

May 24, 2017

Ms. Joyce Munie, P.E.  
Manager, Permit Section  
Illinois Environmental Protection Agency  
Bureau of Land  
1021 North Grand Avenue East  
Springfield, Illinois 62794

**Submittal of Corrected Information  
Groundwater Monitoring Report –3<sup>rd</sup> Quarter 2013  
Roxana, Illinois  
1191150002 – Madison County  
Equilon Enterprises LLC d/b/a Shell Oil Products US  
Log No. B-43R**

Dear Ms. Munie:

On behalf of Shell Oil Products US (SOPUS), AECOM Technical Services, Inc. (AECOM) hereby submits the enclosed addendum to the above-referenced report (the Report).

AECOM collects a variety of samples for SOPUS as part of the work performed in connection with the above-referenced site including the samples referenced and utilized in the Report. AECOM contracts with independent laboratories to analyze the samples collected. As noted in SOPUS' initial disclosure letter and our subsequent communications, Accutest Laboratories (Accutest) issued revised laboratory analyses in response to an internal evaluation performed of its process. Please note, the majority of the corrected analyses were issued only to include a revised footnote and the numeric value of the analytical results reported remained unchanged. If any numeric values of analytical results presented in the Report were updated by Accutest, the updated results are presented as part of the information included in the Report addendum. Moreover, based upon our evaluation of the Report and the revised information received from Accutest, the conclusion(s) of the Report as originally issued are unaffected.

The information provided within and the format of this addendum is as discussed during our meeting with IEPA on March 23, 2017. This addendum includes the following information:

- IEPA LPC form
- Data Review Addendum Table (summarizing changed information)
- Revised analytical results table
- Revised laboratory reports (on CD)



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

Sincerely,

AECOM, on behalf of Shell Oil Products US

A handwritten signature in blue ink that reads "Robert B. Billman". The signature is written in a cursive style with a long, sweeping underline.

Robert Billman, PG  
Senior Project Manager

A handwritten signature in blue ink that reads "Robert E. Mooshegian". The signature is written in a cursive style with a long, sweeping underline.

Robert E. Mooshegian, CHMM  
Senior Program Manager

Enclosures: 2 copies

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



# Illinois Environmental Protection Agency

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

## RCRA FACILITY GROUNDWATER, LEACHATE AND GAS REPORTING FORM

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

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

Facility Name: Equilon Enterprises LLC dba Shell Oil Products US

Facility Address: 900 South 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)

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)

1Q13, 2Q13, 3Q13, and 4Q13 Groundwater Sampling Report Addenda - Addenda being issued due to revised laboratory reports.

| Analytical Method | Sample ID           | Lab Sample ID | Sample Date | Analyte      | Original Result | Corrected Result | Laboratory Qualifier | Units | Laboratory Footnote   | AECOM Qualifier |
|-------------------|---------------------|---------------|-------------|--------------|-----------------|------------------|----------------------|-------|---|-----------------|
| SW846 8260B       | MW16-ROX-070813     | MC22534-6     | 07/08/2013  | Bromomethane | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration Verification outside of acceptance criteria. Sample result may be biased low. | UJ              |
| SW846 8260B       | MW24-ROX-071113     | MC22664-1     | 07/11/2013  | Acetone      | 15.7            | 15.7             |                      | ug/l  | Ana: Continuing Calibration Verification outside of acceptance criteria. Sample result may be biased low. | J               |
| SW846 8260B       | P54-ROX-071113      | MC22664-2     | 07/11/2013  | Acetone      | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration Verification outside of acceptance criteria. Sample result may be biased low. | UJ              |
| SW846 8260B       | MW3-ROX-071113      | MC22664-3     | 07/11/2013  | Acetone      | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration Verification outside of acceptance criteria. Sample result may be biased low. | UJ              |
| SW846 8260B       | MW2-ROX-071113      | MC22664-5     | 07/11/2013  | Acetone      | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration Verification outside of acceptance criteria. Sample result may be biased low. | UJ              |
| SW846 8260B       | ROST4PZC-ROX-071113 | MC22664-6     | 07/11/2013  | Acetone      | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration Verification outside of acceptance criteria. Sample result may be biased low. | UJ              |
| SW846 8260B       | ROST3MW-ROX-071113  | MC22664-7     | 07/11/2013  | Acetone      | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration Verification outside of acceptance criteria. Sample result may be biased low. | UJ              |
| SW846 8260B       | MW22-ROX-071113     | MC22664-8     | 07/11/2013  | Acetone      | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration Verification outside of acceptance criteria. Sample result may be biased low. | UJ              |

| Analytical Method | Sample ID           | Lab Sample ID | Sample Date | Analyte                   | Original Result | Corrected Result | Laboratory Qualifier | Units | Laboratory Footnote   | AECOM Qualifier |
|-------------------|---------------------|---------------|-------------|---------------------------|-----------------|------------------|----------------------|-------|---|-----------------|
| SW846 8260B       | MW22-ROