl methacrylate	**UJ**
P93C-ROX-101613	VOCs	Methyl tert butyl ether	**J**
P93C-ROX-101613	VOCs	Vinyl acetate	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW4-ROX-101613-Run#1	SVOCs	2-Fluorophenol	**6**	15-110
MW4-ROX-101613-Run#1	SVOCs	Phenol-d_5	**5**	15-110

Data was reported and qualified from MW4-ROX-101613-Run#2 (section 3.0 of this data review). No further 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
MW8-ROX-101613	MW8-ROX-101613-Dup
P93B-ROX-101613	P93B-ROX-101613-Dup

Were field duplicates within evaluation criteria?

Yes

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

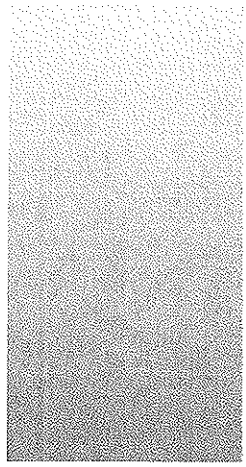
Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

No







Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC25396

Sampling Date: 10/16/13

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: **111**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Reviewed on 11-21-13

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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Test results relate only to samples analyzed.

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ATTN: Elizabeth Kunkel
November 21, 2013

Accutest Job MC25396 (revision 1)

Ms. Kunkel,

The report of Accutest job number MC25396 has been revised to include acid compound results from the original extraction. The case narrative was also revised to include the following statement: "1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found". This request is per Melissa Mansker's email on 11/20/2013. This change has been incorporated into the revised report which is attached.

Sincerely,

Jennifer Dixon
Accutest Laboratories of New England, Inc.

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Sample Summary

Shell Oil

Job No: MC25396

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC25396-1	10/16/13	09:35	LRBL	10/17/13	AQ	Ground Water	MW4-ROX-101613
MC25396-2	10/16/13	10:40	LRBL	10/17/13	AQ	Ground Water	MW7-ROX-101613
MC25396-3	10/16/13	11:45	LRBL	10/17/13	AQ	Ground Water	MW8-ROX-101613
MC25396-4	10/16/13	11:45	LRBL	10/17/13	AQ	Ground Water	MW8-ROX-101613-DUP
MC25396-5	10/16/13	10:55	LRBL	10/17/13	AQ	Ground Water	P93B-ROX-101613
MC25396-6	10/16/13	10:55	LRBL	10/17/13	AQ	Ground Water	P93B-ROX-101613-DUP
MC25396-7	10/16/13	12:20	LRBL	10/17/13	AQ	Ground Water	P93C-ROX-101613
MC25396-8	10/16/13	00:00	LRBL	10/17/13	AQ	Trip Blank Water	TB-ROX-101613-HCL
MC25396-9	10/16/13	00:00	LRBL	10/17/13	AQ	Trip Blank Water	TB-ROX-101613-ST

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2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC25396
Site:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central	**Report Date**	11/21/2013 1:48:26 PM

7 Sample(s), 2 Trip Blank(s) and 0 Field Blank(s) were collected on 10/16/2013 and were received at Accutest on 10/17/2013 properly preserved, at 2.1 Deg. C and intact. These Samples received an Accutest job number of MC25396. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** MSN3056

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25678-1MS, MC25678-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MSN3056-BS for Acrolein, Acrylonitrile, Ethyl methacrylate, Methyl Tert Butyl Ether, Vinyl Acetate are outside control limits. Blank Spike meets program technical requirements.
- MC25678-1MS/MSD for 2-Butanone (MEK), 2-Hexanone, Acetone, Acrolein, Acrylonitrile, Methyl Tert Butyl Ether, Vinyl Acetate are outside control limits due to possible matrix interference. Refer to Blank Spike.

Extractables by GCMS By Method SW846 8270C

Matrix: AQ **Batch ID:** OP35324

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25100-13MS, MC25100-13MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MC25396-1 for Phenol-d5, 2-Fluorophenol: Outside control limits. Sample re-extracted/reanalyzed.

Matrix: AQ **Batch ID:** OP35455

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC25493-18MS, MC25493-18MSD were used as the QC samples indicated.
- The following samples were extracted outside of holding time for method SW846 8270C: MC25396-1. Sample re-extracted beyond recommended holding time.
- OP35455-BS for Benzoic Acid, Phenol are outside control limits. Blank Spike meets program technical requirements.
- OP35455-MS/MSD for Benzoic Acid are outside control limits. Blank Spike meets program technical requirements.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix: AQ	Batch ID: OP35325

- 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) MC25100-14MS, MC25100-14MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8011

Matrix: AQ	Batch ID: OP35363

- 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) MC25100-22MS, MC25100-22MSD were used as the QC samples indicated.

VOC: Analysis is performed and evaluated by SW846 8260C.

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(MC25396).

Summary of Hits

Job Number: MC25396
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Collected: 10/16/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC25396-1	MW4-ROX-101613					
Benzene		1700	5.0	4.5	ug/l	SW846 8260B
Methyl Tert Butyl Ether		33.3	10	4.3	ug/l	SW846 8260B
Xylene (total)		5.8 J	10	4.1	ug/l	SW846 8260B
Phenol [a]		16.8	5.5	0.56	ug/l	SW846 8270C
Phenol		5.8	5.4	0.56	ug/l	SW846 8270C
1-Methylnaphthalene		0.16 J	0.22	0.054	ug/l	SW846 8270C BY SIM
2-Methylnaphthalene		0.15 J	0.22	0.081	ug/l	SW846 8270C BY SIM
MC25396-2	MW7-ROX-101613					
Benzene		553000	1000	900	ug/l	SW846 8260B
Phenol		84.9	5.5	0.56	ug/l	SW846 8270C
Acenaphthene		0.35	0.11	0.076	ug/l	SW846 8270C BY SIM
Fluorene		0.22	0.11	0.11	ug/l	SW846 8270C BY SIM
1-Methylnaphthalene		8.2	0.22	0.055	ug/l	SW846 8270C BY SIM
2-Methylnaphthalene		11.0	0.22	0.082	ug/l	SW846 8270C BY SIM
Phenanthrene		0.19	0.055	0.014	ug/l	SW846 8270C BY SIM
MC25396-3	MW8-ROX-101613					
Benzene		360000	1000	900	ug/l	SW846 8260B
2,4-Dimethylphenol		6.6 J	11	1.2	ug/l	SW846 8270C
2-Methylphenol		2.2 J	11	1.4	ug/l	SW846 8270C
3&4-Methylphenol		5.2 J	11	2.2	ug/l	SW846 8270C
Phenol		99.6	5.4	0.55	ug/l	SW846 8270C
Dibenzofuran		0.50 J	2.2	0.17	ug/l	SW846 8270C
Acenaphthene		0.21	0.11	0.074	ug/l	SW846 8270C BY SIM
Acenaphthylene		0.089 J	0.11	0.053	ug/l	SW846 8270C BY SIM
Fluorene		0.41	0.11	0.11	ug/l	SW846 8270C BY SIM
1-Methylnaphthalene		11.7	0.22	0.054	ug/l	SW846 8270C BY SIM
2-Methylnaphthalene		13.6	0.22	0.080	ug/l	SW846 8270C BY SIM
Phenanthrene		0.11	0.054	0.014	ug/l	SW846 8270C BY SIM
MC25396-4	MW8-ROX-101613-DUP					
Benzene		351000	1000	900	ug/l	SW846 8260B
2,4-Dimethylphenol		6.2 J	12	1.3	ug/l	SW846 8270C
2-Methylphenol		1.9 J	12	1.5	ug/l	SW846 8270C
3&4-Methylphenol		4.6 J	12	2.4	ug/l	SW846 8270C
Phenol		108	5.9	0.60	ug/l	SW846 8270C
Dibenzofuran		0.40 J	2.4	0.18	ug/l	SW846 8270C
Acenaphthene		0.20	0.12	0.081	ug/l	SW846 8270C BY SIM
Acenaphthylene		0.058 J	0.12	0.058	ug/l	SW846 8270C BY SIM

Summary of Hits

Job Number: MC25396
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenne, Roxana, IL
Collected: 10/16/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Fluorene		0.37	0.12	0.12	ug/l	SW846 8270C BY SIM
1-Methylnaphthalene		10.8	0.24	0.059	ug/l	SW846 8270C BY SIM
2-Methylnaphthalene		12.8	0.24	0.087	ug/l	SW846 8270C BY SIM
Phenanthrene		0.097	0.059	0.015	ug/l	SW846 8270C BY SIM
MC25396-5	P93B-ROX-101613					
Benzene		187000	1000	900	ug/l	SW846 8260B
Phenol		69.0	5.0	0.51	ug/l	SW846 8270C
Acenaphthylene		0.065 J	0.10	0.050	ug/l	SW846 8270C BY SIM
MC25396-6	P93B-ROX-101613-DUP					
Benzene		180000	1000	900	ug/l	SW846 8260B
Phenol		82.0	5.1	0.52	ug/l	SW846 8270C
Acenaphthylene		0.091 J	0.10	0.051	ug/l	SW846 8270C BY SIM
MC25396-7	P93C-ROX-101613					
Benzene		1400	50	45	ug/l	SW846 8260B
Methyl Tert Butyl Ether		3.5	1.0	0.43	ug/l	SW846 8260B
Phenol		5.0 J	5.1	0.52	ug/l	SW846 8270C
MC25396-8	TB-ROX-101613-HCL					
No hits reported in this sample.						
MC25396-9	TB-ROX-101613-ST					
No hits reported in this sample.						

(a) Sample re-extracted beyond recommended holding time.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW4-ROX-101613		
Lab Sample ID:	MC25396-1	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N81858.D	10	10/29/13	JB	n/a	n/a	MSN3056
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	100	28	ug/l	
107-02-8	Acrolein	ND	250	63	ug/l	UJ
107-13-1	Acrylonitrile	ND	50	35	ug/l	
71-43-2	Benzene	1700	5.0	4.5	ug/l	
108-86-1	Bromobenzene	ND	50	4.4	ug/l	
74-97-5	Bromochloromethane	ND	50	6.4	ug/l	
75-27-4	Bromodichloromethane	ND	10	3.3	ug/l	
75-25-2	Bromoform	ND	10	4.2	ug/l	
74-83-9	Bromomethane	ND	20	15	ug/l	
78-93-3	2-Butanone (MEK)	ND	50	16	ug/l	
104-51-8	n-Butylbenzene	ND	50	5.4	ug/l	
135-98-8	sec-Butylbenzene	ND	50	5.8	ug/l	
98-06-6	tert-Butylbenzene	ND	50	8.7	ug/l	
75-15-0	Carbon disulfide	ND	50	5.9	ug/l	
56-23-5	Carbon tetrachloride	ND	10	6.2	ug/l	
108-90-7	Chlorobenzene	ND	10	4.8	ug/l	
75-00-3	Chloroethane	ND	20	8.4	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	50	13	ug/l	
67-66-3	Chloroform	ND	10	5.0	ug/l	
74-87-3	Chloromethane	ND	20	14	ug/l	
95-49-8	o-Chlorotoluene	ND	50	5.5	ug/l	
106-43-4	p-Chlorotoluene	ND	50	4.8	ug/l	
124-48-1	Dibromochloromethane	ND	10	3.3	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	10	3.5	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	10	3.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	10	2.6	ug/l	
75-71-8	Dichlorodifluoromethane	ND	20	12	ug/l	
75-34-3	1,1-Dichloroethane	ND	10	3.7	ug/l	
107-06-2	1,2-Dichloroethane	ND	10	3.5	ug/l	
75-35-4	1,1-Dichloroethene	ND	10	6.7	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	10	5.4	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	10	5.4	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-101613		
Lab Sample ID:	MC25396-1	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	20	4.5	ug/l	
142-28-9	1,3-Dichloropropane	ND	50	9.7	ug/l	
594-20-7	2,2-Dichloropropane	ND	50	13	ug/l	
563-58-6	1,1-Dichloropropene	ND	50	6.3	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	2.2	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	2.9	ug/l	
123-91-1	1,4-Dioxane	ND	250	160	ug/l	
97-63-2	Ethyl methacrylate	ND	50	8.1	ug/l	UJ
100-41-4	Ethylbenzene	ND	10	3.8	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	13	ug/l	
591-78-6	2-Hexanone	ND	50	23	ug/l	
98-82-8	Isopropylbenzene	ND	50	6.4	ug/l	
99-87-6	p-Isopropyltolueue	ND	50	5.5	ug/l	
1634-04-4	Methyl Tert Butyl Ether	33.3	10	4.3	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	50	13	ug/l	
74-95-3	Methylene bromide	ND	50	4.3	ug/l	
75-09-2	Methylene chloride	ND	20	4.1	ug/l	
91-20-3	Naphthalene	ND	50	7.9	ug/l	
103-65-1	n-Propylbenzene	ND	50	5.9	ug/l	
100-42-5	Styrene	ND	50	4.9	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	10	4.6	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	4.2	ug/l	
127-18-4	Tetrachloroethene	ND	10	6.1	ug/l	
108-88-3	Toluene	ND	10	4.6	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	50	7.6	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	50	4.5	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	10	9.4	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	10	4.9	ug/l	
79-01-6	Trichloroethene	ND	10	4.5	ug/l	
75-69-4	Trichlorofluoromethane	ND	10	6.1	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	50	7.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	50	4.7	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	50	11	ug/l	
108-05-4	Vinyl Acetate	ND	50	13	ug/l	UJ
75-01-4	Vinyl chloride	ND	10	6.1	ug/l	
	m,p-Xyleue	ND	10	7.0	ug/l	
95-47-6	o-Xylene	ND	10	4.1	ug/l	
1330-20-7	Xylene (total)	5.8	10	4.1	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:	MW4-ROX-101613		
Lab Sample ID:	MC25396-1	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	83%		70-130%
2037-26-5	Toluene-D8	86%		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	

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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:	MW4-ROX-101613		
Lab Sample ID:	MC25396-1	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X00330.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
Run #2 [a]	F70030.D	1	10/31/13	WK	10/28/13	OP35455	MSF3129

	Initial Volume	Final Volume
Run #1	921 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	1.4	ug/l	
65-85-0	Benzoic Acid	ND [b]	11	1.4	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.4	0.42	ug/l	
95-57-8	2-Chlorophenol	ND [b]	5.5	0.42	ug/l	UJ
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND [b]	11	0.54	ug/l	UJ
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
120-83-2	2,4-Dichlorophenol	ND [b]	11	0.36	ug/l	UJ
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
105-67-9	2,4-Dimethylphenol	ND [b]	11	1.3	ug/l	UJ
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
51-28-5	2,4-Dinitrophenol	ND [b]	22	2.7	ug/l	UJ
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND [b]	11	1.3	ug/l	UJ
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
95-48-7	2-Methylphenol	ND [b]	11	1.4	ug/l	UJ
	3&4-Methylphenol	ND	11	2.2	ug/l	
	3&4-Methylphenol	ND [b]	11	2.2	ug/l	UJ
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
88-75-5	2-Nitrophenol	ND [b]	11	0.55	ug/l	UJ
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
100-02-7	4-Nitropheuol	ND [b]	22	0.64	ug/l	UJ
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
87-86-5	Peutachlorophenol	ND [b]	11	1.4	ug/l	UJ
108-95-2	Phenol	5.8	5.4	0.56	ug/l	
108-95-2	Phenol	16.8 [b]	5.5	0.56	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND [b]	11	0.63	ug/l	UJ
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND [b]	11	0.35	ug/l	UJ
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW4-ROX-101613		
Lab Sample ID:	MC25396-1	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
85-68-7	Butyl benzyl phthalate	ND	5.4	0.92	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.71	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotolueue	ND	11	0.70	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ng/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	
84-66-2	Diethyl phthalate	ND	5.4	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.53	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.48	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.88	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.59	ug/l	
110-86-1	Pyridiue	ND	11	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	6% c	22%	15-110%
4165-62-2	Phenol-d5	5% c	20%	15-110%
118-79-6	2,4,6-Tribromophenol	36%	49%	15-110%
4165-60-0	Nitrobenzene-d5	70%		30-130%
321-60-8	2-Fluorobiphenyl	65%		30-130%
1718-51-0	Terphenyl-d14	92%		30-130%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW4-ROX-101613		
Lab Sample ID:	MC25396-1	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

(a) Sample re-extracted beyond recommended holding time.
(b) Result is from Run# 2
(c) Outside control limits. Sample re-extracted/reanalyzed.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW4-ROX-101613		
Lab Sample ID:	MC25396-1	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86591.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223
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	Iudeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	0.16	0.22	0.054	ug/l	J
91-57-6	2-Methylnaphthalene	0.15	0.22	0.081	ug/l	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	73%		30-130%
321-60-8	2-Fluorobiphenyl	66%		30-130%
1718-51-0	Terphenyl-d14	94%		30-130%

ND = Not detected MDL - Method Detection Limit
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B = Indicates analyte found in associated method blank
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Report of Analysis

Client Sample ID:	MW4-ROX-101613		
Lab Sample ID:	MC25396-1	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB51801.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	85%		36-173%
460-00-4	Bromofluorobenzene (S)	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:	MW7-ROX-101613		
Lab Sample ID:	MC25396-2	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N81867.D	2000	10/29/13	JB	n/a	n/a	MSN3056
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20000	5600	ug/l	
107-02-8	Acrolein	ND	50000	13000	ug/l	UJ
107-13-1	Acrylonitrile	ND	10000	7000	ug/l	
71-43-2	Benzene	553000	1000	900	ug/l	
108-86-1	Bromobenzene	ND	10000	870	ug/l	
74-97-5	Bromochloromethane	ND	10000	1300	ug/l	
75-27-4	Bromodichloromethane	ND	2000	660	ug/l	
75-25-2	Bromoform	ND	2000	840	ug/l	
74-83-9	Bromomethane	ND	4000	3000	ug/l	
78-93-3	2-Butanone (MEK)	ND	10000	3200	ug/l	
104-51-8	n-Butylbenzene	ND	10000	1100	ug/l	
135-98-8	sec-Butylbenzene	ND	10000	1200	ug/l	
98-06-6	tert-Butylbenzene	ND	10000	1700	ug/l	
75-15-0	Carbon disulfide	ND	10000	1200	ug/l	
56-23-5	Carbon tetrachloride	ND	2000	1200	ug/l	
108-90-7	Chlorobenzene	ND	2000	970	ug/l	
75-00-3	Chloroethane	ND	4000	1700	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	10000	2500	ug/l	
67-66-3	Chloroform	ND	2000	1000	ug/l	
74-87-3	Chloromethane	ND	4000	2900	ug/l	
95-49-8	o-Chlorotoluene	ND	10000	1100	ug/l	
106-43-4	p-Chlorotoluene	ND	10000	950	ug/l	
124-48-1	Dibromochloromethane	ND	2000	660	ug/l	
95-50-1	1,2-Dichlorohenzene	ND	2000	690	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2000	600	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2000	530	ug/l	
75-71-8	Dichlorodifluoromethane	ND	4000	2400	ug/l	
75-34-3	1,1-Dichloroethane	ND	2000	740	ug/l	
107-06-2	1,2-Dichloroethane	ND	2000	710	ug/l	
75-35-4	1,1-Dichloroethene	ND	2000	1300	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2000	1100	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2000	1100	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW7-ROX-101613		
Lab Sample ID:	MC25396-2	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	4000	910	ug/l	
142-28-9	1,3-Dichloropropane	ND	10000	1900	ug/l	
594-20-7	2,2-Dichloropropane	ND	10000	2500	ug/l	
563-58-6	1,1-Dichloropropene	ND	10000	1300	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1000	430	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1000	570	ug/l	
123-91-1	1,4-Dioxane	ND	50000	31000	ug/l	
97-63-2	Ethyl methacrylate	ND	10000	1600	ng/l	UJ
100-41-4	Ethylbenzene	ND	2000	750	ug/l	
87-68-3	Hexachlorobutadiene	ND	10000	2500	ug/l	
591-78-6	2-Hexanone	ND	10000	4500	ug/l	
98-82-8	Isopropylbenzene	ND	10000	1300	ug/l	
99-87-6	p-Isopropyltoluene	ND	10000	1100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2000	860	ug/l	UJ
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	10000	2600	ug/l	
74-95-3	Methylene bromide	ND	10000	860	ug/l	
75-09-2	Methylene chloride	ND	4000	810	ug/l	
91-20-3	Naphthalene	ND	10000	1600	ug/l	
103-65-1	u-Propylbenzene	ND	10000	1200	ug/l	
100-42-5	Styrene	ND	10000	980	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2000	910	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1000	840	ug/l	
127-18-4	Tetrachloroethene	ND	2000	1200	ug/l	
108-88-3	Toluene	ND	2000	920	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	10000	1500	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	10000	910	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2000	1900	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2000	990	ug/l	
79-01-6	Trichloroethene	ND	2000	900	ug/l	
75-69-4	Trichlorofluoromethane	ND	2000	1200	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	10000	1400	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	10000	930	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	10000	2200	ug/l	
108-05-4	Vinyl Acetate	ND	10000	2600	ug/l	UJ
75-01-4	Viuyl chloride	ND	2000	1200	ug/l	
	m,p-Xylene	ND	2000	1400	ug/l	
95-47-6	o-Xylene	ND	2000	820	ug/l	
1330-20-7	Xylene (total)	ND	2000	820	ug/l	

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N = Indicates presuuptive evideuce of a compouud

Report of Analysis

Client Sample ID:	MW7-ROX-101613		
Lab Sample ID:	MC25396-2	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	83%		70-130%
2037-26-5	Toluene-D8	86%		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:	MW7-ROX-101613		
Lab Sample ID:	MC25396-2	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X00331.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.5	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.54	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.3	ug/l	
51-28-5	2,4-Dinitropbenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.55	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.64	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	84.9	5.5	0.56	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.63	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.35	ug/l	
62-53-3	Aniline	ND	11	0.70	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.5	0.22	ug/l	
85-68-7	Bntyl benzyl phthalate	ND	5.5	0.94	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.63	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.5	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.5	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.5	0.25	ng/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.5	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.5	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.5	0.72	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.74	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.71	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.5	0.55	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.5	0.43	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.5	0.48	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW7-ROX-101613		
Lab Sample ID:	MC25396-2	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.5	0.55	ug/l	
131-11-3	Dimethyl phthalate	ND	5.5	0.55	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.54	ug/l	
118-74-1	Hexachlorobenzene	ND	5.5	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.5	0.48	ug/l	
78-59-1	Isophorone	ND	5.5	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.31	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.55	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.8	ug/l	
98-95-3	Nitrobenzene	ND	5.5	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.5	0.55	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.5	0.89	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.5	0.59	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	41%		15-110%
4165-62-2	Phenol-d5	29%		15-110%
118-79-6	2,4,6-Tribromophenol	78%		15-110%
4165-60-0	Nitrobenzene-d5	88%		30-130%
321-60-8	2-Fluorobiphenyl	80%		30-130%
1718-51-0	Terphenyl-d14	104%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW7-ROX-101613		
Lab Sample ID:	MC25396-2	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86592.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.35	0.11	0.076	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.055	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.055	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	0.22	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	8.2	0.22	0.055	ug/l	
91-57-6	2-Methylnaphthalene	11.0	0.22	0.082	ug/l	
85-01-8	Phenanthrene	0.19	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	90%		30-130%
321-60-8	2-Fluorobiphenyl	79%		30-130%
1718-51-0	Terphenyl-d14	103%		30-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW7-ROX-101613		
Lab Sample ID:	MC25396-2	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB51802.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050
Run #2							

	Initial Volume	Final Volume
Run #1	35.6 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	80%		36-173%
460-00-4	Bromofluorobenzene (S)	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:	MW8-ROX-101613		
Lab Sample ID:	MC25396-3	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N81868.D	2000	10/29/13	JB	n/a	n/a	MSN3056
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20000	5600	ug/l	
107-02-8	Acrolein	ND	50000	13000	ug/l	UJ
107-13-1	Acrylonitrile	ND	10000	7000	ug/l	
71-43-2	Benzene	360000	1000	900	ug/l	
108-86-1	Bromobenzene	ND	10000	870	ug/l	
74-97-5	Bromochloromethane	ND	10000	1300	ug/l	
75-27-4	Bromodichloromethane	ND	2000	660	ug/l	
75-25-2	Bromoform	ND	2000	840	ug/l	
74-83-9	Bromomethane	ND	4000	3000	ug/l	
78-93-3	2-Butanone (MEK)	ND	10000	3200	ug/l	
104-51-8	n-Butylbenzene	ND	10000	1100	ug/l	
135-98-8	sec-Butylbenzene	ND	10000	1200	ug/l	
98-06-6	tert-Butylbenzene	ND	10000	1700	ug/l	
75-15-0	Carbon disulfide	ND	10000	1200	ug/l	
56-23-5	Carbon tetrachloride	ND	2000	1200	ug/l	
108-90-7	Chlorobenzene	ND	2000	970	ug/l	
75-00-3	Chloroethane	ND	4000	1700	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	10000	2500	ug/l	
67-66-3	Chloroform	ND	2000	1000	ug/l	
74-87-3	Chloromethane	ND	4000	2900	ug/l	
95-49-8	o-Chlorotoluene	ND	10000	1100	ug/l	
106-43-4	p-Chlorotoluene	ND	10000	950	ug/l	
124-48-1	Dibromochloromethane	ND	2000	660	ug/l	
95-50-1	1,2-Dichlorohenzene	ND	2000	690	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2000	600	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2000	530	ug/l	
75-71-8	Dichlorodifluoromethane	ND	4000	2400	ug/l	
75-34-3	1,1-Dichloroethane	ND	2000	740	ug/l	
107-06-2	1,2-Dichloroethane	ND	2000	710	ug/l	
75-35-4	1,1-Dichloroethene	ND	2000	1300	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2000	1100	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2000	1100	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-101613		
Lab Sample ID:	MC25396-3	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	4000	910	ug/l	
142-28-9	1,3-Dichloropropane	ND	10000	1900	ug/l	
594-20-7	2,2-Dichloropropane	ND	10000	2500	ug/l	
563-58-6	1,1-Dichloropropene	ND	10000	1300	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1000	430	ng/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1000	570	ug/l	
123-91-1	1,4-Dioxane	ND	50000	31000	ug/l	
97-63-2	Ethyl methacrylate	ND	10000	1600	ug/l	UJ
100-41-4	Ethylbenzene	ND	2000	750	ug/l	
87-68-3	Hexachlorobutadiene	ND	10000	2500	ug/l	
591-78-6	2-Hexanone	ND	10000	4500	ug/l	
98-82-8	Isopropylbenzene	ND	10000	1300	ug/l	
99-87-6	p-Isopropyltoluene	ND	10000	1100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2000	860	ug/l	UJ
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	10000	2600	ug/l	
74-95-3	Methylene bromide	ND	10000	860	ug/l	
75-09-2	Methylene chloride	ND	4000	810	ug/l	
91-20-3	Naphthalene	ND	10000	1600	ug/l	
103-65-1	n-Propylbenzene	ND	10000	1200	ug/l	
100-42-5	Styrene	ND	10000	980	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2000	910	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1000	840	ug/l	
127-18-4	Tetrachloroethene	ND	2000	1200	ug/l	
108-88-3	Toluene	ND	2000	920	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	10000	1500	ug/l	
120-82-1	1,2,4-Trichlorohenzene	ND	10000	910	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2000	1900	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2000	990	ug/l	
79-01-6	Trichloroethene	ND	2000	900	ug/l	
75-69-4	Tricblorofluoromethane	ND	2000	1200	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	10000	1400	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	10000	930	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	10000	2200	ug/l	
108-05-4	Vinyl Acetate	ND	10000	2600	ug/l	UJ
75-01-4	Vinyl chloride	ND	2000	1200	ug/l	
	m,p-Xylene	ND	2000	1400	ug/l	
95-47-6	o-Xylene	ND	2000	820	ug/l	
1330-20-7	Xylene (total)	ND	2000	820	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-101613		
Lab Sample ID:	MC25396-3	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	83%		70-130%
2037-26-5	Toluene-D8	86%		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:	MW8-ROX-101613		
Lab Sample ID:	MC25396-3	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X00332.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
Run #2							

	Initial Volume	Final Volume
Run #1	930 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	6.6	11	1.2	ug/l	J
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	2.2	11	1.4	ug/l	J
	3&4-Methylphenol	5.2	11	2.2	ug/l	J
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	99.6	5.4	0.55	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.92	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.99	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.70	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.69	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	0.50	2.2	0.17	ug/l	J
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW8-ROX-101613		
Lab Sample ID:	MC25396-3	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.53	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.47	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamiue	ND	5.4	0.87	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.58	ug/l	
110-86-1	Pyridine	ND	11	0.55	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	51%		15-110%
4165-62-2	Phenol-d5	37%		15-110%
118-79-6	2,4,6-Tribromophenol	93%		15-110%
4165-60-0	Nitrobenzene-d5	83%		30-130%
321-60-8	2-Fluorobiphenyl	77%		30-130%
1718-51-0	Terphenyl-d14	98%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-101613		
Lab Sample ID:	MC25396-3	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86593.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223
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	0.21	0.11	0.074	ug/l	
208-96-8	Acenaphthylene	0.089	0.11	0.053	ug/l	J
120-12-7	Anthracene	ND	0.11	0.099	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.034	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	0.41	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	11.7	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	13.6	0.22	0.080	ug/l	
85-01-8	Phenanthrene	0.11	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	85%		30-130%
321-60-8	2-Fluorobiphenyl	79%		30-130%
1718-51-0	Terphenyl-d14	102%		30-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW8-ROX-101613		
Lab Sample ID:	MC25396-3	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB51803.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050
Run #2							

	Initial Volume	Final Volume
Run #1	35.1 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	88%		36-173%
460-00-4	Bromofluorobenzene (S)	90%		36-173%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW8-ROX-101613-DUP		
Lab Sample ID:	MC25396-4	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N81869.D	2000	10/29/13	JB	n/a	n/a	MSN3056
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20000	5600	ug/l	
107-02-8	Acrolein	ND	50000	13000	ug/l	UJ
107-13-1	Acrylonitrile	ND	10000	7000	ug/l	
71-43-2	Benzene	351000	1000	900	ug/l	
108-86-1	Bromobenzene	ND	10000	870	ug/l	
74-97-5	Bromochloromethane	ND	10000	1300	ug/l	
75-27-4	Bromodichloromethane	ND	2000	660	ug/l	
75-25-2	Bromoform	ND	2000	840	ug/l	
74-83-9	Bromomethane	ND	4000	3000	ug/l	
78-93-3	2-Butanone (MEK)	ND	10000	3200	ug/l	
104-51-8	n-Butylbenzene	ND	10000	1100	ug/l	
135-98-8	sec-Butylbenzene	ND	10000	1200	ug/l	
98-06-6	tert-Butylbenzene	ND	10000	1700	ug/l	
75-15-0	Carbon disulfide	ND	10000	1200	ug/l	
56-23-5	Carbon tetrachloride	ND	2000	1200	ug/l	
108-90-7	Chlorobenzene	ND	2000	970	ug/l	
75-00-3	Chloroethane	ND	4000	1700	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	10000	2500	ug/l	
67-66-3	Chloroform	ND	2000	1000	ug/l	
74-87-3	Chloromethane	ND	4000	2900	ug/l	
95-49-8	o-Chlorotoluene	ND	10000	1100	ug/l	
106-43-4	p-Chlorotoluene	ND	10000	950	ug/l	
124-48-1	Dibromochloromethane	ND	2000	660	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2000	690	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2000	600	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2000	530	ug/l	
75-71-8	Dichlorodifluoromethane	ND	4000	2400	ug/l	
75-34-3	1,1-Dichloroethane	ND	2000	740	ug/l	
107-06-2	1,2-Dichloroethane	ND	2000	710	ug/l	
75-35-4	1,1-Dichloroethene	ND	2000	1300	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2000	1100	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2000	1100	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-101613-DUP		
Lab Sample ID:	MC25396-4	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	4000	910	ug/l	
142-28-9	1,3-Dichloropropane	ND	10000	1900	ug/l	
594-20-7	2,2-Dichloropropaue	ND	10000	2500	ug/l	
563-58-6	1,1-Dichloropropene	ND	10000	1300	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1000	430	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1000	570	ug/l	
123-91-1	1,4-Dioxane	ND	50000	31000	ug/l	
97-63-2	Ethyl methacrylate	ND	10000	1600	ug/l	UJ
100-41-4	Ethylbenzene	ND	2000	750	ug/l	
87-68-3	Hexachlorobutadiene	ND	10000	2500	ug/l	
591-78-6	2-Hexanone	ND	10000	4500	ug/l	
98-82-8	Isopropylbenzene	ND	10000	1300	ug/l	
99-87-6	p-Isopropyltoluene	ND	10000	1100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2000	860	ug/l	UJ
108-10-1	4-Methyl-2-pentauone (MIBK)	ND	10000	2600	ug/l	
74-95-3	Methylene bromide	ND	10000	860	ug/l	
75-09-2	Methylene chloride	ND	4000	810	ug/l	
91-20-3	Naphthalene	ND	10000	1600	ug/l	
103-65-1	n-Propylbenzene	ND	10000	1200	ug/l	
100-42-5	Styrene	ND	10000	980	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2000	910	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1000	840	ug/l	
127-18-4	Tetrachloroethene	ND	2000	1200	ug/l	
108-88-3	Toluene	ND	2000	920	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	10000	1500	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	10000	910	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2000	1900	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2000	990	ug/l	
79-01-6	Trichloroethene	ND	2000	900	ug/l	
75-69-4	Trichlorofluoromethane	ND	2000	1200	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	10000	1400	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	10000	930	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	10000	2200	ug/l	
108-05-4	Vinyl Acetate	ND	10000	2600	ug/l	UJ
75-01-4	Vinyl chloride	ND	2000	1200	ug/l	
	m,p-Xylene	ND	2000	1400	ug/l	
95-47-6	o-Xylene	ND	2000	820	ug/l	
1330-20-7	Xylene (total)	ND	2000	820	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-101613-DUP		
Lab Sample ID:	MC25396-4	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	82%		70-130%
2037-26-5	Toluene-D8	86%		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:	MW8-ROX-101613-DUP		
Lab Sample ID:	MC25396-4	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X00333.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
Run #2							

	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	12	1.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.9	0.45	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	12	0.58	ug/l	
120-83-2	2,4-Dichlorophenol	ND	12	0.39	ug/l	
105-67-9	2,4-Dimethylphenol	6.2	12	1.3	ug/l	J
51-28-5	2,4-Dinitrophenol	ND	24	2.9	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	12	1.4	ug/l	
95-48-7	2-Methylphenol	1.9	12	1.5	ug/l	J
	3&4-Methylphenol	4.6	12	2.4	ug/l	J
88-75-5	2-Nitrophenol	ND	12	0.59	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.69	ug/l	
87-86-5	Pentachlorophenol	ND	12	1.5	ug/l	
108-95-2	Phenol	108	5.9	0.60	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	12	0.67	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	12	0.37	ug/l	
62-53-3	Aniline	ND	12	0.75	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.9	0.24	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.9	1.0	ug/l	
100-51-6	Benzyl Alcohol	ND	12	0.68	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.9	1.1	ug/l	
106-47-8	4-Chloroaniline	ND	12	0.29	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.9	0.25	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.9	0.27	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.9	0.16	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.9	0.23	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.9	0.77	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	12	0.79	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	12	0.75	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.9	0.59	ug/l	
132-64-9	Dibenzofuran	0.40	2.4	0.18	ug/l	J
84-74-2	Di-n-butyl phthalate	ND	5.9	0.46	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.9	0.51	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-101613-DUP		
Lab Sample ID:	MC25396-4	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.9	0.59	ug/l	
131-11-3	Dimethyl phthalate	ND	5.9	0.59	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.4	0.57	ug/l	
118-74-1	Hexachlorobenzene	ND	5.9	0.35	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	2.9	ug/l	
67-72-1	Hexachloroethane	ND	5.9	0.52	ng/l	
78-59-1	Isophorone	ND	5.9	0.24	ug/l	
88-74-4	2-Nitroaniline	ND	12	0.33	ug/l	
99-09-2	3-Nitroaniline	ND	12	0.59	ug/l	
100-01-6	4-Nitroaniline	ND	12	5.1	ug/l	
98-95-3	Nitrobenzene	ND	5.9	0.29	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.9	0.59	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.9	0.95	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.9	0.64	ug/l	
110-86-1	Pyridine	ND	12	0.61	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		15-110%
4165-62-2	Phenol-d5	35%		15-110%
118-79-6	2,4,6-Tribromophenol	85%		15-110%
4165-60-0	Nitrobenzene-d5	77%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	90%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW8-ROX-101613-DUP		
Lab Sample ID:	MC25396-4	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86594.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223
Run #2							

	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.20	0.12	0.081	ug/l	
208-96-8	Acenaphthylene	0.058	0.12	0.058	ug/l	J
120-12-7	Anthracene	ND	0.12	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.059	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.12	0.034	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.059	0.037	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.12	0.032	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.12	0.045	ug/l	
218-01-9	Chrysene	ND	0.12	0.028	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.12	0.038	ug/l	
206-44-0	Fluoranthene	ND	0.12	0.048	ug/l	
86-73-7	Fluorene	0.37	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	10.8	0.24	0.059	ug/l	
91-57-6	2-Methylnaphthalene	12.8	0.24	0.087	ug/l	
85-01-8	Phenanthrene	0.097	0.059	0.015	ug/l	
129-00-0	Pyrene	ND	0.12	0.045	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	79%		30-130%
321-60-8	2-Fluorobiphenyl	69%		30-130%
1718-51-0	Terphenyl-d14	92%		30-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW8-ROX-101613-DUP		
Lab Sample ID:	MC25396-4	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB51804.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050
Run #2							

	Initial Volume	Final Volume
Run #1	35.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	82%		36-173%
460-00-4	Bromofluorobenzene (S)	83%		36-173%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93B-ROX-101613		
Lab Sample ID:	MC25396-5	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Ceotral Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N81870.D	2000	10/29/13	JB	n/a	n/a	MSN3056
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20000	5600	ug/l	
107-02-8	Acrolein	ND	50000	13000	ug/l	UJ
107-13-1	Acrylonitrile	ND	10000	7000	ug/l	
71-43-2	Benzene	187000	1000	900	ug/l	
108-86-1	Bromobenzene	ND	10000	870	ug/l	
74-97-5	Bromochloromethane	ND	10000	1300	ug/l	
75-27-4	Bromodichloromethane	ND	2000	660	ug/l	
75-25-2	Bromoform	ND	2000	840	ug/l	
74-83-9	Bromomethane	ND	4000	3000	ug/l	
78-93-3	2-Butanone (MEK)	ND	10000	3200	ug/l	
104-51-8	n-Butylbenzene	ND	10000	1100	ug/l	
135-98-8	sec-Butylbenzene	ND	10000	1200	ug/l	
98-06-6	tert-Butylbenzene	ND	10000	1700	ug/l	
75-15-0	Carbon disulfide	ND	10000	1200	ug/l	
56-23-5	Carbon tetrachloride	ND	2000	1200	ug/l	
108-90-7	Chlorobenzene	ND	2000	970	ug/l	
75-00-3	Chloroethane	ND	4000	1700	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	10000	2500	ug/l	
67-66-3	Chloroform	ND	2000	1000	ug/l	
74-87-3	Chloromethane	ND	4000	2900	ug/l	
95-49-8	o-Chlorotoluene	ND	10000	1100	ug/l	
106-43-4	p-Chlorotoluene	ND	10000	950	ug/l	
124-48-1	Dibromochloromethane	ND	2000	660	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2000	690	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2000	600	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2000	530	ug/l	
75-71-8	Dichlorodifluoromethane	ND	4000	2400	ug/l	
75-34-3	1,1-Dichloroethane	ND	2000	740	ug/l	
107-06-2	1,2-Dichloroethane	ND	2000	710	ug/l	
75-35-4	1,1-Dichloroetheue	ND	2000	1300	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2000	1100	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2000	1100	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-101613		
Lab Sample ID:	MC25396-5	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	4000	910	ug/l	
142-28-9	1,3-Dichloropropane	ND	10000	1900	ug/l	
594-20-7	2,2-Dichloropropane	ND	10000	2500	ug/l	
563-58-6	1,1-Dichloropropene	ND	10000	1300	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1000	430	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1000	570	ug/l	
123-91-1	1,4-Dioxane	ND	50000	31000	ug/l	
97-63-2	Ethyl methacrylate	ND	10000	1600	ug/l	UJ
100-41-4	Ethylbenzene	ND	2000	750	ug/l	
87-68-3	Hexachlorobutadiene	ND	10000	2500	ug/l	
591-78-6	2-Hexanone	ND	10000	4500	ug/l	
98-82-8	Isopropylbenzene	ND	10000	1300	ug/l	
99-87-6	p-Isopropyltoluene	ND	10000	1100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2000	860	ug/l	UJ
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	10000	2600	ug/l	
74-95-3	Methylene bromide	ND	10000	860	ug/l	
75-09-2	Methylene chloride	ND	4000	810	ug/l	
91-20-3	Naphthalene	ND	10000	1600	ug/l	
103-65-1	n-Propylbenzene	ND	10000	1200	ug/l	
100-42-5	Styrene	ND	10000	980	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2000	910	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1000	840	ug/l	
127-18-4	Tetrachloroethene	ND	2000	1200	ug/l	
108-88-3	Toluene	ND	2000	920	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	10000	1500	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	10000	910	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2000	1900	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2000	990	ug/l	
79-01-6	Trichloroethene	ND	2000	900	ug/l	
75-69-4	Trichlorofluoromethane	ND	2000	1200	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	10000	1400	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	10000	930	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	10000	2200	ug/l	
108-05-4	Vinyl Acetate	ND	10000	2600	ug/l	UJ
75-01-4	Vinyl chloride	ND	2000	1200	ug/l	
	m,p-Xylene	ND	2000	1400	ug/l	
95-47-6	o-Xylene	ND	2000	820	ug/l	
1330-20-7	Xylene (total)	ND	2000	820	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-101613		
Lab Sample ID:	MC25396-5	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	82%		70-130%
2037-26-5	Toluene-D8	86%		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 presomptive evidence of a compound

Report of Analysis

Client Sample ID:	P93B-ROX-101613		
Lab Sample ID:	MC25396-5	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X00334.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	69.0	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ng/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.39	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-101613		
Lab Sample ID:	MC25396-5	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl pbthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		15-110%
4165-62-2	Phenol-d5	32%		15-110%
118-79-6	2,4,6-Tribromophenol	93%		15-110%
4165-60-0	Nitrobenzene-d5	80%		30-130%
321-60-8	2-Fluorobiphenyl	73%		30-130%
1718-51-0	Terphenyl-d14	95%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93B-ROX-101613		
Lab Sample ID:	MC25396-5	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86595.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223
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	0.065	0.10	0.050	ug/l	J
120-12-7	Antbracene	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	Diheuzo(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	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	82%		30-130%
321-60-8	2-Fluorobiphenyl	73%		30-130%
1718-51-0	Terphenyl-d14	98%		30-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93B-ROX-101613		
Lab Sample ID:	MC25396-5	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB51806.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050
Run #2							

	Initial Volume	Final Volume
Run #1	35.2 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	77%		36-173%
460-00-4	Bromofluorobenzene (S)	81%		36-173%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93B-ROX-101613-DUP		
Lab Sample ID:	MC25396-6	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N81871.D	2000	10/29/13	JB	n/a	n/a	MSN3056
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20000	5600	ug/l	
107-02-8	Acrolein	ND	50000	13000	ug/l	UJ
107-13-1	Acrylonitrile	ND	10000	7000	ug/l	
71-43-2	Benzene	180000	1000	900	ug/l	
108-86-1	Bromobenzene	ND	10000	870	ug/l	
74-97-5	Bromochloromethane	ND	10000	1300	ug/l	
75-27-4	Bromodichloromethane	ND	2000	660	ug/l	
75-25-2	Bromoform	ND	2000	840	ug/l	
74-83-9	Bromomethane	ND	4000	3000	ug/l	
78-93-3	2-Butanone (MEK)	ND	10000	3200	ug/l	
104-51-8	n-Butylbenzene	ND	10000	1100	ug/l	
135-98-8	sec-Butylbenzene	ND	10000	1200	ug/l	
98-06-6	tert-Bntylbenzene	ND	10000	1700	ug/l	
75-15-0	Carbon disulfide	ND	10000	1200	ug/l	
56-23-5	Carbon tetrachloride	ND	2000	1200	ug/l	
108-90-7	Chlorobenzene	ND	2000	970	ug/l	
75-00-3	Chloroethane	ND	4000	1700	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	10000	2500	ug/l	
67-66-3	Chloroform	ND	2000	1000	ug/l	
74-87-3	Chloromethane	ND	4000	2900	ug/l	
95-49-8	o-Chlorotoluene	ND	10000	1100	ug/l	
106-43-4	p-Chlorotoluene	ND	10000	950	ug/l	
124-48-1	Dibromochloromethane	ND	2000	660	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2000	690	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2000	600	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2000	530	ug/l	
75-71-8	Dichlorodifluoromethane	ND	4000	2400	ug/l	
75-34-3	1,1-Dichloroethane	ND	2000	740	ug/l	
107-06-2	1,2-Dichloroethane	ND	2000	710	ug/l	
75-35-4	1,1-Dichloroethene	ND	2000	1300	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2000	1100	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2000	1100	ng/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93B-ROX-101613-DUP		
Lab Sample ID:	MC25396-6	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	4000	910	ug/l	
142-28-9	1,3-Dichloropropane	ND	10000	1900	ug/l	
594-20-7	2,2-Dichloropropane	ND	10000	2500	ug/l	
563-58-6	1,1-Dichloropropene	ND	10000	1300	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1000	430	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1000	570	ug/l	
123-91-1	1,4-Dioxane	ND	50000	31000	ug/l	
97-63-2	Ethyl methacrylate	ND	10000	1600	ug/l	UJ
100-41-4	Ethylbenzene	ND	2000	750	ug/l	
87-68-3	Hexachlorobutadiene	ND	10000	2500	ug/l	
591-78-6	2-Hexanone	ND	10000	4500	ug/l	
98-82-8	Isopropylbenzene	ND	10000	1300	ug/l	
99-87-6	p-Isopropyltoluene	ND	10000	1100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2000	860	ug/l	UJ
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	10000	2600	ug/l	
74-95-3	Methylene bromide	ND	10000	860	ug/l	
75-09-2	Methylene chloride	ND	4000	810	ug/l	
91-20-3	Naphthalene	ND	10000	1600	ug/l	
103-65-1	n-Propylbenzene	ND	10000	1200	ug/l	
100-42-5	Styrene	ND	10000	980	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2000	910	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1000	840	ug/l	
127-18-4	Tetrachloroethene	ND	2000	1200	ug/l	
108-88-3	Toluene	ND	2000	920	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	10000	1500	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	10000	910	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2000	1900	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2000	990	ug/l	
79-01-6	Trichloroethene	ND	2000	900	ug/l	
75-69-4	Trichlorofluoromethane	ND	2000	1200	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	10000	1400	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	10000	930	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	10000	2200	ug/l	
108-05-4	Vinyl Acetate	ND	10000	2600	ug/l	UJ
75-01-4	Vinyl chloride	ND	2000	1200	ug/l	
	m,p-Xylene	ND	2000	1400	ug/l	
95-47-6	o-Xylene	ND	2000	820	ug/l	
1330-20-7	Xylene (total)	ND	2000	820	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-101613-DUP		
Lab Sample ID:	MC25396-6	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	82%		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:	P93B-ROX-101613-DUP		
Lab Sample ID:	MC25396-6	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X00335.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.1	0.39	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.50	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.51	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.60	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	82.0	5.1	0.52	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.58	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.65	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.1	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.1	0.87	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.59	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.1	0.94	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.1	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.1	0.67	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.69	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.65	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.1	0.51	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.1	0.40	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.1	0.44	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-101613-DUP		
Lab Sample ID:	MC25396-6	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.1	0.51	ug/l	
131-11-3	Dimethyl phthalate	ND	5.1	0.51	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.50	ug/l	
118-74-1	Hexachlorobenzene	ND	5.1	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.6	ug/l	
67-72-1	Hexachloroethane	ND	5.1	0.45	ug/l	
78-59-1	Isophorone	ND	5.1	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.51	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.4	ug/l	
98-95-3	Nitrobenzene	ND	5.1	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.1	0.51	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	0.82	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	0.55	ug/l	
110-86-1	Pyridine	ND	10	0.53	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	40%		15-110%
4165-62-2	Phenol-d5	28%		15-110%
118-79-6	2,4,6-Tribromophenol	87%		15-110%
4165-60-0	Nitrobenzene-d5	77%		30-130%
321-60-8	2-Fluorobiphenyl	69%		30-130%
1718-51-0	Terphenyl-d14	96%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93B-ROX-101613-DUP		
Lab Sample ID:	MC25396-6	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86596.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.070	ug/l	
208-96-8	Acenaphthylene	0.091	0.10	0.051	ug/l	J
120-12-7	Anthracene	ND	0.10	0.094	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.051	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.051	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.033	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.20	0.051	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.076	ug/l	
85-01-8	Phenanthrene	ND	0.051	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.039	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	80%		30-130%
321-60-8	2-Fluorobiphenyl	69%		30-130%
1718-51-0	Terphenyl-d14	99%		30-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibratiou range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93B-ROX-101613-DUP		
Lab Sample ID:	MC25396-6	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB51807.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050
Run #2							

	Initial Volume	Final Volume
Run #1	35.9 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	73%		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

Report of Analysis

Client Sample ID:	P93C-ROX-101613		
Lab Sample ID:	MC25396-7	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N81857.D	1	10/29/13	JB	n/a	n/a	MSN3056
Run #2	N81872.D	100	10/29/13	JB	n/a	n/a	MSN3056

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	UJ
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	1400 [a]	50	45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ng/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration rauge
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93C-ROX-101613		
Lab Sample ID:	MC25396-7	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ng/l	
594-20-7	2,2-Dicbloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	UJ
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ng/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ng/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltolnene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3.5	1.0	0.43	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Tricblorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	UJ
75-01-4	Viuyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93C-ROX-101613		
Lab Sample ID:	MC25396-7	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%	81%	70-130%
2037-26-5	Toluene-D8	79%	88%	70-130%
460-00-4	4-Bromofluorobenzene	103%	105%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93C-ROX-101613		
Lab Sample ID:	MC25396-7	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X00336.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.1	0.39	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.50	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.51	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.60	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	5.0	5.1	0.52	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND	10	0.58	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.65	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.1	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.1	0.87	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.59	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.1	0.94	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.1	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.1	0.67	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.69	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.65	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.1	0.51	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.1	0.40	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.1	0.44	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-101613		
Lab Sample ID:	MC25396-7	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.1	0.51	ug/l	
131-11-3	Dimethyl phthalate	ND	5.1	0.51	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.50	ug/l	
118-74-1	Hexachlorobenzene	ND	5.1	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.6	ug/l	
67-72-1	Hexachloroethane	ND	5.1	0.45	ug/l	
78-59-1	Isophorone	ND	5.1	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.51	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.4	ug/l	
98-95-3	Nitrobenzene	ND	5.1	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.1	0.51	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	0.82	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	0.55	ug/l	
110-86-1	Pyridine	ND	10	0.53	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	32%		15-110%
4165-62-2	Phenol-d5	23%		15-110%
118-79-6	2,4,6-Tribromophenol	74%		15-110%
4165-60-0	Nitrobenzene-d5	81%		30-130%
321-60-8	2-Fluorobiphenyl	72%		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:	P93C-ROX-101613		
Lab Sample ID:	MC25396-7	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86597.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.070	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.051	ug/l	
120-12-7	Anthracene	ND	0.10	0.094	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.051	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.051	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ng/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.033	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.20	0.051	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.076	ug/l	
85-01-8	Phenanthrene	ND	0.051	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.039	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	84%		30-130%
321-60-8	2-Fluorobiphenyl	73%		30-130%
1718-51-0	Terphenyl-d14	97%		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-101613		
Lab Sample ID:	MC25396-7	Date Sampled:	10/16/13
Matrix:	AQ - Ground Water	Date Received:	10/17/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB51808.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050
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	0.0051	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	77%		36-173%
460-00-4	Bromofluorobenzene (S)	79%		36-173%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Iudicates 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-101613-HCL		
Lab Sample ID:	MC25396-8	Date Sampled:	10/16/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 Sonth Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N81856.D	1	10/29/13	JB	n/a	n/a	MSN3056
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ng/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-101613-HCL		
Lab Sample ID:	MC25396-8	Date Sampled:	10/16/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ng/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-101613-HCL		
Lab Sample ID:	MC25396-8	Date Sampled:	10/16/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/17/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	83%		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	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates valne exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-101613-ST		
Lab Sample ID:	MC25396-9	Date Sampled:	10/16/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/17/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB51809.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	72%		36-173%
460-00-4	Bromofluorobenzene (S)	78%		36-173%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blauk
N = Indicates presumptive evidence of a compound

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

LAB (LOCATION)
☐ XENCO (_____)
☐ CALSCIENCE (_____)
☑ OTHER (Accutest Labs, 495 Technology Ctr W Marlborough, MA 01752 (508-481-6200))
☐ SPL (_____)
Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:
☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SOHIO ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Baman
PO #
INCIDENT # (ENV SERVICES): 9 7 2 1 6 4 0
SAP #: 3 4 0 0 6 1
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 10/16/13
PAGE: 1 of 1

COMPANY: URS CORPORATION
ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110
PROJECT CONTACT (Reports to Perform): Elizabeth Kunkel, Wendy Pennington, Bob Baman
TELEPHONE: 314-429-0100 FAX: 314-429-0462
e-mail: (liz.kunkel@urs.com; elizabeth.kunkel@urs.com; wendy.pennington@urs.com)
SITE ADDRESS: 900 South Central Ave, ROXANA IL
CONSULTANT PROJECT NO: Roxana Quarterly GW / 21662860.03004
SAMPLER(S): J. Rothrock, B. Eshan, C. Ketzer, C. Williams
LAB USE ONLY: mc25396

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED (SURCHARGE)
☐ LA - ENVIRO 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 EDD2 DISK

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	FIELD NOTES / Container PID Readings or Laboratory Notes
-1	MW4-ROX-101613	10/16/13	0935	Water				2	2	6	X	X	X	X	0	
-2	MW7-ROX-101613		1040								X	X	X	X		
-3	MW8-ROX-101613		1145								X	X	X	X		
-4	MW8-ROX-101613-DUP		1145								X	X	X	X		
-5	P93B-ROX-101613		1055								X	X	X	X		
-6	P93B-ROX-101613-DUP		1055								X	X	X	X		
-7	P93C-ROX-101613		1220					↓	↓	↓	X	X	X	X		
-8	TB-ROX-101613-HCL		0000		↓					2	X					4M3, 19B
-9	TB-ROX-101613-ST	↓	0000	↓					2	2		X			↓	

Relinquished by (Signature): Linda Rothrock — Received by (Signature): FED EX — Date: 10/16/13 — Time: 1700
Relinquished by (Signature): FEDX — Received by (Signature): Wayne Moore — Date: 10-17-13 — Time: 1000
Relinquished by (Signature): — Received by (Signature): — Date: — Time:

2.1-2.5°C

5.1
5

MC25396: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC25396 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 10/17/2013 **Delivery Method:** **Client Service Action Required at Login:** No

Project: 900 SOUTH CENTRAL AVE **No. Coolers:** 2 **Airbill #'s:**

Cooler Security	Y or N		Y or N
1. Custody Seals Present:	☑ ☐	3. COC Present:	☑ ☐
2. Custody Seals Intact:	☑ ☐	4. Smpl Dates/Time OK	☑ ☐

Cooler Temperature	Y or N
1. Temp criteria achieved:	☑ ☐
2. Cooler temp verification:	Infared gun
3. Cooler media:	Ice (bag)

Quality Control Preservation	Y or N	N/A
1. Trip Blank present / cooler:	☑ ☐	☐
2. Trip Blank listed on COC:	☑ ☐	☐
3. Samples preserved properly:	☑ ☐	
4. VOCs headspace free:	☑ ☐	☐

Sample Integrity - Documentation	Y or N
1. Sample labels present on bottles:	☑ ☐
2. Container labeling complete:	☑ ☐
3. Sample container label / COC agree:	☑ ☐

Sample Integrity - Condition	Y or N
1. Sample recvd within HT:	☑ ☐
2. All containers accounted for:	☑ ☐
3. Condition of sample:	Intact

Sample Integrity - Instructions	Y or N	N/A
1. Analysis requested is clear:	☑ ☐	
2. Bottles received for unspecified tests	☐ ☑	
3. Sufficient volume recvd for analysis:	☑ ☐	
4. Compositing instructions clear:	☐ ☐	☑
5. Filtering instructions clear:	☐ ☐	☑

Comments

5.1

5

MC25396: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC25396

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC25396-1 Collected: 16-OCT-13 09:35 By: LRBL Received: 17-OCT-13 By: MW4-ROX-101613						
MC25396-1	SW846 8011	22-OCT-13 18:33	CZ	22-OCT-13	MR	V8011SL
MC25396-1	SW846 8270C BY SIM	23-OCT-13 12:49	WK	18-OCT-13	PA	B8270SIMSL
MC25396-1	SW846 8270C	24-OCT-13 16:44	KR	18-OCT-13	PA	AB8270SL+
MC25396-1	SW846 8260B	29-OCT-13 13:33	JB			V8260SL+
MC25396-1	SW846 8270C	31-OCT-13 18:36	WK	28-OCT-13	AJ	AB8270SL+
MC25396-2 Collected: 16-OCT-13 10:40 By: LRBL Received: 17-OCT-13 By: MW7-ROX-101613						
MC25396-2	SW846 8011	22-OCT-13 19:02	CZ	22-OCT-13	MR	V8011SL
MC25396-2	SW846 8270C BY SIM	23-OCT-13 13:13	WK	18-OCT-13	PA	B8270SIMSL
MC25396-2	SW846 8270C	24-OCT-13 17:05	KR	18-OCT-13	PA	AB8270SL+
MC25396-2	SW846 8260B	29-OCT-13 17:43	JB			V8260SL+
MC25396-3 Collected: 16-OCT-13 11:45 By: LRBL Received: 17-OCT-13 By: MW8-ROX-101613						
MC25396-3	SW846 8011	22-OCT-13 19:31	CZ	22-OCT-13	MR	V8011SL
MC25396-3	SW846 8270C BY SIM	23-OCT-13 13:37	WK	18-OCT-13	PA	B8270SIMSL
MC25396-3	SW846 8270C	24-OCT-13 17:27	KR	18-OCT-13	PA	AB8270SL+
MC25396-3	SW846 8260B	29-OCT-13 18:11	JB			V8260SL+
MC25396-4 Collected: 16-OCT-13 11:45 By: LRBL Received: 17-OCT-13 By: MW8-ROX-101613-DUP						
MC25396-4	SW846 8011	22-OCT-13 19:59	CZ	22-OCT-13	MR	V8011SL
MC25396-4	SW846 8270C BY SIM	23-OCT-13 14:00	WK	18-OCT-13	PA	B8270SIMSL
MC25396-4	SW846 8270C	24-OCT-13 17:49	KR	18-OCT-13	PA	AB8270SL+
MC25396-4	SW846 8260B	29-OCT-13 18:38	JB			V8260SL+
MC25396-5 Collected: 16-OCT-13 10:55 By: LRBL Received: 17-OCT-13 By: P93B-ROX-101613						
MC25396-5	SW846 8011	22-OCT-13 20:56	CZ	22-OCT-13	MR	V8011SL
MC25396-5	SW846 8270C BY SIM	23-OCT-13 14:24	WK	18-OCT-13	PA	B8270SIMSL
MC25396-5	SW846 8270C	24-OCT-13 18:10	KR	18-OCT-13	PA	AB8270SL+
MC25396-5	SW846 8260B	29-OCT-13 19:06	JB			V8260SL+

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC25396

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC25396-6 Collected: 16-OCT-13 10:55 By: LRBL Received: 17-OCT-13 By: P93B-ROX-101613-DUP						
MC25396-6	SW846 8011	22-OCT-13 21:25	CZ	22-OCT-13	MR	V8011SL
MC25396-6	SW846 8270C BY SIM	23-OCT-13 14:48	WK	18-OCT-13	PA	B8270SIMSL
MC25396-6	SW846 8270C	24-OCT-13 18:32	KR	18-OCT-13	PA	AB8270SL+
MC25396-6	SW846 8260B	29-OCT-13 19:34	JB			V8260SL+
MC25396-7 Collected: 16-OCT-13 12:20 By: LRBL Received: 17-OCT-13 By: P93C-ROX-101613						
MC25396-7	SW846 8011	22-OCT-13 21:53	CZ	22-OCT-13	MR	V8011SL
MC25396-7	SW846 8270C BY SIM	23-OCT-13 15:11	WK	18-OCT-13	PA	B8270SIMSL
MC25396-7	SW846 8270C	24-OCT-13 18:53	KR	18-OCT-13	PA	AB8270SL+
MC25396-7	SW846 8260B	29-OCT-13 13:06	JB			V8260SL+
MC25396-7	SW846 8260B	29-OCT-13 20:01	JB			V8260SL+
MC25396-8 Collected: 16-OCT-13 00:00 By: LRBL Received: 17-OCT-13 By: TB-ROX-101613-HCL						
MC25396-8	SW846 8260B	29-OCT-13 12:38	JB			V8260SL+
MC25396-9 Collected: 16-OCT-13 00:00 By: LRBL Received: 17-OCT-13 By: TB-ROX-101613-ST						
MC25396-9	SW846 8011	22-OCT-13 22:22	CZ	22-OCT-13	MR	V8011SL

Accutest Internal Chain of Custody

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Received: 10/17/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC25396-1.1	Walk Iu Ref #22	Thomas Abruzzise	10/28/13 14:29	Retrieve from Storage
MC25396-1.2	Walk In Ref #22	Thomas Abruzzise	10/18/13 15:08	Retrieve from Storage
MC25396-1.3	VOC Ref #4	Krysten Dufort	10/28/13 15:40	Retrieve from Storage
MC25396-1.3	Krysten Dufort	GCMSP	10/28/13 15:40	Load on Instrument
MC25396-1.3	GCMSP	Krysten Dufort	10/29/13 09:51	Unload from Instrument
MC25396-1.3	Krysten Dufort	VOC Ref #4	10/29/13 09:51	Return to Storage
MC25396-1.4	VOC Ref #4	Jaclyn Bergeron	10/29/13 10:59	Retrieve from Storage
MC25396-1.4	Jaclyn Bergeron	GCMSN	10/29/13 10:59	Load on Instrument
MC25396-1.4	GCMSN	Jaclyu Bergeron	10/31/13 10:26	Unload from Instrument
MC25396-1.4	Jaclyn Bergeron	VOC Ref #4	10/31/13 10:27	Return to Storage
MC25396-1.5	VOC Ref #4	Michael Rolo	10/22/13 07:15	Retrieve from Storage
MC25396-1.5	Michael Rolo		10/23/13 10:44	Depleted
MC25396-2.1	Walk In Ref #22	Thomas Abruzzise	10/18/13 15:08	Retrieve from Storage
MC25396-2.3	VOC Ref #4	Jaclyu Bergeron	10/29/13 10:59	Retrieve from Storage
MC25396-2.3	Jaclyn Bergeron	GCMSN	10/29/13 10:59	Load on Instrument
MC25396-2.3	GCMSN	Jaclyn Bergeron	10/31/13 10:26	Unload from Instrument
MC25396-2.3	Jaclyn Bergeron	VOC Ref #4	10/31/13 10:27	Return to Storage
MC25396-2.4	VOC Ref #4	Krysteu Dnfort	10/28/13 15:40	Retrieve from Storage
MC25396-2.4	Krysten Dufort	GCMSP	10/28/13 15:40	Load on Instrument
MC25396-2.4	GCMSP	Krysten Dufort	10/29/13 09:51	Unload from Instrument
MC25396-2.4	Krysten Dufort	VOC Ref #4	10/29/13 09:51	Return to Storage
MC25396-2.6	VOC Ref #4	Michael Rolo	10/22/13 07:15	Retrieve from Storage
MC25396-2.6	Michael Rolo		10/23/13 10:44	Depleted
MC25396-3.2	Walk In Ref #5	Hamid Siamak	10/18/13 13:25	Retrieve from Storage
MC25396-3.2	Hamid Siamak	Walk In Ref #5	10/18/13 16:57	Return to Storage
MC25396-3.3	VOC Ref #4	Jaclyn Bergeron	10/29/13 10:59	Retrieve from Storage
MC25396-3.3	Jaclyn Bergeron	GCMSN	10/29/13 10:59	Load on Instrument
MC25396-3.3	GCMSN	Jaclyn Bergeron	10/31/13 10:26	Unload from Instrument
MC25396-3.3	Jaclyn Bergeron	VOC Ref #4	10/31/13 10:27	Return to Storage
MC25396-3.4	VOC Ref #4	Krysten Dufort	10/28/13 15:40	Retrieve from Storage
MC25396-3.4	Krysten Dufort	GCMSP	10/28/13 15:40	Load on Instrument
MC25396-3.4	GCMSP	Krysten Dufort	10/29/13 09:51	Unload from Instrument
MC25396-3.4	Krysten Dufort	VOC Ref #4	10/29/13 09:51	Return to Storage

Accutest Internal Chain of Custody

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Received: 10/17/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC25396-3.5	VOC Ref #4	Michael Rolo	10/22/13 07:15	Retrieve from Storage
MC25396-3.5	Michael Rolo		10/23/13 10:44	Depleted
MC25396-4.2	Walk In Ref #22	Thomas Abruzzise	10/18/13 15:08	Retrieve from Storage
MC25396-4.3	VOC Ref #4	Jaclyn Bergeron	10/29/13 10:59	Retrieve from Storage
MC25396-4.3	Jaclyn Bergeron	GCMSN	10/29/13 10:59	Load on Instrument
MC25396-4.3	GCMSN	Jaclyn Bergeron	10/31/13 10:26	Unload from Instrument
MC25396-4.3	Jaclyn Bergeron	VOC Ref #4	10/31/13 10:27	Return to Storage
MC25396-4.4	VOC Ref #4	Krysten Dufort	10/28/13 15:40	Retrieve from Storage
MC25396-4.4	Krysten Dufort	GCMSP	10/28/13 15:40	Load on Instrument
MC25396-4.4	GCMSP	Krysten Dufort	10/29/13 09:51	Unload from Instrument
MC25396-4.4	Krysten Dufort	VOC Ref #4	10/29/13 09:51	Return to Storage
MC25396-4.6	VOC Ref #4	Michael Rolo	10/22/13 07:15	Retrieve from Storage
MC25396-4.6	Michael Rolo	VOC Ref #4	10/22/13 08:27	Return to Storage
MC25396-5.1	Walk In Ref #22	Thomas Abruzzise	10/18/13 15:08	Retrieve from Storage
MC25396-5.3	VOC Ref #4	Krysten Dufort	10/28/13 15:40	Retrieve from Storage
MC25396-5.3	Krysten Dufort	GCMSP	10/28/13 15:40	Load on Instrument
MC25396-5.3	GCMSP	Krysten Dufort	10/29/13 09:51	Unload from Instrument
MC25396-5.3	Krysten Dufort	VOC Ref #4	10/29/13 09:51	Return to Storage
MC25396-5.4	VOC Ref #4	Jaclyn Bergeron	10/29/13 10:59	Retrieve from Storage
MC25396-5.4	Jaclyn Bergeron	GCMSN	10/29/13 10:59	Load on Instrument
MC25396-5.4	GCMSN	Jaclyn Bergeron	10/31/13 10:26	Unload from Instrument
MC25396-5.4	Jaclyn Bergeron	VOC Ref #4	10/31/13 10:27	Return to Storage
MC25396-5.5	VOC Ref #4	Michael Rolo	10/22/13 07:15	Retrieve from Storage
MC25396-5.5	Michael Rolo		10/23/13 10:44	Depleted
MC25396-6.1	Walk In Ref #22	Thomas Abruzzise	10/18/13 15:08	Retrieve from Storage
MC25396-6.3	VOC Ref #4	Jaclyn Bergeron	10/29/13 10:59	Retrieve from Storage
MC25396-6.3	Jaclyn Bergeron	GCMSN	10/29/13 10:59	Load on Instrument
MC25396-6.3	GCMSN	Jaclyn Bergeron	10/31/13 10:26	Unload from Instrument
MC25396-6.3	Jaclyn Bergeron	VOC Ref #4	10/31/13 10:27	Return to Storage
MC25396-6.4	VOC Ref #4	Krysten Dufort	10/28/13 15:40	Retrieve from Storage
MC25396-6.4	Krysten Dufort	GCMSP	10/28/13 15:40	Load on Instrument
MC25396-6.4	GCMSP	Krysten Dufort	10/29/13 09:51	Unload from Instrument

Accutest Internal Chain of Custody

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Received: 10/17/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC25396-6.4	Krysten Dufort	VOC Ref #4	10/29/13 09:51	Return to Storage
MC25396-6.6	VOC Ref #4	Michael Rolo	10/22/13 07:15	Retrieve from Storage
MC25396-6.6	Michael Rolo		10/23/13 10:44	Depleted
MC25396-7.1	Walk In Ref #22	Thomas Abruzzise	10/18/13 15:08	Retrieve from Storage
MC25396-7.3	VOC Ref #4	Krysten Dufort	10/28/13 15:40	Retrieve from Storage
MC25396-7.3	Krysteu Dufort	GCMSP	10/28/13 15:40	Load on Instrument
MC25396-7.3	GCMSP	Krysten Dufort	10/29/13 09:51	Unload from Instrument
MC25396-7.3	Krysten Dufort	VOC Ref #4	10/29/13 09:51	Return to Storage
MC25396-7.4	VOC Ref #4	Jaclyn Bergeron	10/29/13 10:59	Retrieve from Storage
MC25396-7.4	Jaclyn Bergeron	GCMSN	10/29/13 10:59	Load on Instrument
MC25396-7.4	GCMSN	Jaclyn Bergeron	10/31/13 10:26	Unload from Iustrument
MC25396-7.4	Jaclyn Bergeron	VOC Ref #4	10/31/13 10:27	Return to Storage
MC25396-7.5	VOC Ref #4	Michael Rolo	10/22/13 07:15	Retrieve from Storage
MC25396-7.5	Michael Rolo		10/23/13 10:44	Depleted
MC25396-8.1	VOC Ref #4	Jaclyn Bergeron	10/29/13 10:59	Retrieve from Storage
MC25396-8.1	Jaclyn Bergeron	GCMSN	10/29/13 10:59	Load on Instrument
MC25396-8.1	GCMSN	Jaclyn Bergeron	10/31/13 10:26	Unload from Instrumeut
MC25396-8.1	Jaclyn Bergeron	VOC Ref #4	10/31/13 10:27	Return to Storage
MC25396-9.2	VOC Ref #4	Michael Rolo	10/22/13 07:15	Retrieve from Storage
MC25396-9.2	Michael Rolo		10/23/13 10:44	Depleted

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Snrrogate Recovery Summaries

Method Blank Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3056-MB	N81850.D	1	10/29/13	JB	n/a	n/a	MSN3056

The QC reported here applies to the following samples: Method: SW846 8260B

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7, MC25396-8

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3056-MB	N81850.D	1	10/29/13	JB	n/a	n/a	MSN3056

The QC reported here applies to the following samples: Method: SW846 8260B

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7, MC25396-8

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ng/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3056-MB	N81850.D	1	10/29/13	JB	n/a	n/a	MSN3056

The QC reported here applies to the following samples: Method: SW846 8260B

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7, MC25396-8

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	83%	70-130%
2037-26-5	Toluene-D8	88%	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	

Blank Spike Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3056-BS	N81848.D	1	10/29/13	JB	n/a	n/a	MSN3056

The QC reported here applies to the following samples: Method: SW846 8260B

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7, MC25396-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	35.7	71	70-130
107-02-8	Acrolein	250	41.9	17* [a]	70-130
107-13-1	Acrylonitrile	50	68.5	137* [a]	70-130
71-43-2	Benzene	50	39.2	78	70-130
108-86-1	Bromobenzene	50	43.2	86	70-130
74-97-5	Bromochloromethane	50	40.2	80	70-130
75-27-4	Bromodichloromethane	50	41.6	83	70-130
75-25-2	Bromoform	50	43.8	88	70-130
74-83-9	Bromomethane	50	49.5	99	70-130
78-93-3	2-Bntanone (MEK)	50	36.0	72	70-130
104-51-8	n-Butylbenzene	50	47.0	94	70-130
135-98-8	sec-Butylbenzene	50	44.9	90	70-130
98-06-6	tert-Butylbenzene	50	43.6	87	70-130
75-15-0	Carbon disulfide	50	38.6	77	70-130
56-23-5	Carbon tetrachloride	50	46.9	94	70-130
108-90-7	Chlorobenzene	50	40.3	81	70-130
75-00-3	Chloroethane	50	48.4	97	70-130
110-75-8	2-Chloroethyl vinyl ether	50	41.3	83	70-130
67-66-3	Chloroform	50	38.3	77	70-130
74-87-3	Chloromethane	50	43.0	86	70-130
95-49-8	o-Chlorotoluene	50	42.1	84	70-130
106-43-4	p-Chlorotoluene	50	44.1	88	70-130
124-48-1	Dibromochloromethane	50	43.4	87	70-130
95-50-1	1,2-Dichlorobenzene	50	40.5	81	70-130
541-73-1	1,3-Dichlorobenzene	50	41.4	83	70-130
106-46-7	1,4-Dichlorobenzene	50	42.1	84	70-130
75-71-8	Dichlorodifluoromethane	50	44.8	90	70-130
75-34-3	1,1-Dichloroethane	50	40.3	81	70-130
107-06-2	1,2-Dichloroetbane	50	39.6	79	70-130
75-35-4	1,1-Dichloroethene	50	38.9	78	70-130
156-59-2	cis-1,2-Dichloroethene	50	38.1	76	70-130
156-60-5	trans-1,2-Dichloroethene	50	38.8	78	70-130
78-87-5	1,2-Dichloropropane	50	41.2	82	70-130
142-28-9	1,3-Dichloropropane	50	41.7	83	70-130
594-20-7	2,2-Dichloropropane	50	43.7	87	70-130
563-58-6	1,1-Dichloropropene	50	43.1	86	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3056-BS	N81848.D	1	10/29/13	JB	n/a	n/a	MSN3056

The QC reported here applies to the following samples: Method: SW846 8260B

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7, MC25396-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	41.7	83	70-130
10061-02-6	trans-1,3-Dichloropropene	50	43.0	86	70-130
123-91-1	1,4-Dioxane	250	185	74	70-130
97-63-2	Ethyl methacrylate	50	36.9	74* a	77-137
100-41-4	Ethylbenzene	50	42.8	86	70-130
87-68-3	Hexachlorobutadiene	50	49.5	99	70-130
591-78-6	2-Hexanone	50	41.2	82	70-130
98-82-8	Isopropylbenzene	50	44.2	88	70-130
99-87-6	p-Isopropyltoluene	50	45.3	91	70-130
1634-04-4	Methyl Tert Butyl Ether	50	32.2	64* a	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	36.6	73	70-130
74-95-3	Methylene bromide	50	38.8	78	70-130
75-09-2	Methylene chloride	50	38.8	78	70-130
91-20-3	Naphthalene	50	45.3	91	70-130
103-65-1	n-Propylbenzene	50	42.6	85	70-130
100-42-5	Styrene	50	43.0	86	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	44.0	88	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	37.5	75	70-130
127-18-4	Tetrachloroethene	50	42.3	85	70-130
108-88-3	Toluene	50	41.1	82	70-130
87-61-6	1,2,3-Trichlorobenzene	50	45.5	91	70-130
120-82-1	1,2,4-Trichlorobenzene	50	47.3	95	70-130
71-55-6	1,1,1-Trichloroethane	50	44.1	88	70-130
79-00-5	1,1,2-Trichloroethane	50	37.6	75	70-130
79-01-6	Trichloroethene	50	40.2	80	70-130
75-69-4	Trichlorofluoromethane	50	47.3	95	70-130
96-18-4	1,2,3-Trichloropropane	50	40.1	80	70-130
95-63-6	1,2,4-Trimethylbenzene	50	42.1	84	70-130
108-67-8	1,3,5-Trimethylbenzene	50	42.4	85	70-130
108-05-4	Vinyl Acetate	50	30.8	62* a	70-130
75-01-4	Vinyl chloride	50	39.6	79	70-130
	m,p-Xylene	100	83.0	83	70-130
95-47-6	o-Xylene	50	40.9	82	70-130
1330-20-7	Xylene (total)	150	124	83	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3056-BS	N81848.D	1	10/29/13	JB	n/a	n/a	MSN3056

The QC reported here applies to the following samples: Method: SW846 8260B

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7, MC25396-8

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	82%	70-130%
2037-26-5	Toluene-D8	87%	70-130%
460-00-4	4-Bromofluorobenzene	91%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25678-1MS	N81860.D	10	10/29/13	JB	n/a	n/a	MSN3056
MC25678-1MSD	N81861.D	10	10/29/13	JB	n/a	n/a	MSN3056
MC25678-1	N81851.D	1	10/29/13	JB	n/a	n/a	MSN3056

The QC reported here applies to the following samples: Method: SW846 8260B

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7, MC25396-8

CAS No.	Compound	MC25678-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		500	132	26* [a]	129	26* [a]	2	70-130/30
107-02-8	Acrolein	ND		2500	436	17* [a]	433	17* [a]	1	70-130/30
107-13-1	Acrylonitrile	ND		500	748	150* [a]	737	147* [a]	1	70-130/30
71-43-2	Benzene	ND		500	393	79	391	78	1	70-130/30
108-86-1	Bromobenzene	ND		500	411	82	427	85	4	70-130/30
74-97-5	Bromochloromethane	ND		500	399	80	406	81	2	70-130/30
75-27-4	Bromodichloromethane	ND		500	402	80	406	81	1	70-130/30
75-25-2	Bromoform	ND		500	423	85	428	86	1	70-130/30
74-83-9	Bromomethane	ND		500	476	95	523	105	9	70-130/30
78-93-3	2-Butanone (MEK)	ND		500	276	55* [a]	275	55* [a]	0	70-130/30
104-51-8	n-Butylbenzene	ND		500	453	91	473	95	4	70-130/30
135-98-8	sec-Butylbenzene	ND		500	425	85	441	88	4	70-130/30
98-06-6	tert-Butylbenzene	ND		500	416	83	425	85	2	70-130/30
75-15-0	Carbon disulfide	ND		500	372	74	376	75	1	70-130/30
56-23-5	Carbon tetrachloride	ND		500	445	89	451	90	1	70-130/30
108-90-7	Chlorobenzene	ND		500	386	77	396	79	3	70-130/30
75-00-3	Chloroethane	ND		500	485	97	481	96	1	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		500	407	81	410	82	1	70-130/30
67-66-3	Chloroform	ND		500	378	76	377	75	0	70-130/30
74-87-3	Chloromethane	ND		500	449	90	449	90	0	70-130/30
95-49-8	o-Chlorotoluene	ND		500	404	81	416	83	3	70-130/30
106-43-4	p-Chlorotoluene	ND		500	419	84	432	86	3	70-130/30
124-48-1	Dibromochloromethane	ND		500	407	81	421	84	3	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		500	399	80	410	82	3	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		500	402	80	411	82	2	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		500	412	82	422	84	2	70-130/30
75-71-8	Dichlorodifluoromethane	ND		500	430	86	442	88	3	70-130/30
75-34-3	1,1-Dichloroethane	ND		500	390	78	393	79	1	70-130/30
107-06-2	1,2-Dichloroethane	ND		500	390	78	389	78	0	70-130/30
75-35-4	1,1-Dichloroethene	ND		500	375	75	383	77	2	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		500	376	75	384	77	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		500	382	76	380	76	1	70-130/30
78-87-5	1,2-Dichloropropane	ND		500	407	81	410	82	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		500	409	82	414	83	1	70-130/30
594-20-7	2,2-Dichloropropane	ND		500	421	84	425	85	1	70-130/30
563-58-6	1,1-Dichloropropene	ND		500	414	83	420	84	1	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25678-1MS	N81860.D	10	10/29/13	JB	n/a	n/a	MSN3056
MC25678-1MSD	N81861.D	10	10/29/13	JB	n/a	n/a	MSN3056
MC25678-1	N81851.D	1	10/29/13	JB	n/a	n/a	MSN3056

The QC reported here applies to the following samples: Method: SW846 8260B

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7, MC25396-8

CAS No.	Compound	MC25678-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		500	403	81	406	81	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		500	412	82	420	84	2	70-130/30
123-91-1	1,4-Dioxane	ND		2500	1880	75	1960	78	4	70-130/30
97-63-2	Ethyl methacrylate	ND		500	374	75	386	77	3	72-139/30
100-41-4	Ethylbenzene	ND		500	407	81	418	84	3	70-130/30
87-68-3	Hexachlorobutadiene	ND		500	478	96	498	100	4	70-130/30
591-78-6	2-Hexanone	ND		500	300	60* [a]	311	62* [a]	4	70-130/30
98-82-8	Isopropylbenzene	ND		500	412	82	424	85	3	70-130/30
99-87-6	p-Isopropyltoluene	ND		500	435	87	451	90	4	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		500	328	66* [a]	331	66* [a]	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		500	371	74	365	73	2	70-130/30
74-95-3	Methylene bromide	ND		500	378	76	383	77	1	70-130/30
75-09-2	Methylene chloride	ND		500	373	75	374	75	0	70-130/30
91-20-3	Naphthalene	ND		500	434	87	467	93	7	70-130/30
103-65-1	n-Propylbenzeue	ND		500	401	80	413	83	3	70-130/30
100-42-5	Styrene	ND		500	413	83	422	84	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		500	422	84	425	85	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		500	380	76	390	78	3	70-130/30
127-18-4	Tetrachloroethene	1.3		500	414	83	421	84	2	70-130/30
108-88-3	Toluene	ND		500	400	80	404	81	1	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		500	424	85	445	89	5	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		500	441	88	468	94	6	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		500	429	86	434	87	1	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		500	380	76	384	77	1	70-130/30
79-01-6	Trichloroethene	ND		500	391	78	395	79	1	70-130/30
75-69-4	Trichlorofluoromethane	ND		500	465	93	467	93	0	70-130/30
96-18-4	1,2,3-Trichloropropaue	ND		500	399	80	413	83	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		500	403	81	412	82	2	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		500	398	80	408	82	2	70-130/30
108-05-4	Vinyl Acetate	ND		500	306	61* [a]	327	65* [a]	7	70-130/30
75-01-4	Vinyl chloride	ND		500	394	79	397	79	1	70-130/30
	m,p-Xylene	ND		1000	781	78	803	80	3	70-130/30
95-47-6	o-Xylene	ND		500	397	79	401	80	1	70-130/30
1330-20-7	Xylene (total)	ND		1500	1180	79	1200	80	2	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25678-1MS	N81860.D	10	10/29/13	JB	n/a	n/a	MSN3056
MC25678-1MSD	N81861.D	10	10/29/13	JB	n/a	n/a	MSN3056
MC25678-1	N81851.D	1	10/29/13	JB	n/a	n/a	MSN3056

The QC reported here applies to the following samples: Method: SW846 8260B

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7, MC25396-8

CAS No.	Surrogate Recoveries	MS	MSD	MC25678-1	Limits
1868-53-7	Dibromofluoromethane	83%	83%	81%	70-130%
2037-26-5	Toluene-D8	89%	88%	88%	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.

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSN3056-CC3048	Injection Date:	10/29/13
Lab File ID:	N81847.D	Injection Time:	08:29
Instrument ID:	GCMSN	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	224694	9.21	333993	10.08	175305	13.34	150979	15.89	74627	6.77
Upper Limit [a]	449388	9.71	667986	10.58	350610	13.84	301958	16.39	149254	7.27
Lower Limit [b]	112347	8.71	166997	9.58	87653	12.84	75490	15.39	37314	6.27
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSN3056-BS	236108	9.21	337972	10.09	174134	13.34	149631	15.89	63866	6.77
MSN3056-MB	199602	9.22	286311	10.09	146945	13.34	107712	15.90	65013	6.78
MC25678-1	201337	9.21	288877	10.09	149553	13.34	108554	15.90	59954	6.78
ZZZZZZ	197045	9.21	280890	10.09	145399	13.34	105264	15.90	62164	6.78
ZZZZZZ	192147	9.21	278750	10.09	143377	13.34	103122	15.90	61844	6.78
ZZZZZZ	201086	9.21	287191	10.09	146451	13.34	103704	15.90	57548	6.78
ZZZZZZ	198478	9.22	282848	10.09	144729	13.34	103479	15.90	65729	6.78
MC25396-8	193230	9.21	280429	10.09	141413	13.34	102291	15.90	63433	6.78
MC25396-7	172859	9.21	312462	10.09	141903	13.34	96606	15.90	58883	6.78
MC25396-1	201862	9.21	298678	10.09	148205	13.34	103622	15.90	61948	6.78
ZZZZZZ	201288	9.21	292613	10.09	147144	13.34	102737	15.90	69319	6.78
MC25678-1MS	210994	9.21	304294	10.09	161438	13.34	141077	15.89	69586	6.77
MC25678-1MSD	218394	9.21	311627	10.09	163051	13.34	141293	15.89	65025	6.77
ZZZZZZ	208492	9.21	298319	10.09	151454	13.34	109393	15.89	67570	6.78
ZZZZZZ	198998	9.21	280297	10.09	143747	13.34	101571	15.90	67802	6.78
ZZZZZZ	196555	9.21	283110	10.09	145808	13.34	102552	15.90	67471	6.78
ZZZZZZ	193684	9.21	280495	10.09	141701	13.34	100293	15.89	62731	6.78
ZZZZZZ	194077	9.21	293753	10.09	147143	13.34	103864	15.90	70888	6.78
MC25396-2	195375	9.21	293454	10.09	146171	13.35	102323	15.90	64134	6.78
MC25396-3	194877	9.21	287819	10.09	146481	13.34	100352	15.90	63642	6.78
MC25396-4	194264	9.21	287348	10.09	144338	13.34	101140	15.90	65853	6.78
MC25396-5	197709	9.21	283402	10.09	141537	13.34	99748	15.90	65714	6.78
MC25396-6	194410	9.21	279734	10.09	143511	13.34	99454	15.90	65473	6.78
MC25396-7	197038	9.21	280478	10.09	143038	13.34	98756	15.90	65180	6.78

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxaua 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260B Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC25396-1	N81858.D	83.0	86.0	103.0
MC25396-2	N81867.D	83.0	86.0	102.0
MC25396-3	N81868.D	83.0	86.0	105.0
MC25396-4	N81869.D	82.0	86.0	102.0
MC25396-5	N81870.D	82.0	86.0	102.0
MC25396-6	N81871.D	82.0	88.0	103.0
MC25396-7	N81872.D	81.0	88.0	105.0
MC25396-7	N81857.D	86.0	79.0	103.0
MC25396-8	N81856.D	83.0	87.0	102.0
MC25678-1MS	N81860.D	83.0	89.0	90.0
MC25678-1MSD	N81861.D	83.0	88.0	89.0
MSN3056-BS	N81848.D	82.0	87.0	91.0
MSN3056-MB	N81850.D	83.0	88.0	100.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35324-MB	X00322.D	1	10/24/13	KR	10/18/13	OP35324	MSX17

The QC reported here applies to the following samples: Method: SW846 8270C

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ng/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.39	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	

Method Blank Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35324-MB	X00322.D	1	10/24/13	KR	10/18/13	OP35324	MSX17

The QC reported here applies to the following samples: Method: SW846 8270C

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	43%	15-110%
4165-62-2	Phenol-d5	30%	15-110%
118-79-6	2,4,6-Tribromophenol	70%	15-110%
4165-60-0	Nitrobenzene-d5	76%	30-130%
321-60-8	2-Fluorobiphenyl	69%	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: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35455-MB	F70010.D	1	10/31/13	WK	10/28/13	OP35455	MSF3129

The QC reported here applies to the following samples: Method: SW846 8270C

MC25396-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	0.85	20	0.58	ug/l	J
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	36%	15-110%
4165-62-2	Phenol-d5	24%	15-110%
118-79-6	2,4,6-Tribromophenol	72%	15-110%
4165-60-0	Nitrobenzene-d5	72%	30-130%
321-60-8	2-Fluorobiphenyl	68%	30-130%
1718-51-0	Terphenyl-d14	86%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

Method Blank Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35325-MB	I86586.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223

The QC reported here applies to the following samples: Method: SW846 8270C BY SIM

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7

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	ng/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.032	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	ug/l	
85-01-8	Phenanthrene	ND	0.050	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	46%	15-110%
4165-62-2	Phenol-d5	31%	15-110%
118-79-6	2,4,6-Tribromophenol	88%	15-110%
4165-60-0	Nitrobenzene-d5	80%	30-130%
321-60-8	2-Fluorobiphenyl	71%	30-130%
1718-51-0	Terphenyl-d14	95%	30-130%

Blank Spike Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35324-BS	X00323.D	1	10/24/13	KR	10/18/13	OP35324	MSX17

The QC reported here applies to the following samples: Method: SW846 8270C

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	17.3	35	30-130
95-57-8	2-Chlorophenol	50	37.6	75	30-130
59-50-7	4-Chloro-3-methyl phenol	50	38.7	77	30-130
120-83-2	2,4-Dichlorophenol	50	40.8	82	30-130
105-67-9	2,4-Dimethylphenol	50	25.1	50	30-130
51-28-5	2,4-Dinitrophenol	50	38.6	77	30-130
534-52-1	4,6-Dinitro-o-cresol	50	46.0	92	30-130
95-48-7	2-Methylphenol	50	33.2	66	30-130
	3&4-Methylphenol	100	64.2	64	30-130
88-75-5	2-Nitrophenol	50	40.4	81	30-130
100-02-7	4-Nitrophenol	50	18.5	37	30-130
87-86-5	Pentachlorophenol	50	39.1	78	30-130
108-95-2	Phenol	50	17.6	35	30-130
95-95-4	2,4,5-Trichlorophenol	50	41.3	83	30-130
88-06-2	2,4,6-Trichlorophenol	50	41.6	83	30-130
62-53-3	Aniline	50	33.7	67	40-140
101-55-3	4-Bromophenyl phenyl ether	50	44.3	89	40-140
85-68-7	Butyl benzyl phthalate	50	46.1	92	40-140
100-51-6	Benzyl Alcohol	50	31.7	63	40-140
91-58-7	2-Chloronaphthalene	50	40.0	80	40-140
106-47-8	4-Chloroaniline	50	39.0	78	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	39.7	79	40-140
111-44-4	bis(2-Chloroethyl)ether	50	40.3	81	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	45.1	90	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	40.9	82	40-140
122-66-7	1,2-Diphenylhydrazine	50	39.7	79	40-140
121-14-2	2,4-Dinitrotoluene	50	44.1	88	40-140
606-20-2	2,6-Dinitrotoluene	50	41.2	82	40-140
91-94-1	3,3'-Dichlorobenzidine	50	45.0	90	40-140
132-64-9	Dibenzofuran	50	39.4	79	40-140
84-74-2	Di-n-butyl phthalate	50	43.5	87	40-140
117-84-0	Di-n-octyl phthalate	50	47.0	94	40-140
84-66-2	Diethyl phthalate	50	42.4	85	40-140
131-11-3	Dimethyl phthalate	50	34.4	69	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	49.0	98	40-140
118-74-1	Hexachlorobenzene	50	43.4	87	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35324-BS	X00323.D	1	10/24/13	KR	10/18/13	OP35324	MSX17

The QC reported here applies to the following samples: Method: SW846 8270C

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	20.5	41	40-140
67-72-1	Hexachloroethane	50	25.7	51	40-140
78-59-1	Isophorone	50	41.0	82	40-140
88-74-4	2-Nitroaniline	50	42.2	84	40-140
99-09-2	3-Nitroaniline	50	41.7	83	40-140
100-01-6	4-Nitroaniline	50	42.9	86	40-140
98-95-3	Nitrobenzene	50	40.1	80	40-140
62-75-9	n-Nitrosodimethylamine	50	26.1	52	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	43.9	88	40-140
86-30-6	N-Nitrosodiphenylamine	50	41.5	83	40-140
110-86-1	Pyridine	50	21.9	44	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	53%	15-110%
4165-62-2	Phenol-d5	36%	15-110%
118-79-6	2,4,6-Tribromophenol	92%	15-110%
4165-60-0	Nitrobenzene-d5	87%	30-130%
321-60-8	2-Fluorobiphenyl	82%	30-130%
1718-51-0	Terphenyl-d14	103%	30-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35455-BS	F70011.D	1	10/31/13	WK	10/28/13	OP35455	MSF3129

The QC reported here applies to the following samples: Method: SW846 8270C

MC25396-1

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	33.0	66	30-130
59-50-7	4-Chloro-3-methyl phenol	50	39.6	79	30-130
120-83-2	2,4-Dichlorophenol	50	37.8	76	30-130
105-67-9	2,4-Dimethylphenol	50	28.1	56	30-130
51-28-5	2,4-Dinitrophenol	50	25.4	51	30-130
534-52-1	4,6-Dinitro-o-cresol	50	37.7	75	30-130
95-48-7	2-Methylphenol	50	29.7	59	30-130
	3&4-Methylphenol	100	56.2	56	30-130
88-75-5	2-Nitrophenol	50	37.1	74	30-130
100-02-7	4-Nitrophenol	50	17.4	35	30-130
87-86-5	Pentachlorophenol	50	35.1	70	30-130
108-95-2	Phenol	50	14.7	29* a	30-130
95-95-4	2,4,5-Trichlorophenol	50	40.0	80	30-130
88-06-2	2,4,6-Trichlorophenol	50	40.0	80	30-130

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Flnorophenol	38%	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	73%	30-130%
321-60-8	2-Fluorobiphenyl	68%	30-130%
1718-51-0	Terphenyl-d14	83%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

7.2.2

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Blank Spike Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35325-BS	I86587.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223

The QC reported here applies to the following samples: Method: SW846 8270C BY SIM

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	39.1	78	40-140
208-96-8	Acenaphthylene	50	32.2	64	40-140
120-12-7	Anthracene	50	41.0	82	40-140
56-55-3	Benzo(a)anthracene	50	47.3	95	40-140
50-32-8	Benzo(a)pyrene	50	46.0	92	40-140
205-99-2	Benzo(b)fluoranthene	50	44.3	89	40-140
191-24-2	Benzo(g,h,i)perylene	50	52.7	105	40-140
207-08-9	Benzo(k)fluoranthene	50	49.5	99	40-140
218-01-9	Chrysene	50	43.6	87	40-140
53-70-3	Dibenzo(a,h)anthracene	50	53.9	108	40-140
206-44-0	Fluoranthene	50	42.9	86	40-140
86-73-7	Fluorene	50	42.0	84	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	53.9	108	40-140
90-12-0	1-Methylnaphthalene	50	36.6	73	40-140
91-57-6	2-Methylnaphthalene	50	34.7	69	40-140
85-01-8	Phenanthrene	50	44.5	89	40-140
129-00-0	Pyrene	50	41.5	83	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	54%	15-110%
4165-62-2	Phenol-d5	36%	15-110%
118-79-6	2,4,6-Tribromophenol	109%	15-110%
4165-60-0	Nitrobenzene-d5	93%	30-130%
321-60-8	2-Fluorobiphenyl	82%	30-130%
1718-51-0	Terphenyl-d14	105%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 Sonth Central Avenne, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35324-MS	X00324.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
OP35324-MSD	X00325.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
MC25100-13	X00329.D	1	10/24/13	KR	10/18/13	OP35324	MSX17

The QC reported here applies to the following samples: Method: SW846 8270C

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7

CAS No.	Compound	MC25100-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Ree/RPD
65-85-0	Benzoic Acid	ND		50	18.2	36	18.9	38	4	30-130/20
95-57-8	2-Chlorophenol	ND		50	38.3	77	38.2	76	0	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	40.2	80	40.7	81	1	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	41.8	84	41.8	84	0	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	31.1	62	28.4	57	9	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	40.0	80	41.4	83	3	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	47.2	94	49.6	99	5	30-130/20
95-48-7	2-Methylphenol	ND		50	34.1	68	34.0	68	0	30-130/20
	3&4-Methylphenol	ND		100	66.2	66	65.2	65	2	30-130/20
88-75-5	2-Nitrophenol	ND		50	42.0	84	41.6	83	1	30-130/20
100-02-7	4-Nitrophenol	ND		50	18.8	38	20.0	40	6	30-130/20
87-86-5	Pentachlorophenol	ND		50	40.4	81	41.2	82	2	30-130/20
108-95-2	Phenol	ND		50	18.1	36	18.1	36	0	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	43.0	86	42.5	85	1	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	42.3	85	43.5	87	3	30-130/20
62-53-3	Aniline	ND		50	34.4	69	32.4	65	6	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	43.9	88	43.6	87	1	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	46.8	94	46.4	93	1	40-140/20
100-51-6	Benzyl Alcobol	ND		50	31.6	63	31.0	62	2	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	39.2	78	39.3	79	0	40-140/20
106-47-8	4-Chloroaniline	ND		50	39.8	80	39.0	78	2	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	40.6	81	39.5	79	3	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	40.6	81	39.6	79	2	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	45.6	91	44.8	90	2	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	40.7	81	41.1	82	1	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	39.3	79	39.9	80	2	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	44.5	89	44.6	89	0	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	41.9	84	42.1	84	0	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	48.3	97	48.5	97	0	40-140/20
132-64-9	Dibenzofuran	ND		50	39.2	78	39.1	78	0	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	44.1	88	44.5	89	1	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	48.3	97	48.0	96	1	40-140/20
84-66-2	Diethyl phthalate	ND		50	43.1	86	42.3	85	2	40-140/20
131-11-3	Dimethyl phthalate	ND		50	36.7	73	34.8	70	5	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	49.8	100	49.4	99	1	40-140/20
118-74-1	Hexachlorobenzene	ND		50	42.8	86	43.1	86	1	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35324-MS	X00324.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
OP35324-MSD	X00325.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
MC25100-13	X00329.D	1	10/24/13	KR	10/18/13	OP35324	MSX17

The QC reported here applies to the following samples: Method: SW846 8270C

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7

CAS No.	Compound	MC25100-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	20.6	41	21.0	42	2	40-140/20
67-72-1	Hexachloroethane	ND		50	25.8	52	25.3	51	2	40-140/20
78-59-1	Isophorone	ND		50	41.9	84	41.5	83	1	40-140/20
88-74-4	2-Nitroaniline	ND		50	42.6	85	42.6	85	0	40-140/20
99-09-2	3-Nitroaniline	ND		50	41.1	82	41.6	83	1	40-140/20
100-01-6	4-Nitroaniline	ND		50	43.5	87	43.8	88	1	40-140/20
98-95-3	Nitrobenzene	ND		50	41.3	83	40.6	81	2	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	26.0	52	25.5	51	2	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	43.7	87	43.0	86	2	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	41.4	83	42.0	84	1	40-140/20
110-86-1	Pyridine	ND		50	22.4	45	20.9	42	7	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25100-13	Limits
367-12-4	2-Fluorophenol	52%	51%	52%	15-110%
4165-62-2	Phenol-d5	35%	35%	35%	15-110%
118-79-6	2,4,6-Tribromophenol	89%	90%	87%	15-110%
4165-60-0	Nitrobenzene-d5	87%	85%	90%	30-130%
321-60-8	2-Fluorobiphenyl	79%	73%	79%	30-130%
1718-51-0	Terphenyl-d14	102%	98%	105%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35455-MS	F70012.D	1	10/31/13	WK	10/28/13	OP35455	MSF3129
OP35455-MSD	F70013.D	1	10/31/13	WK	10/28/13	OP35455	MSF3129
MC25493-18	F70014.D	1	10/31/13	WK	10/28/13	OP35455	MSF3129

The QC reported here applies to the following samples: Method: SW846 8270C

MC25396-1

CAS No.	Compound	MC25493-18 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	13.9	28* [a]	13.7	27* [a]	1	30-130/20
95-57-8	2-Chlorophenol	ND		50	36.4	73	37.9	76	4	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	43.3	87	43.8	88	1	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	42.4	85	43.0	86	1	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	31.9	64	35.0	70	9	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	31.8	64	32.2	64	1	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	43.3	87	44.0	88	2	30-130/20
95-48-7	2-Methylphenol	ND		50	33.3	67	34.4	69	3	30-130/20
	3&4-Methylphenol	ND		100	61.1	61	63.8	64	4	30-130/20
88-75-5	2-Nitrophenol	ND		50	40.9	82	42.2	84	3	30-130/20
100-02-7	4-Nitrophenol	ND		50	19.1	38	19.3	39	1	30-130/20
87-86-5	Pentachlorophenol	ND		50	39.2	78	40.0	80	2	30-130/20
108-95-2	Phenol	ND		50	16.4	33	16.4	33	0	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	44.4	89	45.3	91	2	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	44.4	89	45.9	92	3	30-130/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25493-18	Limits
367-12-4	2-Fluorophenol	43%	43%	38%	15-110%
4165-62-2	Phenol-d5	28%	30%	27%	15-110%
118-79-6	2,4,6-Tribromophenol	88%	91%	80%	15-110%
4165-60-0	Nitrobenzene-d5	77%	81%	75%	30-130%
321-60-8	2-Fluorobiphenyl	75%	77%	72%	30-130%
1718-51-0	Terphenyl-d14	90%	94%	94%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35325-MS	I86588.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223
OP35325-MSD	I86589.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223
MC25100-14	I86590.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223

The QC reported here applies to the following samples: Method: SW846 8270C BY SIM

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7

7.3.3

7

CAS No.	Compound	MC25100-14 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	39.1	78	38.7	77	1	40-140/20
208-96-8	Acenaphthylene	ND		50	32.6	65	32.0	64	2	40-140/20
120-12-7	Anthracene	ND		50	41.3	83	41.1	82	0	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	48.1	96	47.4	95	1	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	46.7	93	45.9	92	2	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	49.5	99	48.3	97	2	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	52.9	106	52.7	105	0	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	46.5	93	45.2	90	3	40-140/20
218-01-9	Chrysene	ND		50	44.5	89	43.9	88	1	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	54.3	109	53.9	108	1	40-140/20
206-44-0	Fluoranthene	ND		50	43.3	87	43.4	87	0	40-140/20
86-73-7	Fluorene	ND		50	42.4	85	41.6	83	2	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	54.4	109	54.1	108	1	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	36.7	73	36.4	73	1	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	34.7	69	34.2	68	1	40-140/20
85-01-8	Phenanthrene	ND		50	44.1	88	44.4	89	1	40-140/20
129-00-0	Pyrene	ND		50	42.3	85	41.8	84	1	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25100-14	Limits
367-12-4	2-Fluorophenol	53%	52%	52%	15-110%
4165-62-2	Phenol-d5	35%	35%	35%	15-110%
118-79-6	2,4,6-Tribromophenol	106%	106%	101%	15-110%
4165-60-0	Nitrobenzene-d5	90%	89%	93%	30-130%
321-60-8	2-Fluorobiphenyl	79%	72%	83%	30-130%
1718-51-0	Terphenyl-d14	106%	103%	108%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3129-CC3124	Injection Date:	10/31/13
Lab File ID:	F70007.D	Injection Time:	09:09
Instrument ID:	GCMSF	Method:	SW846 8270C

	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	197081	4.48	713995	5.54	497084	7.07	927264	8.36	1145093	11.05	1011442	12.80
Upper Limit [a]	394162	4.98	1427990	6.04	994168	7.57	1854528	8.86	2290186	11.55	2022884	13.30
Lower Limit [b]	98541	3.98	356998	5.04	248542	6.57	463632	7.86	572547	10.55	505721	12.30
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP35485-MB	164648	4.48	608510	5.53	400720	7.07	744067	8.36	902958	11.04	790048	12.79
OP35485-BS	165761	4.48	603541	5.54	411532	7.07	770067	8.36	939966	11.04	820394	12.80
OP35455-MB	155662	4.48	557902	5.53	369831	7.07	693610	8.36	842089	11.04	761083	12.80
OP35455-BS	155192	4.48	556599	5.54	380720	7.07	711597	8.36	847573	11.04	748463	12.80
OP35455-MS	145496	4.48	539267	5.54	351768	7.07	671082	8.36	810650	11.04	713131	12.80
OP35455-MSD	159944	4.48	577291	5.54	378421	7.07	722455	8.36	835268	11.04	734059	12.80
MC25493-18	144244	4.48	534626	5.54	349808	7.07	643112	8.36	777154	11.04	709871	12.80
ZZZZZZ	160836	4.48	595831	5.54	390288	7.07	709608	8.36	855827	11.04	792893	12.80
ZZZZZZ	162943	4.48	601151	5.53	408349	7.07	772200	8.36	934393	11.04	838922	12.80
ZZZZZZ	155861	4.48	578593	5.54	386696	7.07	728885	8.36	895763	11.04	769552	12.80
ZZZZZZ	148174	4.48	540543	5.54	356447	7.07	655420	8.36	784626	11.04	727549	12.80
ZZZZZZ	156375	4.48	566149	5.54	373093	7.07	707341	8.36	843868	11.04	747116	12.80
ZZZZZZ	159395	4.48	565104	5.54	376427	7.07	720956	8.36	875408	11.04	785270	12.80
ZZZZZZ	154848	4.48	571104	5.54	385890	7.07	713483	8.36	878964	11.04	796029	12.80
ZZZZZZ	156632	4.48	574768	5.54	383480	7.07	711610	8.36	882091	11.04	768421	12.80
ZZZZZZ	150039	4.48	552901	5.54	364203	7.07	680815	8.36	808111	11.04	733061	12.80
ZZZZZZ	152311	4.48	557155	5.54	378434	7.07	692396	8.36	835687	11.04	750381	12.80
ZZZZZZ	147045	4.48	541779	5.54	362814	7.07	674021	8.36	817405	11.04	725846	12.80
ZZZZZZ	168117	4.48	611208	5.54	418777	7.07	764227	8.36	921320	11.04	798343	12.80
ZZZZZZ	165128	4.48	613034	5.54	412279	7.07	774372	8.36	937934	11.04	836622	12.80
ZZZZZZ	167924	4.48	609537	5.54	410392	7.07	742934	8.36	882969	11.04	796358	12.80
MC25396-1 [c]	157209	4.48	571206	5.54	387080	7.07	712277	8.36	849556	11.04	776441	12.80
ZZZZZZ	150104	4.48	556029	5.54	372820	7.07	685548	8.36	871776	11.04	771226	12.80
ZZZZZZ	163658	4.48	589143	5.54	404612	7.07	725908	8.36	885774	11.04	793613	12.80
ZZZZZZ	161394	4.48	579708	5.54	373969	7.07	713324	8.36	852713	11.05	796227	12.80

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3129-CC3124	Injection Date:	10/31/13
Lab File ID:	F70007.D	Injection Time:	09:09
Instrument ID:	GCMSF	Method:	SW846 8270C

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

(c) Sample re-extracted beyond recommended holdiug time.

Semivolatile Internal Standard Area Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3223-CC3155	Injection Date:	10/23/13
Lab File ID:	I86585.D	Injection Time:	10:17
Instrument ID:	GCMSI	Method:	SW846 8270C 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	247426	4.06	704374	5.05	415711	6.49	703617	7.84	617269	10.62	1053680	12.09
Upper Limit [a]	494852	4.56	1408748	5.55	831422	6.99	1407234	8.34	1234538	11.12	2107360	12.59
Lower Limit [b]	123713	3.56	352187	4.55	207856	5.99	351809	7.34	308635	10.12	526840	11.59
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
OP35325-MB	167780	4.06	483466	5.05	278676	6.49	477398	7.84	430142	10.62	734691	12.09
OP35325-BS	161755	4.06	457481	5.05	266795	6.49	453211	7.84	392418	10.62	684862	12.09
OP35325-MS	162204	4.06	463789	5.05	269360	6.49	462970	7.84	398445	10.62	687327	12.09
OP35325-MSD	168288	4.06	482900	5.05	279553	6.49	471918	7.84	405133	10.62	706104	12.09
MC25100-14	153794	4.06	441580	5.05	253786	6.49	435716	7.83	372397	10.62	644057	12.09
MC25396-1	170386	4.06	486721	5.05	280097	6.49	472498	7.83	409948	10.62	724339	12.09
MC25396-2	157562	4.06	454466	5.05	261468	6.49	445091	7.83	385131	10.62	660790	12.09
MC25396-3	164924	4.06	474705	5.05	265405	6.49	442549	7.84	378030	10.62	675725	12.09
MC25396-4	158221	4.06	461091	5.05	264584	6.49	446069	7.83	389861	10.62	691779	12.09
MC25396-5	158669	4.06	458921	5.05	267628	6.49	445096	7.83	385019	10.62	673243	12.09
MC25396-6	148590	4.06	422407	5.05	248910	6.49	415497	7.83	370108	10.62	644405	12.09
MC25396-7	175097	4.06	501900	5.05	290981	6.49	490477	7.84	432123	10.62	743387	12.09
ZZZZZZ	146970	4.06	424712	5.05	243799	6.49	422053	7.84	368435	10.62	636181	12.10
ZZZZZZ	147497	4.06	426058	5.05	247031	6.49	417655	7.83	369437	10.61	635930	12.09
OP35376-MB	191363	4.06	556442	5.05	321227	6.49	537264	7.84	452073	10.62	744015	12.09
OP35378-MB	191363	4.06	556442	5.05	321227	6.49	537264	7.84	452073	10.62	744015	12.09
OP35378-BS	200697	4.06	570312	5.05	330820	6.49	559764	7.84	459020	10.62	764535	12.09
OP35378-MS	193322	4.06	546482	5.05	307231	6.49	498518	7.84	385718	10.62	566415	12.10
OP35378-MSD	189171	4.06	545579	5.05	306596	6.49	490948	7.84	397114	10.62	547156	12.10
MC25506-12	177249	4.06	510719	5.05	288617	6.49	465578	7.84	380208	10.62	527643	12.10
ZZZZZZ	190832	4.06	546673	5.05	306431	6.49	484315	7.84	381914	10.62	604839	12.10
ZZZZZZ	162010	4.06	472814	5.05	270884	6.49	446316	7.84	364043	10.62	648900	12.09
ZZZZZZ	157963	4.06	461937	5.05	264973	6.49	437572	7.84	364833	10.62	636442	12.09
ZZZZZZ	160455	4.06	468436	5.05	265685	6.49	440630	7.84	369124	10.62	647340	12.09
ZZZZZZ	148216	4.06	430312	5.05	255642	6.49	441076	7.84	412089	10.62	681710	12.09
ZZZZZZ	177280	4.06	513715	5.05	300893	6.49	516755	7.84	466449	10.62	795995	12.10

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3223-CC3155	Injection Date:	10/23/13
Lab File ID:	I86585.D	Injection Time:	10:17
Instrument ID:	GCMSI	Method:	SW846 8270C 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

7

Semivolatile Internal Standard Area Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSX17-CC16	Injection Date:	10/24/13
Lab File ID:	X00321.D	Injection Time:	13:28
Instrument ID:	GCMSX	Method:	SW846 8270C

	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	393756	4.20	1524945	5.27	849346	6.80	1340988	8.10	1356348	10.72	1193495	12.45
Upper Limit [a]	787512	4.70	3049890	5.77	1698692	7.30	2681976	8.60	2712696	11.22	2386990	12.95
Lower Limit [b]	196878	3.70	762473	4.77	424673	6.30	670494	7.60	678174	10.22	596748	11.95

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP35324-MB	348913	4.20	1358155	5.27	749224	6.80	1172854	8.09	1187179	10.72	1050288	12.44
OP35324-BS	406317	4.20	1599074	5.27	868936	6.80	1358242	8.10	1278790	10.72	1128567	12.44
OP35324-MS	401903	4.20	1557031	5.27	853069	6.80	1345094	8.10	1267706	10.72	1107341	12.44
OP35324-MSD	421007	4.20	1624530	5.27	888947	6.80	1401614	8.10	1353844	10.72	1199999	12.45
ZZZZZZ	446823	4.20	1767372	5.27	966254	6.80	1478787	8.09	1343244	10.72	1123098	12.45
ZZZZZZ	496346	4.20	1904055	5.27	1002341	6.80	1477971	8.09	1236888	10.72	1034027	12.44
ZZZZZZ	528688	4.20	2058068	5.26	1086046	6.80	1622282	8.10	1390298	10.72	1155053	12.44
MC25100-13	397362	4.20	1548666	5.27	850481	6.80	1293957	8.09	1199590	10.72	1051508	12.44
MC25396-1	438167	4.20	1711459	5.27	924725	6.80	1402515	8.09	1348725	10.72	1222090	12.45
MC25396-2	431009	4.20	1656210	5.27	891757	6.80	1317056	8.09	1168045	10.72	1029944	12.45
MC25396-3	414462	4.20	1619286	5.27	863742	6.80	1300070	8.10	1223065	10.72	1140668	12.45
MC25396-4	437353	4.20	1676484	5.27	895759	6.80	1341394	8.10	1235275	10.72	1128999	12.45
MC25396-5	432173	4.20	1667549	5.27	888628	6.80	1316119	8.09	1228887	10.72	1131980	12.44
MC25396-6	376004	4.20	1445367	5.27	798850	6.80	1205202	8.09	1185593	10.72	1063755	12.44
MC25396-7	460963	4.20	1784667	5.27	973824	6.80	1503880	8.10	1480813	10.72	1341507	12.44
ZZZZZZ	372778	4.20	1446387	5.27	816204	6.80	1283083	8.10	1309926	10.72	1156271	12.45
ZZZZZZ	362458	4.20	1428509	5.27	777414	6.80	1210220	8.09	1156121	10.72	1035478	12.44
OP35308-MB	434711	4.20	1703231	5.26	918426	6.80	1391947	8.09	1250673	10.72	1066141	12.45
OP35308-BS	473701	4.20	1856393	5.27	1002154	6.80	1537818	8.10	1360049	10.72	1186073	12.44
OP35308-MS	450021	4.20	1760378	5.27	953567	6.80	1438765	8.10	1315475	10.72	1166472	12.44
OP35308-MSD	479528	4.20	1837081	5.27	975307	6.80	1467420	8.10	1263190	10.72	1121829	12.45
MC25232-1	510744	4.20	1936060	5.27	1032922	6.80	1502363	8.10	1290647	10.72	1104662	12.44
OP35329-MB	501508	4.20	1936856	5.27	1019268	6.80	1505917	8.09	1261029	10.72	1056438	12.45
OP35329-BS	538073	4.20	2067596	5.27	1095731	6.80	1645962	8.10	1414176	10.72	1252007	12.45
OP35329-MS	491939	4.20	1898872	5.27	1016364	6.80	1536040	8.10	1329285	10.72	1180174	12.45
OP35329-MSD	507409	4.20	1965490	5.27	1047447	6.80	1571557	8.10	1400640	10.72	1209211	12.45
MC25232-22	486229	4.20	1900528	5.27	994626	6.80	1493802	8.09	1314000	10.72	1107392	12.44
ZZZZZZ	444646	4.20	1710823	5.27	931487	6.80	1354265	8.09	1235865	10.72	1089021	12.45
ZZZZZZ	402652	4.20	1615542	5.27	877987	6.80	1260889	8.09	1145243	10.72	989457	12.44
ZZZZZZ	435355	4.20	1694200	5.27	862071	6.80	1349550	8.09	1184876	10.72	1016563	12.45
ZZZZZZ	430834	4.20	1657595	5.26	934887	6.80	1398491	8.09	1174399	10.72	985198	12.45

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10

Semivolatile Internal Standard Area Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSX17-CC16	Injection Date:	10/24/13
Lab File ID:	X00321.D	Injection Time:	13:28
Instrument ID:	GCMSX	Method:	SW846 8270C

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 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: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC25396-1	F70030.D	22.0	20.0	49.0			
MC25396-1	X00330.D	6.0* [a]	5.0* [a]	36.0	70.0	65.0	92.0
MC25396-2	X00331.D	41.0	29.0	78.0	88.0	80.0	104.0
MC25396-3	X00332.D	51.0	37.0	93.0	83.0	77.0	98.0
MC25396-4	X00333.D	48.0	35.0	85.0	77.0	68.0	90.0
MC25396-5	X00334.D	48.0	32.0	93.0	80.0	73.0	95.0
MC25396-6	X00335.D	40.0	28.0	87.0	77.0	69.0	96.0
MC25396-7	X00336.D	32.0	23.0	74.0	81.0	72.0	93.0
OP35324-BS	X00323.D	53.0	36.0	92.0	87.0	82.0	103.0
OP35324-MB	X00322.D	43.0	30.0	70.0	76.0	69.0	93.0
OP35324-MS	X00324.D	52.0	35.0	89.0	87.0	79.0	102.0
OP35324-MSD	X00325.D	51.0	35.0	90.0	85.0	73.0	98.0
OP35455-BS	F70011.D	38.0	26.0	80.0	73.0	68.0	83.0
OP35455-MB	F70010.D	36.0	24.0	72.0	72.0	68.0	86.0
OP35455-MS	F70012.D	43.0	28.0	88.0	77.0	75.0	90.0
OP35455-MSD	F70013.D	43.0	30.0	91.0	81.0	77.0	94.0

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

(a) Outside control limits. Sample re-extracted/reanalyzed.

Semivolatile Surrogate Recovery Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270C BY SIM Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC25396-1	I86591.D	73.0	66.0	94.0
MC25396-2	I86592.D	90.0	79.0	103.0
MC25396-3	I86593.D	85.0	79.0	102.0
MC25396-4	I86594.D	79.0	69.0	92.0
MC25396-5	I86595.D	82.0	73.0	98.0
MC25396-6	I86596.D	80.0	69.0	99.0
MC25396-7	I86597.D	84.0	73.0	97.0
OP35325-BS	I86587.D	93.0	82.0	105.0
OP35325-MB	I86586.D	80.0	71.0	95.0
OP35325-MS	I86588.D	90.0	79.0	106.0
OP35325-MSD	I86589.D	89.0	72.0	103.0

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35363-MB	BB51795.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050

The QC reported here applies to the following samples: Method: SW846 8011

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7, MC25396-9

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	85%	36-173%
460-00-4	Bromofluorobenzene (S)	91%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35363-BS	BB51796.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050

The QC reported here applies to the following samples: Method: SW846 8011

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7, MC25396-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.070	99	60-140
106-93-4	1,2-Dibromoethane	0.071	0.074	104	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	85%	36-173%
460-00-4	Bromofluorobenzene (S)	86%	36-173%

8.2.1 8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35363-MS	BB51797.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050
OP35363-MSD	BB51798.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050
MC25100-22	BB51799.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050

The QC reported here applies to the following samples: Method: SW846 8011

MC25396-1, MC25396-2, MC25396-3, MC25396-4, MC25396-5, MC25396-6, MC25396-7, MC25396-9

CAS No.	Compound	MC25100-22 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.064	90	0.072	101	12	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.068	96	0.081	114	17	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC25100-22	Limits
460-00-4	Bromofluorobenzene (S)	79%	92%	89%	36-173%
460-00-4	Bromofluorobenzene (S)	78%	91%	85%	36-173%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011	Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC25396-1	BB51801.D	85.0	91.0
MC25396-2	BB51802.D	80.0	89.0
MC25396-3	BB51803.D	88.0	90.0
MC25396-4	BB51804.D	82.0	83.0
MC25396-5	BB51806.D	77.0	81.0
MC25396-6	BB51807.D	73.0	79.0
MC25396-7	BB51808.D	77.0	79.0
MC25396-9	BB51809.D	72.0	78.0
OP35363-BS	BB51796.D	85.0	86.0
OP35363-MB	BB51795.D	85.0	91.0
OP35363-MS	BB51797.D	79.0	78.0
OP35363-MSD	BB51798.D	92.0	91.0

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3050-ICC3050	Injection Date:	10/22/13
Lab File ID:	BB51790.D	Injection Time:	13:17
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	5.95	4.87

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB51793A.D	10/22/13	14:43	5.97	4.87
OP35363-MB	BB51795.D	10/22/13	15:39	5.97	4.87
OP35363-BS	BB51796.D	10/22/13	16:08	5.96	4.87
OP35363-MS	BB51797.D	10/22/13	16:36	5.96	4.87
OP35363-MSD	BB51798.D	10/22/13	17:05	5.94	4.87
MC25100-22	BB51799.D	10/22/13	17:34	5.93	4.87
ZZZZZZ	BB51800.D	10/22/13	18:03	5.93	4.87
MC25396-1	BB51801.D	10/22/13	18:33	5.93	4.87
MC25396-2	BB51802.D	10/22/13	19:02	5.94	4.87
MC25396-3	BB51803.D	10/22/13	19:31	5.93	4.87
MC25396-4	BB51804.D	10/22/13	19:59	5.94	4.87

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC25396
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3050-CC3050	Injection Date:	10/22/13
Lab File ID:	BB51805.D	Injection Time:	20:28
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	5.94	4.87

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC25396-5	BB51806.D	10/22/13	20:56	5.94	4.87
MC25396-6	BB51807.D	10/22/13	21:25	5.94	4.87
MC25396-7	BB51808.D	10/22/13	21:53	5.94	4.87
MC25396-9	BB51809.D	10/22/13	22:22	5.94	4.87
ZZZZZZ	BB51810.D	10/22/13	22:51	5.94	4.87
ZZZZZZ	BB51811.D	10/22/13	23:20	5.94	4.87
ZZZZZZ	BB51812.D	10/22/13	23:50	5.94	4.87
GBB3050-ECC305B	BB51813.D	10/23/13	00:19	5.94	4.87

Surrogate Compounds

SI = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.2

Roxana Groundwater Quarterly – 4th Quarter 2013 Data Review

Laboratory SDG: MC25412

Data Reviewer: Elizabeth Kunkel

Peer Reviewer: Steve Gragert

Date Reviewed: 11/21/2013

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008

Sample Identification	Sample Identification
P114-ROX-101713	TB-ROX-101713-HCL
TB-ROX-101713-ST	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated VOC LCS/LCSD recoveries were outside evaluation criteria. VOC MS/MSD recoveries were outside evaluation criteria in sample P114-ROX-101713. These issues are addressed further in the appropriate sections below. Additionally, the initial calibration verification for acrolein, acrylonitrile, and 2-chloroethyl vinyl ether exceeded 30 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?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS/ LCSD ID	Parameter	Analyte	LCS/LCSD Recovery	RPD	LCS/LCSD /RPD Criteria
MSV944-BS/BSD	VOCs	Acrolein	**23/23**	2	70-130/25
MSV944-BS/BSD	VOCs	Acrylonitrile	**183/182**	0	70-130/25
MSV944-BS/BSD	VOCs	Bromomethane	**133**/129	3	70-130/25

LCS/ LCSD ID	Parameter	Analyte	LCS/LCSD Recovery	RPD	LCS/LCSD /RPD Criteria
MSV944-BS/BSD	VOCs	2-Chloroethyl vinyl ether	**187/186**	1	70-130/25
MSV944-BS/BSD	VOCs	Hexachlorobutadiene	127/**134**	5	70-130/25
MSV944-BS/BSD	VOCs	1,2,3-Trichlorobenzene	120/**131**	9	70-130/25
MSV944-BS/BSD	VOCs	Trichlorofluoromethane	**140/135**	4	70-130/25
MSV946-BS/BSD	VOCs	Acrolein	**20/21**	5	70-130/25
MSV946-BS/BSD	VOCs	Acrylonitrile	**169/171**	1	70-130/25
MSV946-BS/BSD	VOCs	Bromomethane	**131**/127	3	70-130/25
MSV946-BS/BSD	VOCs	2-Chloroethyl vinyl ether	**178/176**	1	70-130/25

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS/LCSD MSV944-BS/BSD was associated with the trip blank. Trip blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
P114-ROX-101713	VOCs	Acrolein	**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 P114-ROX-101713 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
P114-ROX-101713	VOCs	Acetone	**51/53**	4	70-130/30
P114-ROX-101713	VOCs	Acrolein	**19/20**	4	70-130/30
P114-ROX-101713	VOCs	Bromomethane	**131**/130	1	70-130/30
P114-ROX-101713	VOCs	2-Chloroethyl vinyl ether	**0/0**	NA	70-130/30
P114-ROX-101713	VOCs	Dichlorodifluoromethane	**139/136**	2	70-130/30
P114-ROX-101713	VOCs	Trichlorofluoromethane	**142/137**	3	70-130/30

USEPA National Functional Guidelines for Organic Data Review indicates that organic data does not require qualification based on MS/MSD data alone. LCS/LCSD recoveries were within evaluation criteria with the exception of compounds listed and qualified as appropriate in Section 5.0 of this data review. No further qualification of data was required.

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; samples analyzed did not require dilution.

12.0 Additional Qualifications

Were additional qualifications applied?

No

New England ACCUTEST LABORATORIES



Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC25412

Sampling Date: 10/17/13

Report to:

URS Corporation

elizabeth.kunkel@URS.com

ATTN: Elizabeth Kunkel

Total number of pages in report: **68**

Reviewed on 11-21-13

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: MC25412

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC25412-1	10/17/13	15:15	LRCW	10/18/13	AQ	Ground Water	P114-ROX-101713
MC25412-2	10/17/13	00:00	LRCW	10/18/13	AQ	Trip Blank Water	TB-ROX-101713-HCL
MC25412-3	10/17/13	00:00	LRCW	10/18/13	AQ	Trip Blank Water	TB-ROX-101713-ST

ACCUTEST LABORATORIES

2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	Job No	MC25412
Site:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central	Report Date	11/1/2013 4:43:55 PM

1 Sample(s) and 2 Trip Blank(s) were collected on 10/17/2013 and were received at Accutest on 10/18/2013 properly preserved, at 2.4 Deg. C and intact. These Samples received an Accutest job number of MC25412. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ Batch ID: MSV944

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25418-5MS, MC25418-5MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MSV944-BSD Recovery(s) for Acrolein, Hexachlorobutadiene, 1,2,3-Trichlorobenzene, Trichlorofluoromethane are outside control limits. Blank Spike meets program technical requirements.
- MSV944-BS Recovery(s) for Acrolein, Bromomethane, Trichlorofluoromethane are outside control limits. Blank Spike meets program technical requirements.
- MC25418-5MS/MSD Recovery(s) for 2-Chloroethyl vinyl ether, Acetone, Acrolein, Acrylonitrile are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Initial calibration verification standard MSV937-ICV937 for acrylonitrile, 2-chloroethyl vinyl ether exceed 30% Difference (response bias high). Associated samples are non-detect these compounds.
- MSV944-BS/BSD for 2-Chloroethyl vinyl ether, Acrylonitrile: Outside control limits. Associated samples are non-detect for this compound.
- Initial calibration verification standard MSV937-ICV937 for acrolein exceed 30% Difference. Acrolein is within criteria in continuing calibration check standard MSV944-CC937, MSV946-CC937.

Matrix AQ Batch ID: MSV946

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC25412-1MS, MC25412-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MSV946-BS Recovery(s) for 2-Chloroethyl vinyl ether, Acrolein, Bromomethane are outside control limits. Blank Spike meets program technical requirements.
- MSV946-BSD Recovery(s) for 2-Chloroethyl vinyl ether, Acrolein are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2-Chloroethyl vinyl ether, Acetone, Acrolein, Acrylonitrile, Bromomethane, Dichlorodifluoromethane, Trichlorofluoromethane are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 2-Chloroethyl vinyl ether, Acetone, Acrolein, Acrylonitrile, Dichlorodifluoromethane, Trichlorofluoromethane are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- MSV946-BS/BSD for Acrylonitrile: Outside control limits. Associated samples are non-detect for this compound.

Extractables by GCMS By Method SW846 8270C

Matrix AQ	Batch ID: OP35324

- 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) MC25100-13MS, MC25100-13MSD were used as the QC samples indicated.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix AQ	Batch ID: OP35325

- 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) MC25100-14MS, MC25100-14MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8011

Matrix AQ	Batch ID: OP35363

- 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) MC25100-22MS, MC25100-22MSD were used as the QC samples indicated.
- Continuing calibration check standard GBB3050-CC3050, file BB51805, BB51813 for 4-Bromofluorobenzene exceed criteria. Target analyte is within criteria.

VOC: Analysis is performed and evaluated by SW846 8260C.

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(MC25412).

Summary of Hits

Job Number: MC25412
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Collected: 10/17/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC25412-1	P114-ROX-101713					
Acetone		4.7 J	10	2.8	ug/l	SW846 8260B
Benzene		0.74	0.50	0.45	ug/l	SW846 8260B
Methyl Tert Butyl Ether		3.6	1.0	0.43	ug/l	SW846 8260B
MC25412-2	TB-ROX-101713-HCL					
No hits reported in this sample.						
MC25412-3	TB-ROX-101713-ST					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P114-ROX-101713		
Lab Sample ID:	MC25412-1	Date Sampled:	10/17/13
Matrix:	AQ - Ground Water	Date Received:	10/18/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V24742.D	1	10/31/13	AMY	n/a	n/a	MSV946
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	4.7	10	2.8	ug/l	J
107-02-8	Acrolein	ND	25	6.3	ug/l	UJ
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	0.74	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P114-ROX-101713		
Lab Sample ID:	MC25412-1	Date Sampled:	10/17/13
Matrix:	AQ - Ground Water	Date Received:	10/18/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3.6	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorohenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P114-ROX-101713		
Lab Sample ID:	MC25412-1	Date Sampled:	10/17/13
Matrix:	AQ - Ground Water	Date Received:	10/18/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	95%		70-130%
460-00-4	4-Bromofluorobeuzene	93%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P114-ROX-101713		
Lab Sample ID:	MC25412-1	Date Sampled:	10/17/13
Matrix:	AQ - Ground Water	Date Received:	10/18/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X00337.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic Acid	ND	11	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	ug/l	
95-48-7	2-Methylphenol	ND	11	ug/l	
	3&4-Methylphenol	ND	11	ug/l	
88-75-5	2-Nitrophenol	ND	11	ug/l	
100-02-7	4-Nitrophenol	ND	22	ug/l	
87-86-5	Pentachlorophenol	ND	11	ug/l	
108-95-2	Phenol	ND	5.4	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	ug/l	
62-53-3	Aniline	ND	11	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	ug/l	
100-51-6	Benzyl Alcohol	ND	11	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	ug/l	
106-47-8	4-Chloroaniline	ND	11	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	ug/l	
132-64-9	Dibenzofuran	ND	2.2	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	ng/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P114-ROX-101713		
Lab Sample ID:	MC25412-1	Date Sampled:	10/17/13
Matrix:	AQ - Ground Water	Date Received:	10/18/13
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	ug/l	
67-72-1	Hexachloroethane	ND	5.4	ug/l	
78-59-1	Isophorone	ND	5.4	ug/l	
88-74-4	2-Nitroaniline	ND	11	ug/l	
99-09-2	3-Nitroaniline	ND	11	ug/l	
100-01-6	4-Nitroaniline	ND	11	ug/l	
98-95-3	Nitrobenzene	ND	5.4	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	ug/l	
621-64-7	N-Nitroso-di-u-propylamine	ND	5.4	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	ug/l	
110-86-1	Pyridine	ND	11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	41%		15-110%
4165-62-2	Phenol-d5	31%		15-110%
118-79-6	2,4,6-Tribromophenol	92%		15-110%
4165-60-0	Nitrobenzene-d5	72%		30-130%
321-60-8	2-Fluorobiphenyl	69%		30-130%
1718-51-0	Terphenyl-d14	94%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-101713		
Lab Sample ID:	MC25412-1	Date Sampled:	10/17/13
Matrix:	AQ - Ground Water	Date Received:	10/18/13
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I86598.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.11	ug/l	
120-12-7	Anthracene	ND	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	ug/l	
218-01-9	Chrysene	ND	0.11	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	ug/l	
206-44-0	Fluoranthene	ND	0.11	ug/l	
86-73-7	Fluorene	ND	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.22	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	ug/l	
85-01-8	Phenanthrene	ND	0.054	ug/l	
129-00-0	Pyrene	ND	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	75%		30-130%
321-60-8	2-Fluorobiphenyl	72%		30-130%
1718-51-0	Terphenyl-d14	101%		30-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P114-ROX-101713		
Lab Sample ID:	MC25412-1	Date Sampled:	10/17/13
Matrix:	AQ - Ground Water	Date Received:	10/18/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB51810.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050
Run #2							

	Initial Volume	Final Volume
Run #1	35.3 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	56%		36-173%
460-00-4	Bromofluorobenzene (S)	76%		36-173%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-101713-HCL		
Lab Sample ID:	MC25412-2	Date Sampled:	10/17/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/18/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V24700.D	1	10/30/13	AMY	n/a	n/a	MSV944
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylhenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorohenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte fonnd in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-101713-HCL		
Lab Sample ID:	MC25412-2	Date Sampled:	10/17/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/18/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorohenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylhenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-101713-HCL		
Lab Sample ID:	MC25412-2	Date Sampled:	10/17/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/18/13
Method:	SW846 8260B	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	91%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-101713-ST		
Lab Sample ID:	MC25412-3	Date Sampled:	10/17/13
Matrix:	AQ - Trip Blank Water	Date Received:	10/18/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB51811.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050
Run #2							

	Initial Volume	Final Volume
Run #1	36.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

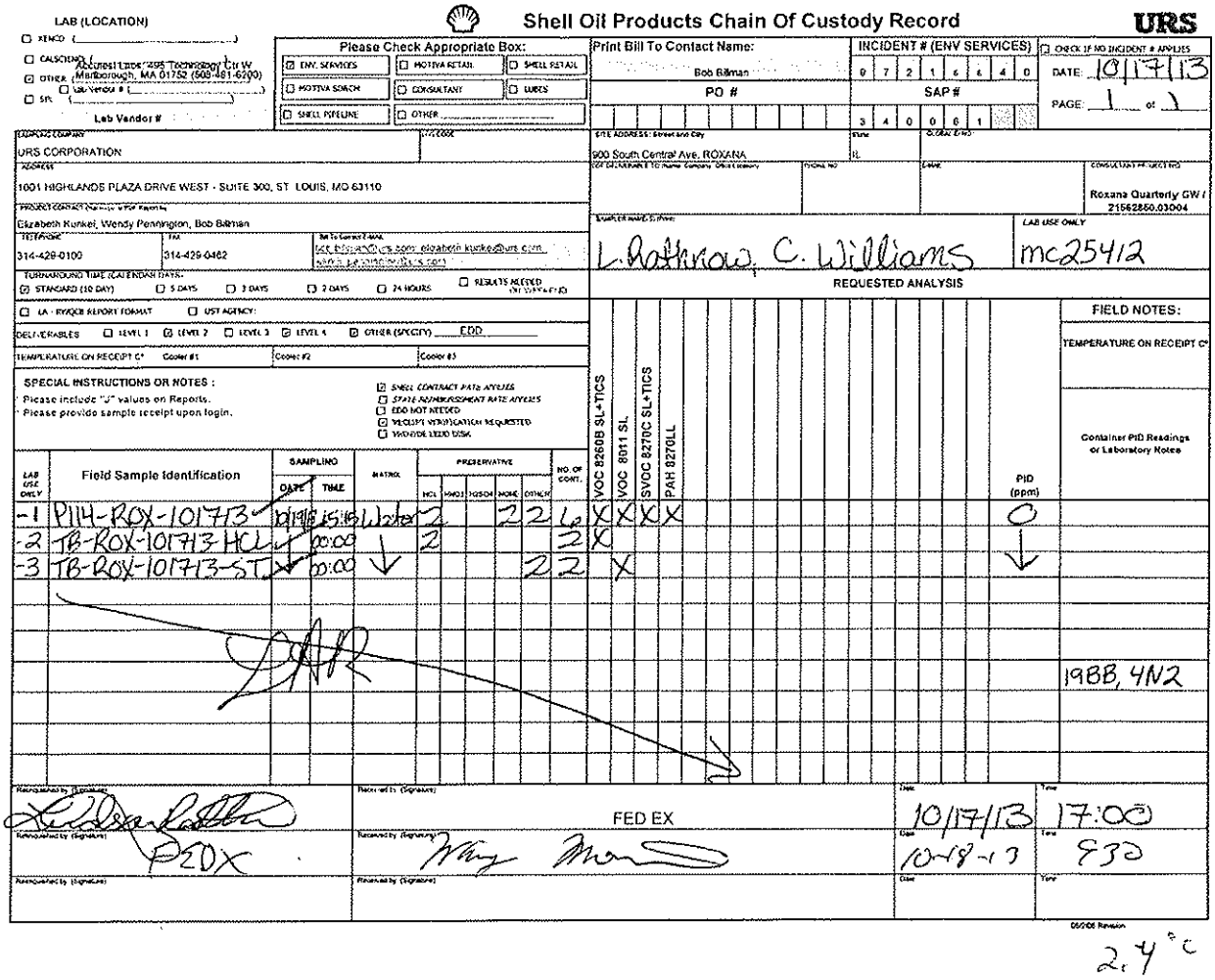
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	85%		36-173%
460-00-4	Bromofluorobenzene (S)	82%		36-173%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody



LAB (LOCATION)
☐ XENCO (_____)
☐ CALSCIENCE (_____)
☑ OTHER (Accutest Labs, 495 Technology Ctr W, Marlborough, MA 01752 (508-481-6200))
☐ SPL (_____)
Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:
☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SEARCH ☐ CONSULTANT ☐ UBEs
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Billman
PO #
INCIDENT # (ENV SERVICES): 0 7 2 1 6 4 4 0
SAP #: 3 4 0 0 6 1
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 10/17/13
PAGE: 1 of 1

CORPORATE COMPANY: URS CORPORATION
ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110
PROJECT CONTACT (Name for Report): Elizabeth Kunkel, Wendy Pennington, Bob Billman
TELEPHONE: 314-429-0100
FAX: 314-429-0462
Bill To Contact E-MAIL: bob.billman@cb.com; elizabeth.kunkel@urs.com; wendy.pennington@urs.com
TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED (SEE SURCHARGES)
☐ LA - INVOICE 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 EDD2 DISK

SITE ADDRESS: Street and City: 900 South Central Ave, ROXANA
STATE: IL
CONSULTANT PROJECT NO.: Roxana Quarterly GW / 21562850.03004
SAMPLER NAME(S) Print: L. Rathirao, C. Williams
LAB USE ONLY: mc25412

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	PRESERVATIVE HNO3	PRESERVATIVE H2SO4	PRESERVATIVE NONE	PRESERVATIVE OTHER	NO. OF CONT.	VOC 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)
-1	P114-ROX-101713	10/17/13	15:16	Water	2			2	2	6	X	X	X	X	0
-2	TB-ROX-101713-HCL	↓	00:00	↓	2					2	X				↓
-3	TB-ROX-101713-ST	↓	00:00	↓				2	2	4		X			

FIELD NOTES:
TEMPERATURE ON RECEIPT C°
Container PID Readings or Laboratory Notes
19BB, 4N2

Relinquished by (Signature)	Received by (Signature)	Date	Time
[signature]	FED EX	10/17/13	17:00
P2DX	[signature]	10-18-13	830

05/06 Revision

2.4 °C

5.1
5

MC25412: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC25412 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 10/18/2013 **Delivery Method:** **Client Service Action Required at Login:** No

Project: 900 SOUTH CENTRAL **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y or N		Y or N
1. Custody Seals Present:	☑ ☐	3. COC Present:	☑ ☐
2. Custody Seals Intact:	☑ ☐	4. Smpl Dates/Time OK	☑ ☐

Cooler Temperature	Y or N
1. Temp criteria achieved:	☑ ☐
2. Cooler temp verification:	Infared gun
3. Cooler media:	Ice (bag)

Quality Control Preservation	Y or N	N/A
1. Trip Blank present / cooler:	☑ ☐	☐
2. Trip Blank listed on COC:	☑ ☐	☐
3. Samples preserved properly:	☑ ☐	
4. VOCs headspace free:	☑ ☐	☐

Sample Integrity - Documentation	Y or N
1. Sample labels present on bottles:	☑ ☐
2. Container labeling complete:	☑ ☐
3. Sample container label / COC agree:	☑ ☐

Sample Integrity - Condition	Y or N
1. Sample recvd within HT:	☑ ☐
2. All containers accounted for:	☑ ☐
3. Condition of sample:	Intact

Sample Integrity - Instructions	Y or N	N/A
1. Analysis requested is clear:	☑ ☐	
2. Bottles received for unspecified tests	☐ ☑	
3. Sufficient volume recvd for analysis:	☑ ☐	
4. Compositing instructions clear:	☐ ☐	☑
5. Filtering instructions clear:	☐ ☐	☑

Comments

5.1

5

MC25412: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC25412

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC25412-1 Collected: 17-OCT-13 15:15 By: LRCW Received: 18-OCT-13 By: P114-ROX-101713						
MC25412-1	SW846 8011	22-OCT-13 22:51	CZ	22-OCT-13	MR	V8011SL
MC25412-1	SW846 8270C BY SIM	23-OCT-13 15:35	WK	18-OCT-13	PA	B8270SIMSL
MC25412-1	SW846 8270C	24-OCT-13 19:15	KR	18-OCT-13	PA	AB8270SL+
MC25412-1	SW846 8260B	31-OCT-13 09:40	AMY			V8260SL+
MC25412-2 Collected: 17-OCT-13 00:00 By: LRCW Received: 18-OCT-13 By: TB-ROX-101713-HCL						
MC25412-2	SW846 8260B	30-OCT-13 15:09	AMY			V8260SL+
MC25412-3 Collected: 17-OCT-13 00:00 By: LRCW Received: 18-OCT-13 By: TB-ROX-101713-ST						
MC25412-3	SW846 8011	22-OCT-13 23:20	CZ	22-OCT-13	MR	V8011SL

Accutest Internal Chain of Custody

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Received: 10/18/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC25412-1.1	Walk In Ref #22	Thomas Abruzzise	10/18/13 15:08	Retrieve from Storage
MC25412-1.3	VOC Ref #4	Amy Min Yang	10/31/13 08:51	Retrieve from Storage
MC25412-1.3	Amy Min Yang	GCMSV	10/31/13 08:51	Load on Instrument
MC25412-1.3	GCMSV	Amy Min Yang	11/01/13 16:15	Unload from Instrument
MC25412-1.3	Amy Min Yang	VOC Ref #4	11/01/13 16:15	Return to Storage
MC25412-1.4	VOC Ref #4	Amy Min Yang	10/30/13 11:05	Retrieve from Storage
MC25412-1.4	Amy Min Yang	GCMSV	10/30/13 11:06	Load on Instrument
MC25412-1.4	GCMSV	Amy Min Yang	11/01/13 16:15	Unload from Instrument
MC25412-1.4	Amy Min Yang	VOC Ref #4	11/01/13 16:15	Return to Storage
MC25412-1.5	VOC Ref #4	Michael Rolo	10/22/13 07:15	Retrieve from Storage
MC25412-1.5	Michael Rolo		10/23/13 10:44	Depleted
MC25412-2.1	VOC Ref #4	Amy Min Yang	10/30/13 11:05	Retrieve from Storage
MC25412-2.1	Amy Min Yang	GCMSV	10/30/13 11:06	Load on Instrument
MC25412-2.1	GCMSV	Amy Min Yang	10/31/13 15:42	Unload from Instrument
MC25412-2.1	Amy Min Yang	VOC Ref #4	10/31/13 15:43	Return to Storage
MC25412-3.1	VOC Ref #4	Michael Rolo	10/22/13 07:15	Retrieve from Storage
MC25412-3.1	Michael Rolo		10/23/13 10:44	Depleted

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV944-MB	V24691.D	1	10/30/13	AMY	n/a	n/a	MSV944

The QC reported here applies to the following samples: Method: SW846 8260B

MC25412-2

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	10	ug/l	
107-02-8	Acrolein	ND	25	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
74-97-5	Bromochloromethane	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	

Method Blank Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV944-MB	V24691.D	1	10/30/13	AMY	n/a	n/a	MSV944

The QC reported here applies to the following samples: Method: SW846 8260B

MC25412-2

CAS No.	Compound	Result	RL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
87-68-3	Hexachlorobntadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

Method Blank Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV944-MB	V24691.D	1	10/30/13	AMY	u/a	n/a	MSV944

The QC reported here applies to the following samples: Method: SW846 8260B

MC25412-2

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	92%	70-130%
2037-26-5	Toluene-D8	95%	70-130%
460-00-4	4-Bromoflnorobenzene	91%	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: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV946-MB	V24741.D	1	10/31/13	AMY	n/a	n/a	MSV946

The QC reported here applies to the following samples: Method: SW846 8260B

MC25412-1

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	10	ug/l	
107-02-8	Acrolein	ND	25	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
74-97-5	Bromochloromethane	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ng/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	

Method Blank Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV946-MB	V24741.D	1	10/31/13	AMY	n/a	n/a	MSV946

The QC reported here applies to the following samples: Method: SW846 8260B

MC25412-1

CAS No.	Compound	Result	RL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ng/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ng/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethaue	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/l	
108-05-4	Viuyl Acetate	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

6.1.2

Method Blank Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV946-MB	V24741.D	1	10/31/13	AMY	n/a	n/a	MSV946

The QC reported here applies to the following samples: Method: SW846 8260B

MC25412-1

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	91%	70-130%
2037-26-5	Toluene-D8	95%	70-130%
460-00-4	4-Bromofluorobenzene	91%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

6.1.2

6

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV944-BS	V24687.D	1	10/30/13	AMY	n/a	n/a	MSV944
MSV944-BSD	V24688.D	1	10/30/13	AMY	n/a	n/a	MSV944

The QC reported here applies to the following samples: Method: SW846 8260B

MC25412-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	51.9	104	55.9	112	7	70-130/25
107-02-8	Acrolein	250	57.6	23* a	56.3	23* a	2	70-130/25
107-13-1	Acrylonitrile	50	91.3	183* b	91.0	182* b	0	70-130/25
71-43-2	Benzene	50	54.6	109	53.3	107	2	70-130/25
108-86-1	Bromobenzene	50	56.2	112	55.2	110	2	70-130/25
74-97-5	Bromochloromethane	50	53.8	108	52.4	105	3	70-130/25
75-27-4	Bromodichloromethane	50	60.6	121	59.6	119	2	70-130/25
75-25-2	Bromoform	50	41.8	84	41.8	84	0	70-130/25
74-83-9	Bromomethane	50	66.6	133* a	64.6	129	3	70-130/25
78-93-3	2-Butanone (MEK)	50	54.9	110	54.7	109	0	70-130/25
104-51-8	n-Butylbenzene	50	56.8	114	56.4	113	1	70-130/25
135-98-8	sec-Butylbenzene	50	54.2	108	53.3	107	2	70-130/25
98-06-6	tert-Bntylbenzene	50	55.4	111	54.1	108	2	70-130/25
75-15-0	Carbon disulfide	50	56.7	113	53.8	108	5	70-130/25
56-23-5	Carbon tetrachloride	50	59.0	118	57.3	115	3	70-130/25
108-90-7	Chlorobenzene	50	51.1	102	50.9	102	0	70-130/25
75-00-3	Chloroethane	50	62.7	125	60.6	121	3	70-130/25
110-75-8	2-Chloroethyl vinyl ether	50	93.7	187* b	93.2	186* b	1	70-130/25
67-66-3	Chloroform	50	55.9	112	54.3	109	3	70-130/25
74-87-3	Chloromethane	50	60.9	122	59.2	118	3	70-130/25
95-49-8	o-Chlorotoluene	50	51.0	102	50.1	100	2	70-130/25
106-43-4	p-Chlorotoluene	50	53.5	107	52.9	106	1	70-130/25
124-48-1	Dibromochloromethane	50	45.0	90	45.0	90	0	70-130/25
95-50-1	1,2-Dichlorobenzene	50	52.9	106	52.5	105	1	70-130/25
541-73-1	1,3-Dichlorobenzene	50	53.4	107	52.4	105	2	70-130/25
106-46-7	1,4-Dichlorobenzene	50	54.4	109	54.2	108	0	70-130/25
75-71-8	Dichlorodifluoromethane	50	63.7	127	61.7	123	3	70-130/25
75-34-3	1,1-Dichloroethane	50	57.0	114	55.2	110	3	70-130/25
107-06-2	1,2-Dichloroethane	50	61.6	123	60.6	121	2	70-130/25
75-35-4	1,1-Dichloroethene	50	55.0	110	53.0	106	4	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	53.1	106	51.3	103	3	70-130/25
156-60-5	trans-1,2-Dichloroetbene	50	54.7	109	52.4	105	4	70-130/25
78-87-5	1,2-Dichloropropane	50	54.6	109	54.0	108	1	70-130/25
142-28-9	1,3-Dichloropropane	50	50.2	100	50.5	101	1	70-130/25
594-20-7	2,2-Dichloropropane	50	50.7	101	48.4	97	5	70-130/25
563-58-6	1,1-Dichloropropene	50	60.4	121	58.3	117	4	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV944-BS	V24687.D	1	10/30/13	AMY	n/a	n/a	MSV944
MSV944-BSD	V24688.D	1	10/30/13	AMY	n/a	n/a	MSV944

The QC reported here applies to the following samples: Method: SW846 8260B

MC25412-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	50	58.2	116	57.8	116	1	70-130/25
10061-02-6	trans-1,3-Dichloropropene	50	49.1	98	48.9	98	0	70-130/25
123-91-1	1,4-Dioxane	250	238	95	228	91	4	70-130/25
97-63-2	Ethyl methacrylate	50	52.6	105	52.8	106	0	77-137/25
100-41-4	Ethylbenzene	50	54.6	109	53.7	107	2	70-130/25
87-68-3	Hexachlorobutadiene	50	63.7	127	67.1	134* a	5	70-130/25
591-78-6	2-Hexanone	50	56.3	113	57.3	115	2	70-130/25
98-82-8	Isopropylbenzene	50	54.7	109	53.3	107	3	70-130/25
99-87-6	p-Isopropyltoluene	50	57.0	114	56.4	113	1	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	47.6	95	47.2	94	1	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	54.7	109	55.5	111	1	70-130/25
74-95-3	Methylene bromide	50	56.6	113	56.1	112	1	70-130/25
75-09-2	Methylene chloride	50	51.9	104	50.6	101	3	70-130/25
91-20-3	Naphthalene	50	59.5	119	62.8	126	5	70-130/25
103-65-1	n-Propylbenzene	50	51.9	104	50.1	100	4	70-130/25
100-42-5	Styrene	50	50.0	100	49.4	99	1	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	49.0	98	48.9	98	0	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	54.4	109	54.3	109	0	70-130/25
127-18-4	Tetrachloroethene	50	54.6	109	53.7	107	2	70-130/25
108-88-3	Toluene	50	54.7	109	53.4	107	2	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	60.0	120	65.4	131* a	9	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	60.9	122	64.3	129	5	70-130/25
71-55-6	1,1,1-Trichloroethane	50	57.9	116	54.9	110	5	70-130/25
79-00-5	1,1,2-Trichloroethane	50	55.1	110	54.6	109	1	70-130/25
79-01-6	Trichloroethene	50	58.6	117	57.3	115	2	70-130/25
75-69-4	Trichlorofluoromethane	50	70.2	140* a	67.7	135* a	4	70-130/25
96-18-4	1,2,3-Trichloropropane	50	52.0	104	52.0	104	0	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	54.2	108	53.2	106	2	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	55.0	110	54.2	108	1	70-130/25
108-05-4	Vinyl Acetate	50	52.3	105	51.5	103	2	70-130/25
75-01-4	Vinyl chloride	50	53.1	106	50.8	102	4	70-130/25
	m,p-Xylene	100	106	106	105	105	1	70-130/25
95-47-6	o-Xylene	50	52.1	104	51.5	103	1	70-130/25
1330-20-7	Xylene (total)	150	158	105	156	104	1	70-130/25

* = Outside of Control Limits.

6.2.1

6

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV944-BS	V24687.D	1	10/30/13	AMY	n/a	n/a	MSV944
MSV944-BSD	V24688.D	1	10/30/13	AMY	n/a	n/a	MSV944

The QC reported here applies to the following samples: Method: SW846 8260B

MC25412-2

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	94%	93%	70-130%
2037-26-5	Toluene-D8	96%	96%	70-130%
460-00-4	4-Bromofluorobenzene	87%	85%	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: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV946-BS	V24737.D	1	10/31/13	AMY	n/a	n/a	MSV946
MSV946-BSD	V24738.D	1	10/31/13	AMY	n/a	n/a	MSV946

The QC reported here applies to the following samples: Method: SW846 8260B

MC25412-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	37.1	74	37.7	75	2	70-130/25
107-02-8	Acrolein	250	49.2	20* a	51.6	21* a	5	70-130/25
107-13-1	Acrylonitrile	50	84.6	169* b	85.3	171* b	1	70-130/25
71-43-2	Benzene	50	54.9	110	53.5	107	3	70-130/25
108-86-1	Bromobenzene	50	55.5	111	54.6	109	2	70-130/25
74-97-5	Bromochloromethane	50	52.6	105	51.8	104	2	70-130/25
75-27-4	Bromodichloromethane	50	58.4	117	57.8	116	1	70-130/25
75-25-2	Bromoform	50	38.3	77	38.8	78	1	70-130/25
74-83-9	Bromomethane	50	65.3	131* a	63.4	127	3	70-130/25
78-93-3	2-Butanone (MEK)	50	41.0	82	41.9	84	2	70-130/25
104-51-8	n-Butylbenzeue	50	53.6	107	53.7	107	0	70-130/25
135-98-8	sec-Butylbenzene	50	53.0	106	52.2	104	2	70-130/25
98-06-6	tert-Butylbenzene	50	53.7	107	52.8	106	2	70-130/25
75-15-0	Carbon disulfide	50	56.6	113	55.3	111	2	70-130/25
56-23-5	Carbon tetrachloride	50	58.1	116	56.6	113	3	70-130/25
108-90-7	Chlorobenzene	50	51.9	104	50.6	101	3	70-130/25
75-00-3	Chloroethane	50	61.9	124	59.3	119	4	70-130/25
110-75-8	2-Chloroethyl vinyl ether	50	88.9	178* a	88.1	176* a	1	70-130/25
67-66-3	Chloroform	50	55.0	110	53.9	108	2	70-130/25
74-87-3	Chloromethane	50	61.1	122	57.8	116	6	70-130/25
95-49-8	o-Chlorotoluene	50	49.8	100	49.2	98	1	70-130/25
106-43-4	p-Chlorotoluene	50	52.1	104	51.3	103	2	70-130/25
124-48-1	Dibromochloromethane	50	43.2	86	43.2	86	0	70-130/25
95-50-1	1,2-Dichlorobenzene	50	51.4	103	51.7	103	1	70-130/25
541-73-1	1,3-Dichlorobenzene	50	52.0	104	51.6	103	1	70-130/25
106-46-7	1,4-Dichlorobenzene	50	53.4	107	53.1	106	1	70-130/25
75-71-8	Dichlorodifluoromethane	50	61.1	122	59.7	119	2	70-130/25
75-34-3	1,1-Dichloroethane	50	56.8	114	55.1	110	3	70-130/25
107-06-2	1,2-Dichloroethane	50	59.0	118	58.0	116	2	70-130/25
75-35-4	1,1-Dichloroethene	50	55.9	112	54.1	108	3	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	52.9	106	51.8	104	2	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	54.4	109	53.0	106	3	70-130/25
78-87-5	1,2-Dichloropropane	50	54.5	109	53.3	107	2	70-130/25
142-28-9	1,3-Dichloropropane	50	49.4	99	49.4	99	0	70-130/25
594-20-7	2,2-Dichloropropane	50	40.5	81	39.2	78	3	70-130/25
563-58-6	1,1-Dichloropropene	50	59.9	120	58.0	116	3	70-130/25

* = Outside of Control Limits.

6.2.2

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV946-BS	V24737.D	1	10/31/13	AMY	n/a	n/a	MSV946
MSV946-BSD	V24738.D	1	10/31/13	AMY	n/a	n/a	MSV946

The QC reported here applies to the following samples: Method: SW846 8260B

MC25412-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	50	55.0	110	54.2	108	1	70-130/25
10061-02-6	trans-1,3-Dichloropropene	50	45.6	91	45.2	90	1	70-130/25
123-91-1	1,4-Dioxane	250	203	81	220	88	8	70-130/25
97-63-2	Ethyl methacrylate	50	50.0	100	50.5	101	1	77-137/25
100-41-4	Ethylbenzene	50	54.5	109	53.3	107	2	70-130/25
87-68-3	Hexachlorobutadiene	50	63.2	126	63.6	127	1	70-130/25
591-78-6	2-Hexanone	50	39.6	79	39.3	79	1	70-130/25
98-82-8	Isopropylbenzene	50	53.8	108	53.0	106	1	70-130/25
99-87-6	p-Isopropyltoluene	50	55.2	110	54.8	110	1	70-130/25
1634-04-4	Methyl Tert Bntyl Ether	50	46.0	92	46.2	92	0	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	48.7	97	49.3	99	1	70-130/25
74-95-3	Methylene bromide	50	54.7	109	54.3	109	1	70-130/25
75-09-2	Methylene chloride	50	51.9	104	50.8	102	2	70-130/25
91-20-3	Naphthalene	50	57.1	114	60.9	122	6	70-130/25
103-65-1	n-Propylbenzene	50	49.8	100	49.1	98	1	70-130/25
100-42-5	Styrene	50	50.3	101	49.2	98	2	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	49.0	98	47.7	95	3	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	49.0	98	51.3	103	5	70-130/25
127-18-4	Tetrachloroethene	50	54.9	110	53.7	107	2	70-130/25
108-88-3	Tolnene	50	54.4	109	53.0	106	3	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	58.4	117	62.4	125	7	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	58.9	118	61.3	123	4	70-130/25
71-55-6	1,1,1-Trichloroethane	50	57.0	114	55.6	111	2	70-130/25
79-00-5	1,1,2-Trichloroethane	50	53.6	107	53.3	107	1	70-130/25
79-01-6	Trichloroethene	50	60.5	121	57.3	115	5	70-130/25
75-69-4	Trichlorofluoromethane	50	63.7	127	61.9	124	3	70-130/25
96-18-4	1,2,3-Trichloropropane	50	46.7	93	47.1	94	1	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	53.2	106	52.0	104	2	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	54.2	108	53.2	106	2	70-130/25
108-05-4	Vinyl Acetate	50	42.8	86	48.0	96	11	70-130/25
75-01-4	Vinyl chloride	50	51.4	103	49.5	99	4	70-130/25
	m,p-Xylene	100	107	107	105	105	2	70-130/25
95-47-6	o-Xylene	50	52.5	105	51.6	103	2	70-130/25
1330-20-7	Xylene (total)	150	159	106	156	104	2	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV946-BS	V24737.D	1	10/31/13	AMY	n/a	n/a	MSV946
MSV946-BSD	V24738.D	1	10/31/13	AMY	n/a	n/a	MSV946

The QC reported here applies to the following samples: Method: SW846 8260B

MC25412-1

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	92%	92%	70-130%
2037-26-5	Toluene-D8	95%	95%	70-130%
460-00-4	4-Bromofluorobenzene	86%	86%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.
(b) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25418-5MS	V24697.D	1	10/30/13	AMY	n/a	n/a	MSV944
MC25418-5MSD	V24698.D	1	10/30/13	AMY	n/a	n/a	MSV944
MC25418-5	V24694.D	1	10/30/13	AMY	n/a	n/a	MSV944

The QC reported here applies to the following samples: Method: SW846 8260B

MC25412-2

CAS No.	Compound	MC25418-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	22.6	45* [a]	22.7	45* [a]	0	70-130/30
107-02-8	Acrolein	ND		250	47.5	19* [a]	46.6	19* [a]	2	70-130/30
107-13-1	Acrylonitrile	ND		50	89.7	179* [a]	89.0	178* [a]	1	70-130/30
71-43-2	Benzene	ND		50	54.0	108	52.7	105	2	70-130/30
108-86-1	Bromobenzene	ND		50	55.4	111	54.1	108	2	70-130/30
74-97-5	Bromochloromethane	ND		50	52.8	106	52.4	105	1	70-130/30
75-27-4	Bromodichloromethane	ND		50	59.0	118	57.8	116	2	70-130/30
75-25-2	Bromoform	ND		50	41.0	82	41.3	83	1	70-130/30
74-83-9	Bromomethane	ND		50	62.0	124	61.4	123	1	70-130/30
78-93-3	2-Butanone (MEK)	ND		50	35.7	71	35.5	71	1	70-130/30
104-51-8	n-Butylbenzene	ND		50	54.9	110	53.5	107	3	70-130/30
135-98-8	sec-Butylbenzene	ND		50	52.7	105	51.1	102	3	70-130/30
98-06-6	tert-Butylbenzene	ND		50	53.1	106	51.9	104	2	70-130/30
75-15-0	Carbon disulfide	ND		50	56.4	113	55.3	111	2	70-130/30
56-23-5	Carbon tetrachloride	ND		50	60.3	121	59.0	118	2	70-130/30
108-90-7	Chlorobenzene	ND		50	50.2	100	50.2	100	0	70-130/30
75-00-3	Chloroethane	ND		50	57.9	116	57.5	115	1	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		50	ND	0* [a]	ND	0* [a]	nc	70-130/30
67-66-3	Chloroform	ND		50	54.7	109	53.9	108	1	70-130/30
74-87-3	Chloromethane	ND		50	57.3	115	55.8	112	3	70-130/30
95-49-8	o-Chlorotoluene	ND		50	49.9	100	48.4	97	3	70-130/30
106-43-4	p-Chlorotoluene	ND		50	52.0	104	50.5	101	3	70-130/30
124-48-1	Dibromochloromethane	ND		50	44.1	88	44.1	88	0	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		50	50.8	102	50.7	101	0	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		50	51.4	103	50.7	101	1	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		50	53.3	107	52.1	104	2	70-130/30
75-71-8	Dichlorodifluoromethane	ND		50	61.6	123	59.5	119	3	70-130/30
75-34-3	1,1-Dichloroethane	2.2		50	57.8	111	57.3	110	1	70-130/30
107-06-2	1,2-Dichloroethane	ND		50	60.6	121	59.7	119	1	70-130/30
75-35-4	1,1-Dichloroethene	0.74		50	56.4	111	55.2	109	2	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50	51.8	104	50.7	101	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50	53.4	107	52.8	106	1	70-130/30
78-87-5	1,2-Dichloropropane	ND		50	54.0	108	52.9	106	2	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	49.5	99	49.7	99	0	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	49.6	99	48.9	98	1	70-130/30
563-58-6	1,1-Dichloropropene	ND		50	61.3	123	59.3	119	3	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25418-5MS	V24697.D	1	10/30/13	AMY	n/a	n/a	MSV944
MC25418-5MSD	V24698.D	1	10/30/13	AMY	n/a	n/a	MSV944
MC25418-5	V24694.D	1	10/30/13	AMY	n/a	n/a	MSV944

The QC reported here applies to the following samples: Method: SW846 8260B

MC25412-2

CAS No.	Compound	MC25418-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		50	56.7	113	56.0	112	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		50	48.3	97	48.2	96	0	70-130/30
123-91-1	1,4-Dioxane	ND		250	208	83	223	89	7	70-130/30
97-63-2	Ethyl methacrylate	ND		50	53.7	107	52.7	105	2	72-139/30
100-41-4	Ethylbenzene	ND		50	53.8	108	52.9	106	2	70-130/30
87-68-3	Hexachlorobutadiene	ND		50	59.0	118	58.3	117	1	70-130/30
591-78-6	2-Hexanone	ND		50	36.4	73	36.5	73	0	70-130/30
98-82-8	Isopropylbenzene	ND		50	53.7	107	52.2	104	3	70-130/30
99-87-6	p-Isopropyltoluene	ND		50	54.6	109	53.6	107	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		50	46.8	94	46.8	94	0	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	53.4	107	52.5	105	2	70-130/30
74-95-3	Methylene bromide	ND		50	56.0	112	55.1	110	2	70-130/30
75-09-2	Methylene chloride	ND		50	50.5	101	50.1	100	1	70-130/30
91-20-3	Naphthalene	ND		50	58.7	117	61.7	123	5	70-130/30
103-65-1	n-Propylbenzene	ND		50	50.2	100	48.6	97	3	70-130/30
100-42-5	Styrene	ND		50	49.1	98	48.3	97	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	48.3	97	47.7	95	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	53.7	107	53.8	108	0	70-130/30
127-18-4	Tetrachloroethene	ND		50	54.8	110	53.6	107	2	70-130/30
108-88-3	Toluene	ND		50	53.9	108	52.8	106	2	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	50.7	101	59.4	119	16	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	55.5	111	59.6	119	7	70-130/30
71-55-6	1,1,1-Trichloroethane	3.8		50	61.7	116	60.2	113	2	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50	54.2	108	53.8	108	1	70-130/30
79-01-6	Trichloroethene	ND		50	58.1	116	56.5	113	3	70-130/30
75-69-4	Trichlorofluoromethane	ND		50	64.4	129	62.0	124	4	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		50	51.3	103	50.3	101	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		50	52.5	105	51.1	102	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		50	53.6	107	52.4	105	2	70-130/30
108-05-4	Vinyl Acetate	ND		50	50.9	102	50.2	100	1	70-130/30
75-01-4	Vinyl chloride	ND		50	49.1	98	47.9	96	2	70-130/30
	m,p-Xylene	ND		100	104	104	103	103	1	70-130/30
95-47-6	o-Xylene	ND		50	50.7	101	50.3	101	1	70-130/30
1330-20-7	Xylene (total)	ND		150	155	103	153	102	1	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25418-5MS	V24697.D	1	10/30/13	AMY	n/a	n/a	MSV944
MC25418-5MSD	V24698.D	1	10/30/13	AMY	n/a	n/a	MSV944
MC25418-5	V24694.D	1	10/30/13	AMY	n/a	n/a	MSV944

The QC reported here applies to the following samples: Method: SW846 8260B

MC25412-2

CAS No.	Surrogate Recoveries	MS	MSD	MC25418-5	Limits
1868-53-7	Dibromofluoromethane	94%	93%	95%	70-130%
2037-26-5	Toluene-D8	95%	96%	95%	70-130%
460-00-4	4-Bromofluorobenzene	86%	86%	91%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

6.3.1

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* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25412-1MS	V24748.D	5	10/31/13	AMY	n/a	n/a	MSV946
MC25412-1MSD	V24749.D	5	10/31/13	AMY	n/a	n/a	MSV946
MC25412-1	V24742.D	1	10/31/13	AMY	n/a	n/a	MSV946

The QC reported here applies to the following samples: Method: SW846 8260B

MC25412-1

CAS No.	Compound	MC25412-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	4.7	J	250	132	51* a	137	53* a	4	70-130/30
107-02-8	Acrolein	ND		1250	236	19* a	246	20* a	4	70-130/30
107-13-1	Acrylonitrile	ND		250	458	183* a	467	187* a	2	70-130/30
71-43-2	Benzene	0.74		250	277	111	274	109	1	70-130/30
108-86-1	Bromobenzene	ND		250	277	111	279	112	1	70-130/30
74-97-5	Bromochloromethane	ND		250	269	108	270	108	0	70-130/30
75-27-4	Bromodichloromethane	ND		250	299	120	298	119	0	70-130/30
75-25-2	Bromoform	ND		250	199	80	202	81	1	70-130/30
74-83-9	Bromomethane	ND		250	328	131* a	324	130	1	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	177	71	183	73	3	70-130/30
104-51-8	n-Butylbenzene	ND		250	277	111	279	112	1	70-130/30
135-98-8	sec-Butylbenzene	ND		250	266	106	267	107	0	70-130/30
98-06-6	tert-Butylbenzene	ND		250	267	107	268	107	0	70-130/30
75-15-0	Carbon disulfide	ND		250	291	116	286	114	2	70-130/30
56-23-5	Carbon tetrachloride	ND		250	307	123	303	121	1	70-130/30
108-90-7	Chlorobenzene	ND		250	261	104	259	104	1	70-130/30
75-00-3	Chloroethane	ND		250	308	123	301	120	2	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	ND	0* a	ND	0* a	nc	70-130/30
67-66-3	Chloroform	ND		250	280	112	278	111	1	70-130/30
74-87-3	Chloromethane	ND		250	314	126	300	120	5	70-130/30
95-49-8	o-Chlorotoluene	ND		250	250	100	249	100	0	70-130/30
106-43-4	p-Chlorotoluene	ND		250	261	104	261	104	0	70-130/30
124-48-1	Dibromochloromethane	ND		250	222	89	226	90	2	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	256	102	263	105	3	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	259	104	261	104	1	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	269	108	270	108	0	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	347	139* a	340	136* a	2	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	289	116	286	114	1	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	307	123	303	121	1	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	288	115	287	115	0	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	266	106	266	106	0	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	278	111	274	110	1	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	275	110	273	109	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	255	102	257	103	1	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	257	103	257	103	0	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	311	124	305	122	2	70-130/30

* = Outside of Control Limits.

6.3.2

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Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25412-1MS	V24748.D	5	10/31/13	AMY	n/a	n/a	MSV946
MC25412-1MSD	V24749.D	5	10/31/13	AMY	n/a	n/a	MSV946
MC25412-1	V24742.D	1	10/31/13	AMY	n/a	n/a	MSV946

The QC reported here applies to the following samples: Method: SW846 8260B

MC25412-1

CAS No.	Compound	MC25412-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	285	114	285	114	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	243	97	245	98	1	70-130/30
123-91-1	1,4-Dioxane	ND		1250	1060	85	1070	86	1	70-130/30
97-63-2	Ethyl methacrylate	ND		250	267	107	270	108	1	72-139/30
100-41-4	Ethylbenzene	ND		250	275	110	274	110	0	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	308	123	323	129	5	70-130/30
591-78-6	2-Hexanone	ND		250	183	73	190	76	4	70-130/30
98-82-8	Isopropylbenzene	ND		250	270	108	270	108	0	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	276	110	279	112	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	3.6		250	243	96	247	97	2	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	264	106	273	109	3	70-130/30
74-95-3	Methylene bromide	ND		250	284	114	284	114	0	70-130/30
75-09-2	Methylene chloride	ND		250	262	105	261	104	0	70-130/30
91-20-3	Naphthalene	ND		250	248	99	316	126	24	70-130/30
103-65-1	n-Propylbenzene	ND		250	252	101	252	101	0	70-130/30
100-42-5	Styrene	ND		250	252	101	252	101	0	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	248	99	250	100	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	268	107	277	111	3	70-130/30
127-18-4	Tetrachloroethene	ND		250	282	113	280	112	1	70-130/30
108-88-3	Toluene	ND		250	274	110	271	108	1	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	257	103	314	126	20	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	278	111	311	124	11	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	295	118	290	116	2	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	274	110	276	110	1	70-130/30
79-01-6	Trichloroethene	ND		250	295	118	292	117	1	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	354	142* [a]	342	137* [a]	3	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	243	97	251	100	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	264	106	263	105	0	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	269	108	268	107	0	70-130/30
108-05-4	Vinyl Acetate	ND		250	261	104	262	105	0	70-130/30
75-01-4	Vinyl chloride	ND		250	259	104	252	101	3	70-130/30
	m,p-Xylene	ND		500	538	108	534	107	1	70-130/30
95-47-6	o-Xylene	ND		250	261	104	264	106	1	70-130/30
1330-20-7	Xylene (total)	ND		750	799	107	798	106	0	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25412-1MS	V24748.D	5	10/31/13	AMY	n/a	n/a	MSV946
MC25412-1MSD	V24749.D	5	10/31/13	AMY	n/a	n/a	MSV946
MC25412-1	V24742.D	1	10/31/13	AMY	n/a	n/a	MSV946

The QC reported here applies to the following samples: Method: SW846 8260B

MC25412-1

CAS No.	Surrogate Recoveries	MS	MSD	MC25412-1	Limits
1868-53-7	Dibromofluoromethane	93%	94%	92%	70-130%
2037-26-5	Toluene-D8	95%	95%	95%	70-130%
460-00-4	4-Bromofluorobenzene	86%	86%	93%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

6.3.2

6

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSV944-CC937	Injection Date:	10/30/13
Lab File ID:	V24686.D	Injection Time:	08:56
Instrument ID:	GCMSV	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	563929	6.55	772796	7.73	390693	11.07	434483	13.28	61059	3.49
Upper Limit [a]	1127858	7.05	1545592	8.23	781386	11.57	868966	13.78	122118	3.99
Lower Limit [b]	281965	6.05	386398	7.23	195347	10.57	217242	12.78	30530	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
MSV944-BS	542296	6.55	746440	7.73	382572	11.07	418054	13.28	64306	3.49
MSV944-BSD	546938	6.54	745055	7.73	379672	11.07	419734	13.28	64879	3.48
MSV944-MB	527657	6.55	733571	7.73	372956	11.07	373560	13.28	55565	3.50
ZZZZZZ	513237	6.55	718798	7.73	369253	11.07	364596	13.28	53438	3.50
ZZZZZZ	524541	6.54	735538	7.73	372617	11.07	371057	13.28	54291	3.49
MC25418-5	501926	6.55	703418	7.73	360438	11.07	361513	13.28	57512	3.50
ZZZZZZ	499413	6.55	700399	7.73	359116	11.07	356991	13.28	58287	3.50
ZZZZZZ	539524	6.55	725046	7.73	369173	11.07	376912	13.28	72121	3.50
MC25418-5MS	536321	6.55	733786	7.73	377471	11.07	411939	13.28	63872	3.49
MC25418-5MSD	542897	6.55	741528	7.73	378759	11.07	421056	13.28	65227	3.49
MC25412-2	520503	6.55	725716	7.74	368901	11.07	369535	13.28	60392	3.50
ZZZZZZ	520078	6.55	731082	7.74	369664	11.07	370413	13.28	61686	3.50
ZZZZZZ	510777	6.55	710615	7.74	364907	11.07	366477	13.28	59125	3.50
ZZZZZZ	510019	6.55	716608	7.73	364855	11.07	366314	13.28	60923	3.49
ZZZZZZ	490614	6.56	690563	7.74	355167	11.07	354441	13.28	60868	3.50
ZZZZZZ	489302	6.55	680524	7.73	351709	11.07	353802	13.28	57507	3.49
ZZZZZZ	490302	6.55	689374	7.73	354214	11.07	354238	13.28	56250	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 Internal Standard Area Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSV946-CC937	Injection Date:	10/31/13
Lab File ID:	V24736.D	Injection Time:	07:01
Instrument ID:	GCMSV	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	557611	6.55	761339	7.74	385943	11.07	424088	13.28	58179	3.50
Upper Limit [a]	1115222	7.05	1522678	8.24	771886	11.57	848176	13.78	116358	4.00
Lower Limit [b]	278806	6.05	380670	7.24	192972	10.57	212044	12.78	29090	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
MSV946-BS	553944	6.55	758425	7.74	383326	11.07	426508	13.28	57715	3.49
MSV946-BSD	557447	6.55	767452	7.73	386387	11.07	429396	13.28	63028	3.49
MSV946-MB	528105	6.55	737669	7.74	372652	11.07	374152	13.28	54739	3.50
MC25412-1	518368	6.55	724434	7.74	366063	11.07	373632	13.29	56247	3.50
ZZZZZZ	517298	6.56	716726	7.74	363254	11.07	364057	13.29	49246	3.51
ZZZZZZ	520671	6.56	721261	7.74	368196	11.07	372622	13.29	54397	3.50
ZZZZZZ	514181	6.56	713862	7.74	363263	11.07	365718	13.29	53008	3.51
ZZZZZZ	512387	6.56	714024	7.74	361974	11.07	361496	13.29	53476	3.51
ZZZZZZ	504580	6.56	698951	7.74	354503	11.07	359547	13.29	57801	3.51
MC25412-1MS	525442	6.55	719341	7.74	364511	11.08	407965	13.29	65175	3.50
MC25412-1MSD	518640	6.56	717148	7.74	360526	11.08	404839	13.29	66338	3.50
ZZZZZZ	518917	6.56	721785	7.74	363455	11.08	378943	13.29	63564	3.51
ZZZZZZ	510965	6.57	711682	7.75	357286	11.08	364913	13.29	63884	3.51
ZZZZZZ	495951	6.56	690267	7.74	350588	11.08	352881	13.29	61950	3.50
ZZZZZZ	491034	6.56	691619	7.75	350613	11.08	353653	13.29	60995	3.50
ZZZZZZ	494234	6.57	685957	7.75	348179	11.08	358542	13.29	63523	3.51
ZZZZZZ	488747	6.57	685526	7.75	351399	11.08	361770	13.29	60680	3.50
ZZZZZZ	518682	6.56	715160	7.74	363838	11.08	378565	13.29	62408	3.50
ZZZZZZ	500372	6.57	703777	7.75	355334	11.08	365314	13.29	61628	3.51
ZZZZZZ	505525	6.57	713044	7.75	359654	11.08	369793	13.29	62783	3.50
ZZZZZZ	491431	6.58	691556	7.75	350723	11.08	361703	13.29	59852	3.52
ZZZZZZ	486276	6.57	681099	7.75	350441	11.08	348335	13.29	60753	3.50
ZZZZZZ	477117	6.57	677240	7.75	344660	11.08	345944	13.29	60791	3.51

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260B Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC25412-1	V24742.D	92.0	95.0	93.0
MC25412-2	V24700.D	92.0	94.0	91.0
MC25412-1MS	V24748.D	93.0	95.0	86.0
MC25412-1MSD	V24749.D	94.0	95.0	86.0
MC25418-5MS	V24697.D	94.0	95.0	86.0
MC25418-5MSD	V24698.D	93.0	96.0	86.0
MSV944-BS	V24687.D	94.0	96.0	87.0
MSV944-BSD	V24688.D	93.0	96.0	85.0
MSV944-MB	V24691.D	92.0	95.0	91.0
MSV946-BS	V24737.D	92.0	95.0	86.0
MSV946-BSD	V24738.D	92.0	95.0	86.0
MSV946-MB	V24741.D	91.0	95.0	91.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobeuzene	70-130%

6.5.1

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35324-MB	X00322.D	1	10/24/13	KR	10/18/13	OP35324	MSX17

The QC reported here applies to the following samples: Method: SW846 8270C

MC25412-1

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic Acid	ND	10	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	ug/l	
95-48-7	2-Methylphenol	ND	10	ug/l	
	3&4-Methylphenol	ND	10	ug/l	
88-75-5	2-Nitrophenol	ND	10	ug/l	
100-02-7	4-Nitrophenol	ND	20	ug/l	
87-86-5	Pentachlorophenol	ND	10	ug/l	
108-95-2	Phenol	ND	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	ug/l	
62-53-3	Aniline	ND	10	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	ug/l	
100-51-6	Benzyl Alcohol	ND	10	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	ug/l	
106-47-8	4-Chloroaniline	ND	10	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	ug/l	
91-94-1	3,3'-Dichlorohenzidine	ND	5.0	ug/l	
132-64-9	Dibenzofuran	ND	2.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	ug/l	
117-84-0	Di-n-octyl phtbalate	ND	5.0	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	ug/l	

Method Blank Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35324-MB	X00322.D	1	10/24/13	KR	10/18/13	OP35324	MSX17

The QC reported here applies to the following samples: Method: SW846 8270C

MC25412-1

CAS No.	Compound	Result	RL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	ug/l	
67-72-1	Hexachloroethane	ND	5.0	ug/l	
78-59-1	Isophorone	ND	5.0	ug/l	
88-74-4	2-Nitroaniline	ND	10	ug/l	
99-09-2	3-Nitroaniline	ND	10	ug/l	
100-01-6	4-Nitroaniline	ND	10	ng/l	
98-95-3	Nitrobenzene	ND	5.0	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	ug/l	
110-86-1	Pyridine	ND	10	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	43%	15-110%
4165-62-2	Phenol-d5	30%	15-110%
118-79-6	2,4,6-Tribromuphenol	70%	15-110%
4165-60-0	Nitrobenzene-d5	76%	30-130%
321-60-8	2-Fluorobiphenyl	69%	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: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35325-MB	I86586.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223

The QC reported here applies to the following samples: Method: SW846 8270C BY SIM

MC25412-1

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.10	ug/l	
208-96-8	Acenaphthylene	ND	0.10	ug/l	
120-12-7	Anthracene	ND	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	ug/l	
218-01-9	Chrysene	ND	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	ug/l	
206-44-0	Fluoranthene	ND	0.10	ug/l	
86-73-7	Fluorene	ND	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.20	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	ug/l	
85-01-8	Phenanthrene	ND	0.050	ug/l	
129-00-0	Pyrene	ND	0.10	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	46%	15-110%
4165-62-2	Phenol-d5	31%	15-110%
118-79-6	2,4,6-Tribromophenol	88%	15-110%
4165-60-0	Nitrobenzene-d5	80%	30-130%
321-60-8	2-Fluorobiphenyl	71%	30-130%
1718-51-0	Terphenyl-d14	95%	30-130%

Blank Spike Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35324-BS	X00323.D	1	10/24/13	KR	10/18/13	OP35324	MSX17

The QC reported here applies to the following samples: Method: SW846 8270C

MC25412-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	17.3	35	30-130
95-57-8	2-Chlorophenol	50	37.6	75	30-130
59-50-7	4-Chloro-3-methyl phenol	50	38.7	77	30-130
120-83-2	2,4-Dichlorophenol	50	40.8	82	30-130
105-67-9	2,4-Dimethylphenol	50	25.1	50	30-130
51-28-5	2,4-Dinitrophenol	50	38.6	77	30-130
534-52-1	4,6-Dinitro-o-cresol	50	46.0	92	30-130
95-48-7	2-Methylphenol	50	33.2	66	30-130
	3&4-Methylphenol	100	64.2	64	30-130
88-75-5	2-Nitrophenol	50	40.4	81	30-130
100-02-7	4-Nitrophenol	50	18.5	37	30-130
87-86-5	Pentachlorophenol	50	39.1	78	30-130
108-95-2	Phenol	50	17.6	35	30-130
95-95-4	2,4,5-Trichlorophenol	50	41.3	83	30-130
88-06-2	2,4,6-Trichlorophenol	50	41.6	83	30-130
62-53-3	Aniline	50	33.7	67	40-140
101-55-3	4-Bromophenyl phenyl ether	50	44.3	89	40-140
85-68-7	Butyl benzyl phthalate	50	46.1	92	40-140
100-51-6	Benzyl Alcohol	50	31.7	63	40-140
91-58-7	2-Chloronaphthalene	50	40.0	80	40-140
106-47-8	4-Chloroaniline	50	39.0	78	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	39.7	79	40-140
111-44-4	bis(2-Chloroethyl)ether	50	40.3	81	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	45.1	90	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	40.9	82	40-140
122-66-7	1,2-Diphenylhydrazine	50	39.7	79	40-140
121-14-2	2,4-Dinitrotoluene	50	44.1	88	40-140
606-20-2	2,6-Dinitrotoluene	50	41.2	82	40-140
91-94-1	3,3'-Dichlorobenzidine	50	45.0	90	40-140
132-64-9	Dibenzofuran	50	39.4	79	40-140
84-74-2	Di-n-butyl phthalate	50	43.5	87	40-140
117-84-0	Di-n-octyl phthalate	50	47.0	94	40-140
84-66-2	Diethyl phthalate	50	42.4	85	40-140
131-11-3	Dimethyl phthalate	50	34.4	69	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	49.0	98	40-140
118-74-1	Hexachlorobenzene	50	43.4	87	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35324-BS	X00323.D	1	10/24/13	KR	10/18/13	OP35324	MSX17

The QC reported here applies to the following samples: Method: SW846 8270C

MC25412-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	20.5	41	40-140
67-72-1	Hexachloroethane	50	25.7	51	40-140
78-59-1	Isophorone	50	41.0	82	40-140
88-74-4	2-Nitroaniline	50	42.2	84	40-140
99-09-2	3-Nitroaniline	50	41.7	83	40-140
100-01-6	4-Nitroaniline	50	42.9	86	40-140
98-95-3	Nitrobenzene	50	40.1	80	40-140
62-75-9	n-Nitrosodimethylamine	50	26.1	52	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	43.9	88	40-140
86-30-6	N-Nitrosodiphenylamine	50	41.5	83	40-140
110-86-1	Pyridine	50	21.9	44	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	53%	15-110%
4165-62-2	Phenol-d5	36%	15-110%
118-79-6	2,4,6-Tribromophenol	92%	15-110%
4165-60-0	Nitrobenzene-d5	87%	30-130%
321-60-8	2-Fluorobiphenyl	82%	30-130%
1718-51-0	Terphenyl-d14	103%	30-130%

7.2.1

7

* = Ontside of Control Limits.

Blank Spike Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35325-BS	I86587.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223

The QC reported here applies to the following samples: Method: SW846 8270C BY SIM

MC25412-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	39.1	78	40-140
208-96-8	Acenaphthylene	50	32.2	64	40-140
120-12-7	Anthracene	50	41.0	82	40-140
56-55-3	Benzo(a)anthracene	50	47.3	95	40-140
50-32-8	Benzo(a)pyrene	50	46.0	92	40-140
205-99-2	Benzo(b)fluoranthene	50	44.3	89	40-140
191-24-2	Benzo(g,h,i)perylene	50	52.7	105	40-140
207-08-9	Benzo(k)fluoranthene	50	49.5	99	40-140
218-01-9	Chrysene	50	43.6	87	40-140
53-70-3	Dibenzo(a,h)anthracene	50	53.9	108	40-140
206-44-0	Fluoranthene	50	42.9	86	40-140
86-73-7	Fluorene	50	42.0	84	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	53.9	108	40-140
90-12-0	1-Methylnaphthalene	50	36.6	73	40-140
91-57-6	2-Methylnaphthalene	50	34.7	69	40-140
85-01-8	Phenanthrene	50	44.5	89	40-140
129-00-0	Pyrene	50	41.5	83	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	54%	15-110%
4165-62-2	Phenol-d5	36%	15-110%
118-79-6	2,4,6-Tribromophenol	109%	15-110%
4165-60-0	Nitrobenzene-d5	93%	30-130%
321-60-8	2-Fluorobiphenyl	82%	30-130%
1718-51-0	Terphenyl-d14	105%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35324-MS	X00324.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
OP35324-MSD	X00325.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
MC25100-13	X00329.D	1	10/24/13	KR	10/18/13	OP35324	MSX17

The QC reported here applies to the following samples: Method: SW846 8270C

MC25412-1

CAS No.	Compound	MC25100-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	18.2	36	18.9	38	4	30-130/20
95-57-8	2-Chlorophenol	ND		50	38.3	77	38.2	76	0	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	40.2	80	40.7	81	1	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	41.8	84	41.8	84	0	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	31.1	62	28.4	57	9	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	40.0	80	41.4	83	3	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	47.2	94	49.6	99	5	30-130/20
95-48-7	2-Methylphenol	ND		50	34.1	68	34.0	68	0	30-130/20
	3&4-Methylphenol	ND		100	66.2	66	65.2	65	2	30-130/20
88-75-5	2-Nitrophenol	ND		50	42.0	84	41.6	83	1	30-130/20
100-02-7	4-Nitrophenol	ND		50	18.8	38	20.0	40	6	30-130/20
87-86-5	Pentachlorophenol	ND		50	40.4	81	41.2	82	2	30-130/20
108-95-2	Phenol	ND		50	18.1	36	18.1	36	0	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	43.0	86	42.5	85	1	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	42.3	85	43.5	87	3	30-130/20
62-53-3	Aniline	ND		50	34.4	69	32.4	65	6	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	43.9	88	43.6	87	1	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	46.8	94	46.4	93	1	40-140/20
100-51-6	Benzyl Alcohol	ND		50	31.6	63	31.0	62	2	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	39.2	78	39.3	79	0	40-140/20
106-47-8	4-Chloroaniline	ND		50	39.8	80	39.0	78	2	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	40.6	81	39.5	79	3	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	40.6	81	39.6	79	2	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	45.6	91	44.8	90	2	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	40.7	81	41.1	82	1	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	39.3	79	39.9	80	2	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	44.5	89	44.6	89	0	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	41.9	84	42.1	84	0	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	48.3	97	48.5	97	0	40-140/20
132-64-9	Dibenzofuran	ND		50	39.2	78	39.1	78	0	40-140/20
84-74-2	Di-n-bntyl phthalate	ND		50	44.1	88	44.5	89	1	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	48.3	97	48.0	96	1	40-140/20
84-66-2	Diethyl phthalate	ND		50	43.1	86	42.3	85	2	40-140/20
131-11-3	Dimethyl phthalate	ND		50	36.7	73	34.8	70	5	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	49.8	100	49.4	99	1	40-140/20
118-74-1	Hexachlorobenzene	ND		50	42.8	86	43.1	86	1	40-140/20

* = Ontside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35324-MS	X00324.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
OP35324-MSD	X00325.D	1	10/24/13	KR	10/18/13	OP35324	MSX17
MC25100-13	X00329.D	1	10/24/13	KR	10/18/13	OP35324	MSX17

The QC reported here applies to the following samples: Method: SW846 8270C

MC25412-1

CAS No.	Compound	MC25100-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	20.6	41	21.0	42	2	40-140/20
67-72-1	Hexachloroethane	ND		50	25.8	52	25.3	51	2	40-140/20
78-59-1	Isophorone	ND		50	41.9	84	41.5	83	1	40-140/20
88-74-4	2-Nitroaniline	ND		50	42.6	85	42.6	85	0	40-140/20
99-09-2	3-Nitroaniline	ND		50	41.1	82	41.6	83	1	40-140/20
100-01-6	4-Nitroaniline	ND		50	43.5	87	43.8	88	1	40-140/20
98-95-3	Nitrobenzene	ND		50	41.3	83	40.6	81	2	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	26.0	52	25.5	51	2	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	43.7	87	43.0	86	2	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	41.4	83	42.0	84	1	40-140/20
110-86-1	Pyridine	ND		50	22.4	45	20.9	42	7	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25100-13	Limits
367-12-4	2-Fluorophenol	52%	51%	52%	15-110%
4165-62-2	Phenol-d5	35%	35%	35%	15-110%
118-79-6	2,4,6-Tribromophenol	89%	90%	87%	15-110%
4165-60-0	Nitrobenzene-d5	87%	85%	90%	30-130%
321-60-8	2-Fluorobiphenyl	79%	73%	79%	30-130%
1718-51-0	Terphenyl-d14	102%	98%	105%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35325-MS	I86588.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223
OP35325-MSD	I86589.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223
MC25100-14	I86590.D	1	10/23/13	WK	10/18/13	OP35325	MSI3223

The QC reported here applies to the following samples: Method: SW846 8270C BY SIM

MC25412-1

CAS No.	Compound	MC25100-14 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	39.1	78	38.7	77	1	40-140/20
208-96-8	Acenaphthylene	ND		50	32.6	65	32.0	64	2	40-140/20
120-12-7	Anthracene	ND		50	41.3	83	41.1	82	0	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	48.1	96	47.4	95	1	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	46.7	93	45.9	92	2	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	49.5	99	48.3	97	2	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	52.9	106	52.7	105	0	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	46.5	93	45.2	90	3	40-140/20
218-01-9	Chrysene	ND		50	44.5	89	43.9	88	1	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	54.3	109	53.9	108	1	40-140/20
206-44-0	Fluoranthene	ND		50	43.3	87	43.4	87	0	40-140/20
86-73-7	Fluorene	ND		50	42.4	85	41.6	83	2	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	54.4	109	54.1	108	1	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	36.7	73	36.4	73	1	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	34.7	69	34.2	68	1	40-140/20
85-01-8	Phenanthrene	ND		50	44.1	88	44.4	89	1	40-140/20
129-00-0	Pyrene	ND		50	42.3	85	41.8	84	1	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC25100-14	Limits
367-12-4	2-Fluorophenol	53%	52%	52%	15-110%
4165-62-2	Phenol-d5	35%	35%	35%	15-110%
118-79-6	2,4,6-Tribromophenol	106%	106%	101%	15-110%
4165-60-0	Nitrobenzene-d5	90%	89%	93%	30-130%
321-60-8	2-Fluorobiphenyl	79%	72%	83%	30-130%
1718-51-0	Terphenyl-d14	106%	103%	108%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3223-CC3155	Injection Date:	10/23/13
Lab File ID:	I86585.D	Injection Time:	10:17
Instrument ID:	GCMSI	Method:	SW846 8270C 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	247426	4.06	704374	5.05	415711	6.49	703617	7.84	617269	10.62	1053680	12.09
Upper Limit [a]	494852	4.56	1408748	5.55	831422	6.99	1407234	8.34	1234538	11.12	2107360	12.59
Lower Limit [b]	123713	3.56	352187	4.55	207856	5.99	351809	7.34	308635	10.12	526840	11.59
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
OP35325-MB	167780	4.06	483466	5.05	278676	6.49	477398	7.84	430142	10.62	734691	12.09
OP35325-BS	161755	4.06	457481	5.05	266795	6.49	453211	7.84	392418	10.62	684862	12.09
OP35325-MS	162204	4.06	463789	5.05	269360	6.49	462970	7.84	398445	10.62	687327	12.09
OP35325-MSD	168288	4.06	482900	5.05	279553	6.49	471918	7.84	405133	10.62	706104	12.09
MC25100-14	153794	4.06	441580	5.05	253786	6.49	435716	7.83	372397	10.62	644057	12.09
ZZZZZZ	170386	4.06	486721	5.05	280097	6.49	472498	7.83	409948	10.62	724339	12.09
ZZZZZZ	157562	4.06	454466	5.05	261468	6.49	445091	7.83	385131	10.62	660790	12.09
ZZZZZZ	164924	4.06	474705	5.05	265405	6.49	442549	7.84	378030	10.62	675725	12.09
ZZZZZZ	158221	4.06	461091	5.05	264584	6.49	446069	7.83	389861	10.62	691779	12.09
ZZZZZZ	158669	4.06	458921	5.05	267628	6.49	445096	7.83	385019	10.62	673243	12.09
ZZZZZZ	148590	4.06	422407	5.05	248910	6.49	415497	7.83	370108	10.62	644405	12.09
ZZZZZZ	175097	4.06	501900	5.05	290981	6.49	490477	7.84	432123	10.62	743387	12.09
MC25412-1	146970	4.06	424712	5.05	243799	6.49	422053	7.84	368435	10.62	636181	12.10
ZZZZZZ	147497	4.06	426058	5.05	247031	6.49	417655	7.83	369437	10.61	635930	12.09
OP35376-MB	191363	4.06	556442	5.05	321227	6.49	537264	7.84	452073	10.62	744015	12.09
OP35378-MB	191363	4.06	556442	5.05	321227	6.49	537264	7.84	452073	10.62	744015	12.09
OP35378-BS	200697	4.06	570312	5.05	330820	6.49	559764	7.84	459020	10.62	764535	12.09
OP35378-MS	193322	4.06	546482	5.05	307231	6.49	498518	7.84	385718	10.62	566415	12.10
OP35378-MSD	189171	4.06	545579	5.05	306596	6.49	490948	7.84	397114	10.62	547156	12.10
MC25506-12	177249	4.06	510719	5.05	288617	6.49	465578	7.84	380208	10.62	527643	12.10
ZZZZZZ	190832	4.06	546673	5.05	306431	6.49	484315	7.84	381914	10.62	604839	12.10
ZZZZZZ	162010	4.06	472814	5.05	270884	6.49	446316	7.84	364043	10.62	648900	12.09
ZZZZZZ	157963	4.06	461937	5.05	264973	6.49	437572	7.84	364833	10.62	636442	12.09
ZZZZZZ	160455	4.06	468436	5.05	265685	6.49	440630	7.84	369124	10.62	647340	12.09
ZZZZZZ	148216	4.06	430312	5.05	255642	6.49	441076	7.84	412089	10.62	681710	12.09
ZZZZZZ	177280	4.06	513715	5.05	300893	6.49	516755	7.84	466449	10.62	795995	12.10

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minntes.

Semivolatile Internal Standard Area Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3223-CC3155	Injection Date:	10/23/13
Lab File ID:	I86585.D	Injection Time:	10:17
Instrument ID:	GCMSI	Method:	SW846 8270C 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.

Semivolatile Internal Standard Area Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSX17-CC16	Injection Date:	10/24/13
Lab File ID:	X00321.D	Injection Time:	13:28
Instrument ID:	GCMSX	Method:	SW846 8270C

	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	393756	4.20	1524945	5.27	849346	6.80	1340988	8.10	1356348	10.72	1193495	12.45
Upper Limit [a]	787512	4.70	3049890	5.77	1698692	7.30	2681976	8.60	2712696	11.22	2386990	12.95
Lower Limit [b]	196878	3.70	762473	4.77	424673	6.30	670494	7.60	678174	10.22	596748	11.95
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP35324-MB	348913	4.20	1358155	5.27	749224	6.80	1172854	8.09	1187179	10.72	1050288	12.44
OP35324-BS	406317	4.20	1599074	5.27	868936	6.80	1358242	8.10	1278790	10.72	1128567	12.44
OP35324-MS	401903	4.20	1557031	5.27	853069	6.80	1345094	8.10	1267706	10.72	1107341	12.44
OP35324-MSD	421007	4.20	1624530	5.27	888947	6.80	1401614	8.10	1353844	10.72	1199999	12.45
ZZZZZZ	446823	4.20	1767372	5.27	966254	6.80	1478787	8.09	1343244	10.72	1123098	12.45
ZZZZZZ	496346	4.20	1904055	5.27	1002341	6.80	1477971	8.09	1236888	10.72	1034027	12.44
ZZZZZZ	528688	4.20	2058068	5.26	1086046	6.80	1622282	8.10	1390298	10.72	1155053	12.44
MC25100-13	397362	4.20	1548666	5.27	850481	6.80	1293957	8.09	1199590	10.72	1051508	12.44
ZZZZZZ	438167	4.20	1711459	5.27	924725	6.80	1402515	8.09	1348725	10.72	1222090	12.45
ZZZZZZ	431009	4.20	1656210	5.27	891757	6.80	1317056	8.09	1168045	10.72	1029944	12.45
ZZZZZZ	414462	4.20	1619286	5.27	863742	6.80	1300070	8.10	1223065	10.72	1140668	12.45
ZZZZZZ	437353	4.20	1676484	5.27	895759	6.80	1341394	8.10	1235275	10.72	1128999	12.45
ZZZZZZ	432173	4.20	1667549	5.27	888628	6.80	1316119	8.09	1228887	10.72	1131980	12.44
ZZZZZZ	376004	4.20	1445367	5.27	798850	6.80	1205202	8.09	1185593	10.72	1063755	12.44
ZZZZZZ	460963	4.20	1784667	5.27	973824	6.80	1503880	8.10	1480813	10.72	1341507	12.44
MC25412-1	372778	4.20	1446387	5.27	816204	6.80	1283083	8.10	1309926	10.72	1156271	12.45
ZZZZZZ	362458	4.20	1428509	5.27	777414	6.80	1210220	8.09	1156121	10.72	1035478	12.44
OP35308-MB	434711	4.20	1703231	5.26	918426	6.80	1391947	8.09	1250673	10.72	1066141	12.45
OP35308-BS	473701	4.20	1856393	5.27	1002154	6.80	1537818	8.10	1360049	10.72	1186073	12.44
OP35308-MS	450021	4.20	1760378	5.27	953567	6.80	1438765	8.10	1315475	10.72	1166472	12.44
OP35308-MSD	479528	4.20	1837081	5.27	975307	6.80	1467420	8.10	1263190	10.72	1121829	12.45
MC25232-1	510744	4.20	1936060	5.27	1032922	6.80	1502363	8.10	1290647	10.72	1104662	12.44
OP35329-MB	501508	4.20	1936856	5.27	1019268	6.80	1505917	8.09	1261029	10.72	1056438	12.45
OP35329-BS	538073	4.20	2067596	5.27	1095731	6.80	1645962	8.10	1414176	10.72	1252007	12.45
OP35329-MS	491939	4.20	1898872	5.27	1016364	6.80	1536040	8.10	1329285	10.72	1180174	12.45
OP35329-MSD	507409	4.20	1965490	5.27	1047447	6.80	1571557	8.10	1400640	10.72	1209211	12.45
MC25232-22	486229	4.20	1900528	5.27	994626	6.80	1493802	8.09	1314000	10.72	1107392	12.44
ZZZZZZ	444646	4.20	1710823	5.27	931487	6.80	1354265	8.09	1235865	10.72	1089021	12.45
ZZZZZZ	402652	4.20	1615542	5.27	877987	6.80	1260889	8.09	1145243	10.72	989457	12.44
ZZZZZZ	435355	4.20	1694200	5.27	862071	6.80	1349550	8.09	1184876	10.72	1016563	12.45
ZZZZZZ	430834	4.20	1657595	5.26	934887	6.80	1398491	8.09	1174399	10.72	985198	12.45

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10

Semivolatile Internal Standard Area Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSX17-CC16	Injection Date:	10/24/13
Lab File ID:	X00321.D	Injection Time:	13:28
Instrument ID:	GCMSX	Method:	SW846 8270C

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

IS 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: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC25412-1	X00337.D	41.0	31.0	92.0	72.0	69.0	94.0
OP35324-BS	X00323.D	53.0	36.0	92.0	87.0	82.0	103.0
OP35324-MB	X00322.D	43.0	30.0	70.0	76.0	69.0	93.0
OP35324-MS	X00324.D	52.0	35.0	89.0	87.0	79.0	102.0
OP35324-MSD	X00325.D	51.0	35.0	90.0	85.0	73.0	98.0

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

Semivolatile Surrogate Recovery Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270C BY SIM Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC25412-1	I86598.D	75.0	72.0	101.0
OP35325-BS	I86587.D	93.0	82.0	105.0
OP35325-MB	I86586.D	80.0	71.0	95.0
OP35325-MS	I86588.D	90.0	79.0	106.0
OP35325-MSD	I86589.D	89.0	72.0	103.0

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35363-MB	BB51795.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050

The QC reported here applies to the following samples: Method: SW846 8011

MC25412-1, MC25412-3

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobeuzene (S)	85%	36-173%
460-00-4	Bromofluorobenzene (S)	91%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35363-BS	BB51796.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050

The QC reported here applies to the following samples: Method: SW846 8011

MC25412-1, MC25412-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.070	99	60-140
106-93-4	1,2-Dibromoethane	0.071	0.074	104	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	85%	36-173%
460-00-4	Bromofluorobenzene (S)	86%	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35363-MS	BB51797.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050
OP35363-MSD	BB51798.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050
MC25100-22	BB51799.D	1	10/22/13	CZ	10/22/13	OP35363	GBB3050

The QC reported here applies to the following samples: Method: SW846 8011

MC25412-1, MC25412-3

CAS No.	Compound	MC25100-22 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.064	90	0.072	101	12	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.068	96	0.081	114	17	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC25100-22	Limits
460-00-4	Bromofluorobenzene (S)	79%	92%	89%	36-173%
460-00-4	Bromofluorobenzene (S)	78%	91%	85%	36-173%

8.3.1

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011 Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC25412-1	BB51810.D	56.0	76.0
MC25412-3	BB51811.D	85.0	82.0
OP35363-BS	BB51796.D	85.0	86.0
OP35363-MB	BB51795.D	85.0	91.0
OP35363-MS	BB51797.D	79.0	78.0
OP35363-MSD	BB51798.D	92.0	91.0

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

8.4.1

8

GC Surrogate Retention Time Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3050-ICC3050	Injection Date:	10/22/13
Lab File ID:	BB51790.D	Injection Time:	13:17
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	5.95	4.87

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB51793A.D	10/22/13	14:43	5.97	4.87
OP35363-MB	BB51795.D	10/22/13	15:39	5.97	4.87
OP35363-BS	BB51796.D	10/22/13	16:08	5.96	4.87
OP35363-MS	BB51797.D	10/22/13	16:36	5.96	4.87
OP35363-MSD	BB51798.D	10/22/13	17:05	5.94	4.87
MC25100-22	BB51799.D	10/22/13	17:34	5.93	4.87
ZZZZZZ	BB51800.D	10/22/13	18:03	5.93	4.87
ZZZZZZ	BB51801.D	10/22/13	18:33	5.93	4.87
ZZZZZZ	BB51802.D	10/22/13	19:02	5.94	4.87
ZZZZZZ	BB51803.D	10/22/13	19:31	5.93	4.87
ZZZZZZ	BB51804.D	10/22/13	19:59	5.94	4.87

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC25412
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3050-CC3050	Injection Date:	10/22/13
Lab File ID:	BB51805.D	Injection Time:	20:28
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	5.94	4.87

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB51806.D	10/22/13	20:56	5.94	4.87
ZZZZZZ	BB51807.D	10/22/13	21:25	5.94	4.87
ZZZZZZ	BB51808.D	10/22/13	21:53	5.94	4.87
ZZZZZZ	BB51809.D	10/22/13	22:22	5.94	4.87
MC25412-1	BB51810.D	10/22/13	22:51	5.94	4.87
MC25412-3	BB51811.D	10/22/13	23:20	5.94	4.87
ZZZZZZ	BB51812.D	10/22/13	23:50	5.94	4.87
GBB3050-ECC305B	BB51813.D	10/23/13	00:19	5.94	4.87

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.2

8

Roxana Groundwater Quarterly – 4th Quarter 2013 Data Review

Laboratory SDG: MC26110

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/19/2013

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008

Sample Identification	Sample Identification
P66-ROX-110713	TB-ROX-110713-HCL
TB-ROX-110713-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 that the VOC LCS recovery for 2-chloroethyl vinyl ether was outside evaluation criteria. These issues are addressed further in the appropriate sections below. Additionally, the continuing calibration verification for acrolein and acrylonitrile exceeded 40 percent difference (%D).

The cooler receipt form indicated that one of one cooler was received by the laboratory at a temperature of 0.3ºC, 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?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSN3074-BS	VOCs	2-Chloroethyl vinyl ether	**38**	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 MSN3074-BS was associated with the trip blank. Trip blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
P66-ROX-110713	VOCs	2-Chloroethyl vinyl ether	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; samples analyzed did not require dilution.

12.0 Additional Qualifications

Were additional qualifications applied?

No

New England ACCUTEST LABORATORIES



Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC26110

Sampling Date: 11/07/13

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: **38**

Reviewed on 11-19-13

Reza Rand
Lab Director

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Client Service contact: Matthew Morrell 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

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Test results relate only to samples analyzed.

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Sample Summary

Shell Oil

Job No: MC26110

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC26110-1	11/07/13	15:35	DCBS	11/08/13	AQ	Ground Water	P66-ROX-110713
MC26110-2	11/07/13	00:00	DCBS	11/08/13	AQ	Trip Blank Water	TB-ROX-110713-HCL
MC26110-3	11/07/13	00:00	DCBS	11/08/13	AQ	Trip Blank Water	TB-ROX-110713-ST

ACCUTEST LABORATORIES

2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	Job No	MC26110
Site:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central	Report Date	11/18/2013 3:02:26 PM

1 Sample(s), 2 Trip Blank(s) were collected on 11/07/2013 and were received at Accutest on 11/08/2013 properly preserved, at 0.3 Deg. C and intact. These Samples received an Accutest job number of MC26110. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane was 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: MSN3074

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC25841-1MS, MC25841-1MSD were used as the QC samples indicated.
- Blank Spike Recovery(s) for 2-Chloroethyl vinyl ether 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-Butanone (MEK), 2-Chloroethyl vinyl ether, Acetone are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Continuing calibration check standard MSN3074-CC3048 for acrolein exceed 40% Difference. Acrolein is considered a difficult analyte.
- Continuing calibration check standard MSN3074-CC3048 for acrylonitrile exceed 40% Difference (response bias high). Associated samples are non-detect this compound.

Volatiles by GC By Method SW846 8011

Matrix AQ Batch ID: OP35660

- 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) MC25769-10MS, MC25769-10MSD 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(MC26110).

Summary of Hits

Job Number: MC26110
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Collected: 11/07/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC26110-1	P66-ROX-110713					
Benzene		30.0	0.50	0.45	ug/l	SW846 8260C
n-Butylbenzene		8.8	5.0	0.54	ug/l	SW846 8260C
sec-Butylbenzene		10.2	5.0	0.58	ug/l	SW846 8260C
tert-Butylbenzene		7.1	5.0	0.87	ug/l	SW846 8260C
Chlorobenzene		0.70 J	1.0	0.48	ug/l	SW846 8260C
Ethylbenzene		1.6	1.0	0.38	ug/l	SW846 8260C
Isopropylbenzene		95.8	5.0	0.64	ug/l	SW846 8260C
Methyl Tert Butyl Ether		52.8	1.0	0.43	ug/l	SW846 8260C
Naphthalene		5.7	5.0	0.79	ug/l	SW846 8260C
n-Propylbenzene		65.8	5.0	0.59	ug/l	SW846 8260C
Toluene		0.86 J	1.0	0.46	ug/l	SW846 8260C
1,1,2-Trichloroethane		1.5	1.0	0.49	ug/l	SW846 8260C
o-Xylene		0.57 J	1.0	0.41	ug/l	SW846 8260C
Xylene (total)		0.57 J	1.0	0.41	ug/l	SW846 8260C

MC26110-2 TB-ROX-110713-HCL

No hits reported in this sample.

MC26110-3 TB-ROX-110713-ST

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P66-ROX-110713		
Lab Sample ID:	MC26110-1	Date Sampled:	11/07/13
Matrix:	AQ - Ground Water	Date Received:	11/08/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N82334.D	1	11/13/13	JB	n/a	n/a	MSN3074
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	30.0	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	8.8	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	10.2	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	7.1	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	0.70	1.0	0.48	ug/l	J
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	UJ
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethaue	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobeuzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorohenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates au 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-110713		
Lab Sample ID:	MC26110-1	Date Sampled:	11/07/13
Matrix:	AQ - Ground Water	Date Received:	11/08/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	1.6	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	95.8	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	52.8	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Napbthalene	5.7	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	65.8	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachluroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	0.86	1.0	0.46	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	1.5	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	0.57	1.0	0.41	ug/l	J
1330-20-7	Xylene (total)	0.57	1.0	0.41	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:	P66-ROX-110713		
Lab Sample ID:	MC26110-1	Date Sampled:	11/07/13
Matrix:	AQ - Ground Water	Date Received:	11/08/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	82%		70-130%
2037-26-5	Toluene-D8	91%		70-130%
460-00-4	4-Bromofluorobenzene	91%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P66-ROX-110713		
Lab Sample ID:	MC26110-1	Date Sampled:	11/07/13
Matrix:	AQ - Ground Water	Date Received:	11/08/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB52380.D	1	11/12/13	CZ	11/09/13	OP35660	GBB3070
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	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	117%		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:	TB-ROX-110713-HCL		
Lab Sample ID:	MC26110-2	Date Sampled:	11/07/13
Matrix:	AQ - Trip Blank Water	Date Received:	11/08/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N82329.D	1	11/13/13	JB	n/a	n/a	MSN3074
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanoue (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-110713-HCL		
Lab Sample ID:	MC26110-2	Date Sampled:	11/07/13
Matrix:	AQ - Trip Blank Water	Date Received:	11/08/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 Sonth Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ng/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorohenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Viuyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibratiun range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compouud

Report of Analysis

Client Sample ID:	TB-ROX-110713-HCL		
Lab Sample ID:	MC26110-2	Date Sampled:	11/07/13
Matrix:	AQ - Trip Blank Water	Date Received:	11/08/13
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	83%		70-130%
2037-26-5	Toluene-D8	88%		70-130%
460-00-4	4-Bromofluorobenzene	105%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-110713-ST		
Lab Sample ID:	MC26110-3	Date Sampled:	11/07/13
Matrix:	AQ - Trip Blank Water	Date Received:	11/08/13
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB52381.D	1	11/12/13	CZ	11/09/13	OP35660	GBB3070
Run #2							

	Initial Volume	Final Volume
Run #1	35.0 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

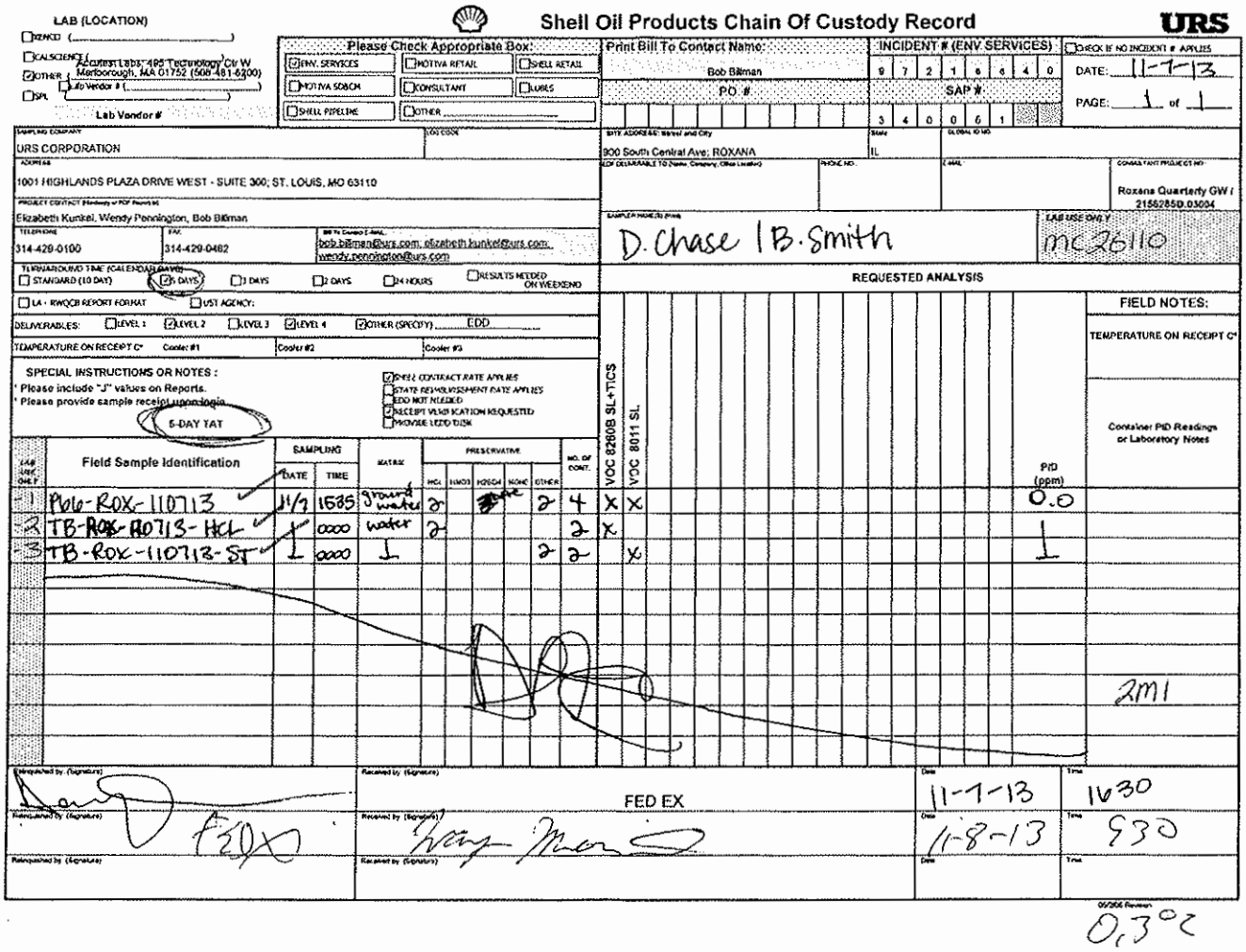
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	113%		36-173%
460-00-4	Bromofluorobenzene (S)	106%		36-173%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody



LAB (LOCATION)
☐ KENCO (_____)
☐ CALSCIENCE
☑ OTHER (Accutest Labs; 495 Technology Ctr W Marlborough, MA 01752 (508-481-6200))
☐ SPL (Lab Vendor # _____)
Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:
☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SOBCH ☐ CONSULTANT ☐ URS
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Billman
PO #:

INCIDENT # (ENV. SERVICES): 9 7 2 1 6 6 4 0
SAP #: 3 4 0 0 6 1

☐ CHECK IF NO INCIDENT # APPLIES
DATE: 11-7-13
PAGE: 1 of 1

SAMPLING COMPANY: URS CORPORATION
LOG CODE:
SITE ADDRESS: Street and City: 900 South Central Ave; ROXANA
State: IL
GLOBAL ID NO.:
ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300; ST. LOUIS, MO 63110
EDF DELIVERABLE TO (Name, Company, Office Location):
PHONE NO.:
E-MAIL:
CONSULTANT PROJECT NO.: Roxana Quarterly GW / 21562858.03004
PROJECT CONTACT (Hardcopy or PDF Report to): Elizabeth Kunkel, Wendy Pennington, Bob Billman
TELEPHONE: 314-429-0100
FAX: 314-429-0462
Bill To Contact E-mail: bob.billman@urs.com; elizabeth.kunkel@urs.com; wendy.pennington@urs.com
SAMPLER NAME(S) (Print): D. Chase | B. Smith
LAB USE ONLY: MC26110

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 chronlogs.
5-DAY TAT

☐ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE EDD DISK

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	H2SO4	HNO3	NONE	OTHER	NO. OF CONT.	VOC 8260B SL+TICS	VOC 8011 SL	PID (ppm)	FIELD NOTES: Container PID Readings or Laboratory Notes
1	MW6-ROX-110713	11/7	1535	groundwater	2				2	4	X	X	0.0	
2	TB-ROX-110713-HCL	11/7	0000	water	2					2	X		1	
3	TB-ROX-110713-ST	11/7	0000	water					2	2		X		

2M1

Relinquished by (Signature)	Received by (Signature)	Date	Time
	FED EX	11-7-13	1630
FEDX		11-8-13	930

06/2006 Revision

0.3°C

5.1

5

MC26110: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC26110 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 11/8/2013 **Delivery Method:** **Client Service Action Required at Login:** No

Project: 900 SOUTH CENTRAL **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y or N		Y or N
1. Custody Seals Present:	☑ ☐	3. COC Present:	☑ ☐
2. Custody Seals Intact:	☑ ☐	4. Smpl Dates/Time OK	☑ ☐

Cooler Temperature	Y or N
1. Temp criteria achieved:	☑ ☐
2. Cooler temp verification:	Infared gun
3. Cooler media:	Ice (bag)

Quality Control Preservation	Y or N	N/A
1. Trip Blank present / cooler:	☑ ☐	☐
2. Trip Blank listed on COC:	☑ ☐	☐
3. Samples preserved properly:	☑ ☐	
4. VOCs headspace free:	☑ ☐	☐

Sample Integrity - Documentation	Y or N
1. Sample labels present on bottles:	☑ ☐
2. Container labeling complete:	☑ ☐
3. Sample container label / COC agree:	☑ ☐

Sample Integrity - Condition	Y or N
1. Sample recvd within HT:	☑ ☐
2. All containers accounted for:	☑ ☐
3. Condition of sample:	Intact

Sample Integrity - Instructions	Y or N	N/A
1. Analysis requested is clear:	☑ ☐	
2. Bottles received for unspecified tests	☐ ☑	
3. Sufficient volume recvd for analysis:	☑ ☐	
4. Compositing instructions clear:	☐ ☐	☑
5. Filtering instructions clear:	☐ ☐	☑

Comments

5.1

5

MC26110: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC26110

URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC26110-1 Collected: 07-NOV-13 15:35 By: DCBS Received: 08-NOV-13 By: P66-ROX-110713						
MC26110-1	SW846 8011	12-NOV-13 14:11	CZ	09-NOV-13	MT	V8011SL
MC26110-1	SW846 8260C	13-NOV-13 16:04	JB			V8260SL+
MC26110-2 Collected: 07-NOV-13 00:00 By: DCBS Received: 08-NOV-13 By: TB-ROX-110713-HCL						
MC26110-2	SW846 8260C	13-NOV-13 13:45	JB			V8260SL+
MC26110-3 Collected: 07-NOV-13 00:00 By: DCBS Received: 08-NOV-13 By: TB-ROX-110713-ST						
MC26110-3	SW846 8011	12-NOV-13 14:39	CZ	09-NOV-13	MT	V8011SL

Accutest Internal Chain of Custody

Job Number: MC26110
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL
Received: 11/08/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC26110-1.3	VOC Ref #2	Jaclyn Bergeron	11/13/13 11:54	Retrieve from Storage
MC26110-1.3	Jaclyn Bergeron	GCMSN	11/13/13 11:54	Load on Instrument
MC26110-1.3	GCMSN	Jaclyn Bergeron	11/14/13 07:56	Unload from Instrument
MC26110-1.3	Jaclyn Bergerou	VOC Ref #2	11/14/13 07:56	Return to Storage
MC26110-1.4	VOC Ref #1	Michael Rolo	11/09/13 07:12	Retrieve from Storage
MC26110-1.4	Michael Rolo		11/11/13 07:09	Depleted
MC26110-2.1	VOC Ref #2	Jaclyn Bergeron	11/13/13 11:54	Retrieve from Storage
MC26110-2.1	Jaclyn Bergeron	GCMSN	11/13/13 11:54	Load on Instrument
MC26110-2.1	GCMSN	Jaclyn Bergeron	11/14/13 07:56	Unload from Instrument
MC26110-2.1	Jaclyn Bergeron	VOC Ref #2	11/14/13 07:56	Return to Storage
MC26110-3.2	VOC Ref #1	Michael Rolo	11/09/13 07:12	Retrieve from Storage
MC26110-3.2	Michael Rolo		11/11/13 07:09	Depleted

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC26110
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3074-MB	N82326.D	1	11/13/13	JB	n/a	n/a	MSN3074

The QC reported here applies to the following samples: Method: SW846 8260C

MC26110-1, MC26110-2

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ng/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ng/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ng/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC26110
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3074-MB	N82326.D	1	11/13/13	JB	n/a	n/a	MSN3074

The QC reported here applies to the following samples: Method: SW846 8260C

MC26110-1, MC26110-2

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-peutanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	1.0	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ng/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC26110
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3074-MB	N82326.D	1	11/13/13	JB	n/a	n/a	MSN3074

The QC reported here applies to the following samples: Method: SW846 8260C

MC26110-1, MC26110-2

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	81%	70-130%
2037-26-5	Toluene-D8	87%	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	

Blank Spike Summary

Job Number: MC26110
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3074-BS	N82324.D	1	11/13/13	JB	n/a	n/a	MSN3074

The QC reported here applies to the following samples: Method: SW846 8260C

MC26110-1, MC26110-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	53.1	106	70-130
107-02-8	Acrolein	50	55.7	111	70-130
107-13-1	Acrylonitrile	100	102	102	70-130
71-43-2	Benzene	50	44.4	89	70-130
108-86-1	Bromobenzene	50	48.5	97	70-130
74-97-5	Bromochloromethane	50	46.9	94	70-130
75-27-4	Bromodichloromethane	50	45.6	91	70-130
75-25-2	Bromoform	50	51.4	103	70-130
74-83-9	Bromomethane	50	58.8	118	70-130
78-93-3	2-Butanone (MEK)	50	47.2	94	70-130
104-51-8	n-Butylbenzene	50	52.7	105	70-130
135-98-8	sec-Butylbenzene	50	49.4	99	70-130
98-06-6	tert-Butylbenzene	50	47.4	95	70-130
75-15-0	Carbon disulfide	50	48.0	96	70-130
56-23-5	Carbon tetrachloride	50	51.8	104	70-130
108-90-7	Chlorobenzene	50	43.8	88	70-130
75-00-3	Chloroethane	50	58.8	118	70-130
110-75-8	2-Chloroethyl vinyl ether	125	47.0	38*	70-130
67-66-3	Chloroform	50	43.6	87	70-130
74-87-3	Chloromethane	50	49.9	100	70-130
95-49-8	o-Chlorotoluene	50	46.5	93	70-130
106-43-4	p-Chlorotoluene	50	48.6	97	70-130
124-48-1	Dibromochloromethane	50	48.4	97	70-130
95-50-1	1,2-Dichlorobenzene	50	45.8	92	70-130
541-73-1	1,3-Dichlorobenzene	50	45.9	92	70-130
106-46-7	1,4-Dichlorobenzene	50	47.2	94	70-130
75-71-8	Dichlorodifluoromethane	50	48.8	98	70-130
75-34-3	1,1-Dichloroethane	50	46.5	93	70-130
107-06-2	1,2-Dichloroethane	50	44.4	89	70-130
75-35-4	1,1-Dichloroethene	50	45.7	91	70-130
156-59-2	cis-1,2-Dichloroethene	50	44.1	88	70-130
156-60-5	trans-1,2-Dichloroethene	50	45.0	90	70-130
78-87-5	1,2-Dichloropropane	50	47.0	94	70-130
142-28-9	1,3-Dichloropropane	50	47.3	95	70-130
594-20-7	2,2-Dichloropropane	50	49.0	98	70-130
563-58-6	1,1-Dichloropropene	50	48.8	98	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC26110
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3074-BS	N82324.D	1	11/13/13	JB	n/a	n/a	MSN3074

The QC reported here applies to the following samples: Method: SW846 8260C

MC26110-1, MC26110-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	47.4	95	70-130
10061-02-6	trans-1,3-Dichloropropene	50	49.7	99	70-130
123-91-1	1,4-Dioxane	250	250	100	70-130
97-63-2	Ethyl methacrylate	50	46.9	94	77-137
100-41-4	Ethylbenzene	50	46.5	93	70-130
87-68-3	Hexachlorobutadiene	50	56.9	114	70-130
591-78-6	2-Hexanone	50	52.5	105	70-130
98-82-8	Isopropylbenzene	50	48.2	96	70-130
99-87-6	p-Isopropyltoluene	50	49.8	100	70-130
1634-04-4	Methyl Tert Butyl Ether	50	41.1	82	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	50.0	100	70-130
74-95-3	Methylene bromide	50	43.9	88	70-130
75-09-2	Methylene chloride	50	44.7	89	70-130
91-20-3	Naphthalene	50	55.8	112	70-130
103-65-1	n-Propylbenzene	50	46.6	93	70-130
100-42-5	Styrene	50	47.5	95	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	46.4	93	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	46.9	94	70-130
127-18-4	Tetrachloroethene	50	47.3	95	70-130
108-88-3	Toluene	50	45.9	92	70-130
87-61-6	1,2,3-Trichlorobenzene	50	52.6	105	70-130
120-82-1	1,2,4-Trichlorobenzene	50	53.5	107	70-130
71-55-6	1,1,1-Trichloroethane	50	49.4	99	70-130
79-00-5	1,1,2-Trichloroethane	50	45.2	90	70-130
79-01-6	Trichloroethene	50	44.0	88	70-130
75-69-4	Trichlorofluoromethane	50	50.1	100	70-130
96-18-4	1,2,3-Trichloropropane	50	52.3	105	70-130
95-63-6	1,2,4-Trimethylbenzene	50	46.3	93	70-130
108-67-8	1,3,5-Trimethylbenzene	50	46.1	92	70-130
108-05-4	Vinyl Acetate	50	44.0	88	70-130
75-01-4	Vinyl chloride	50	44.7	89	70-130
	m,p-Xylene	100	89.8	90	70-130
95-47-6	o-Xylene	50	44.0	88	70-130
1330-20-7	Xylene (total)	150	134	89	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC26110
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3074-BS	N82324.D	1	11/13/13	JB	n/a	n/a	MSN3074

The QC reported here applies to the following samples: Method: SW846 8260C

MC26110-1, MC26110-2

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	85%	70-130%
2037-26-5	Toluene-D8	88%	70-130%
460-00-4	4-Bromofluorobenzene	92%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

6.2.1

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* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC26110
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25841-1MS	N82347.D	1	11/13/13	JB	n/a	n/a	MSN3074
MC25841-1MSD	N82348.D	1	11/13/13	JB	n/a	n/a	MSN3074
MC25841-1	N82335.D	1	11/13/13	JB	n/a	n/a	MSN3074

The QC reported here applies to the following samples: Method: SW846 8260C

MC26110-1, MC26110-2

CAS No.	Compound	MC25841-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	18.5	37* a	17.0	34* a	8	70-130/30
107-02-8	Acrolein	ND		50	45.4	91	49.2	98	8	70-130/30
107-13-1	Acrylonitrile	ND		100	86.5	87	88.5	89	2	70-130/30
71-43-2	Benzene	ND		50	40.2	80	39.2	78	3	70-130/30
108-86-1	Bromobenzene	ND		50	43.2	86	43.6	87	1	70-130/30
74-97-5	Bromochloromethane	ND		50	42.2	84	42.8	86	1	70-130/30
75-27-4	Bromodichloromethane	ND		50	41.4	83	40.5	81	2	70-130/30
75-25-2	Bromoform	ND		50	45.0	90	45.9	92	2	70-130/30
74-83-9	Bromomethane	ND		50	49.1	98	54.4	109	10	70-130/30
78-93-3	2-Butanone (MEK)	ND		50	30.1	60* a	31.8	64* a	5	70-130/30
104-51-8	n-Butylbenzene	ND		50	46.6	93	46.4	93	0	70-130/30
135-98-8	sec-Butylbenzene	ND		50	43.7	87	43.7	87	0	70-130/30
98-06-6	tert-Butylbenzene	ND		50	43.4	87	43.1	86	1	70-130/30
75-15-0	Carbon disnlfide	ND		50	43.4	87	43.0	86	1	70-130/30
56-23-5	Carbon tetrachloride	ND		50	46.5	93	46.1	92	1	70-130/30
108-90-7	Chlorobenzene	ND		50	40.4	81	40.0	80	1	70-130/30
75-00-3	Chloroethane	ND		50	53.2	106	52.6	105	1	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		125	42.8	34* a	42.2	34* a	1	70-130/30
67-66-3	Chloroform	ND		50	39.2	78	39.0	78	1	70-130/30
74-87-3	Chloromethane	ND		50	43.1	86	43.9	88	2	70-130/30
95-49-8	o-Chlorotoluene	ND		50	42.7	85	42.5	85	0	70-130/30
106-43-4	p-Chlorotoluene	ND		50	44.0	88	44.1	88	0	70-130/30
124-48-1	Dibromochloromethane	ND		50	42.8	86	42.9	86	0	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		50	41.1	82	41.3	83	0	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		50	41.1	82	41.2	82	0	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		50	42.4	85	41.8	84	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND		50	40.8	82	42.1	84	3	70-130/30
75-34-3	1,1-Dichloroethane	1.3		50	43.0	83	42.9	83	0	70-130/30
107-06-2	1,2-Dichloroethane	ND		50	39.8	80	38.9	78	2	70-130/30
75-35-4	1,1-Dichloroethene	ND		50	41.8	84	41.3	83	1	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50	39.9	80	39.4	79	1	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50	41.7	83	41.5	83	0	70-130/30
78-87-5	1,2-Dichloropropane	ND		50	42.8	86	42.2	84	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	43.4	87	43.0	86	1	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	42.2	84	41.1	82	3	70-130/30
563-58-6	1,1-Dichloropropene	ND		50	43.1	86	42.3	85	2	70-130/30

* = Outside of Control Limits.

6.3.1

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Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC26110
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25841-1MS	N82347.D	1	11/13/13	JB	n/a	n/a	MSN3074
MC25841-1MSD	N82348.D	1	11/13/13	JB	n/a	n/a	MSN3074
MC25841-1	N82335.D	1	11/13/13	JB	n/a	n/a	MSN3074

The QC reported here applies to the following samples: Method: SW846 8260C

MC26110-1, MC26110-2

CAS No.	Compound	MC25841-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		50	42.8	86	41.2	82	4	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		50	44.0	88	43.1	86	2	70-130/30
123-91-1	1,4-Dioxane	ND		250	212	85	219	88	3	70-130/30
97-63-2	Ethyl methacrylate	ND		50	42.1	84	42.3	85	0	72-139/30
100-41-4	Ethylbenzene	ND		50	43.8	88	42.8	86	2	70-130/30
87-68-3	Hexachlorobutadiene	ND		50	49.8	100	49.5	99	1	70-130/30
591-78-6	2-Hexanone	ND		50	33.8	68* [a]	34.9	70	3	70-130/30
98-82-8	Isopropylbenzene	ND		50	43.3	87	43.1	86	0	70-130/30
99-87-6	p-Isopropyltoluene	ND		50	45.2	90	45.1	90	0	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		50	37.9	76	37.3	75	2	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	42.6	85	42.6	85	0	70-130/30
74-95-3	Methylene bromide	ND		50	40.1	80	39.0	78	3	70-130/30
75-09-2	Methylene chloride	ND		50	40.6	81	40.2	80	1	70-130/30
91-20-3	Naphthalene	ND		50	45.5	91	48.9	98	7	70-130/30
103-65-1	n-Propylbenzene	ND		50	42.0	84	42.4	85	1	70-130/30
100-42-5	Styrene	ND		50	43.5	87	43.1	86	1	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	43.2	86	42.9	86	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	39.7	79	40.9	82	3	70-130/30
127-18-4	Tetrachloroethene	ND		50	43.2	86	41.8	84	3	70-130/30
108-88-3	Toluene	ND		50	43.0	86	41.9	84	3	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	45.4	91	47.1	94	4	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	45.6	91	47.2	94	3	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		50	45.7	91	44.9	90	2	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50	40.4	81	39.6	79	2	70-130/30
79-01-6	Trichloroethene	ND		50	40.5	81	39.7	79	2	70-130/30
75-69-4	Trichlorofluoromethane	ND		50	45.7	91	45.0	90	2	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		50	43.1	86	44.8	90	4	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		50	42.0	84	41.2	82	2	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		50	41.7	83	41.6	83	0	70-130/30
108-05-4	Vinyl Acetate	ND		50	35.1	70	36.1	72	3	70-130/30
75-01-4	Vinyl chloride	ND		50	39.0	78	39.9	80	2	70-130/30
	m,p-Xylene	ND		100	86.8	87	83.1	83	4	70-130/30
95-47-6	o-Xylene	ND		50	42.6	85	41.3	83	3	70-130/30
1330-20-7	Xylene (total)	ND		150	129	86	124	83	4	70-130/30

* = Outside of Control Limits.

6.3.1

6

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC26110
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC25841-1MS	N82347.D	1	11/13/13	JB	n/a	n/a	MSN3074
MC25841-1MSD	N82348.D	1	11/13/13	JB	n/a	n/a	MSN3074
MC25841-1	N82335.D	1	11/13/13	JB	n/a	n/a	MSN3074

The QC reported here applies to the following samples: Method: SW846 8260C

MC26110-1, MC26110-2

CAS No.	Surrogate Recoveries	MS	MSD	MC25841-1	Limits
1868-53-7	Dibromofluoromethane	81%	83%	82%	70-130%
2037-26-5	Toluene-D8	88%	87%	84%	70-130%
460-00-4	4-Bromofluorobenzene	89%	91%	101%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC26110
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSN3074-CC3048	Injection Date:	11/13/13
Lab File ID:	N82324.D	Injection Time:	11:25
Instrument ID:	GCMSN	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	203776	9.21	298126	10.09	156895	13.34	132901	15.89	80577	6.77
Upper Limit [a]	407552	9.71	596252	10.59	313790	13.84	265802	16.39	161154	7.27
Lower Limit [b]	101888	8.71	149063	9.59	78448	12.84	66451	15.39	40289	6.27

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSN3074-BS	203776	9.21	298126	10.09	156895	13.34	132901	15.89	80577	6.77
MSN3074-MB	209622	9.22	300010	10.09	153682	13.34	102533	15.89	87599	6.78
ZZZZZZ	208623	9.21	305926	10.09	154969	13.34	104041	15.90	95423	6.78
ZZZZZZ	207217	9.21	305058	10.09	155396	13.34	103203	15.90	87013	6.78
MC26110-2	204813	9.21	297627	10.09	151716	13.34	102838	15.90	79092	6.78
ZZZZZZ	204552	9.21	300063	10.09	153495	13.34	104140	15.90	81267	6.78
ZZZZZZ	203267	9.21	302407	10.09	153719	13.34	103840	15.90	80882	6.78
ZZZZZZ	201031	9.21	292341	10.09	149895	13.34	103582	15.90	80757	6.78
ZZZZZZ	203126	9.21	306264	10.09	155028	13.34	105069	15.90	87671	6.78
MC26110-1	221345	9.21	329668	10.09	175134	13.34	142564	15.89	85537	6.77
MC25841-1	226349	9.21	333222	10.09	164145	13.34	117416	15.89	87505	6.78
ZZZZZZ	214420	9.21	310092	10.09	156771	13.34	111428	15.90	89012	6.78
ZZZZZZ	203163	9.21	300549	10.09	151180	13.34	106988	15.90	72481	6.78
ZZZZZZ	205869	9.21	301409	10.09	153801	13.34	108287	15.90	83030	6.77
ZZZZZZ	219597	9.21	332038	10.09	209894	13.34	190688	15.89	87625	6.77
ZZZZZZ	232386	9.21	341949	10.09	217586	13.34	182940	15.89	90334	6.77
ZZZZZZ	249751	9.21	397263	10.09	219009	13.34	201933	15.90	99727	6.77
MC25841-1MS	226117	9.21	333227	10.09	176526	13.34	153598	15.89	82994	6.77
MC25841-1MSD	234128	9.21	346829	10.09	180922	13.34	153837	15.89	79381	6.77

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: MC26110
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC26110-1	N82334.D	82.0	91.0	91.0
MC26110-2	N82329.D	83.0	88.0	105.0
MC25841-1MS	N82347.D	81.0	88.0	89.0
MC25841-1MSD	N82348.D	83.0	87.0	91.0
MSN3074-BS	N82324.D	85.0	88.0	92.0
MSN3074-MB	N82326.D	81.0	87.0	106.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC26110
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35660-MB	BB52359.D	1	11/12/13	CZ	11/09/13	OP35660	GBB3070

The QC reported here applies to the following samples: Method: SW846 8011

MC26110-1, MC26110-3

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	119%	36-173%
460-00-4	Bromofluorobenzene (S)	114%	36-173%

Blank Spike Summary

Job Number: MC26110
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35660-BS	BB52360.D	1	11/12/13	CZ	11/09/13	OP35660	GBB3070

The QC reported here applies to the following samples: Method: SW846 8011

MC26110-1, MC26110-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.074	104	60-140
106-93-4	1,2-Dibromoethane	0.071	0.076	107	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	111%	36-173%
460-00-4	Bromofluorobenzene (S)	115%	36-173%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC26110
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP35660-MS	BB52361.D	1	11/12/13	CZ	11/09/13	OP35660	GBB3070
OP35660-MSD	BB52362.D	1	11/12/13	CZ	11/09/13	OP35660	GBB3070
MC25769-10	BB52373.D	1	11/12/13	CZ	11/09/13	OP35660	GBB3070

The QC reported here applies to the following samples: Method: SW846 8011

MC26110-1, MC26110-3

CAS No.	Compound	MC25769-10 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	0.014	U	0.0675	0.069	102	0.071	103	3	64-141/29
106-93-4	1,2-Dibromoethane	0.014	U	0.0675	0.067	99	0.064	93	5	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC25769-10	Limits
460-00-4	Bromofluorobenzene (S)	114%	122%	124%	36-173%
460-00-4	Bromofluorobenzene (S)	112%	113%	111%	36-173%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC26110
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011 Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC26110-1	BB52380.D	117.0	120.0
MC26110-3	BB52381.D	113.0	106.0
OP35660-BS	BB52360.D	111.0	115.0
OP35660-MB	BB52359.D	119.0	114.0
OP35660-MS	BB52361.D	114.0	112.0
OP35660-MSD	BB52362.D	122.0	113.0

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC26110
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3070-CC3070	Injection Date:	11/12/13
Lab File ID:	BB52355.D	Injection Time:	02:35
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	5.80	4.69

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB52356.D	11/12/13	03:04	5.80	4.69
ZZZZZZ	BB52357.D	11/12/13	03:34	5.80	4.69
ZZZZZZ	BB52358.D	11/12/13	04:03	5.80	4.69
OP35660-MB	BB52359.D	11/12/13	04:33	5.81	4.69
OP35660-BS	BB52360.D	11/12/13	05:01	5.80	4.69
OP35660-MS	BB52361.D	11/12/13	05:29	5.80	4.69
OP35660-MSD	BB52362.D	11/12/13	05:57	5.80	4.69
ZZZZZZ	BB52363.D	11/12/13	06:24	5.80	4.69
ZZZZZZ	BB52364.D	11/12/13	06:52	5.80	4.69
ZZZZZZ	BB52365.D	11/12/13	07:19	5.80	4.69

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC26110
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q13 GW/ 21562850.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3070-CC3070	Injection Date:	11/12/13
Lab File ID:	BB52377.D	Injection Time:	12:49
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	5.80	4.69

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB52378.D	11/12/13	13:17	5.80	4.69
ZZZZZZ	BB52379.D	11/12/13	13:44	5.80	4.69
MC26110-1	BB52380.D	11/12/13	14:11	5.79	4.69
MC26110-3	BB52381.D	11/12/13	14:39	5.80	4.69
ZZZZZZ	BB52382.D	11/12/13	15:06	5.80	4.69
ZZZZZZ	BB52383.D	11/12/13	15:33	5.80	4.69
GBB3070-ECC307B	BB52384.D	11/12/13	16:01	5.79	4.69

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1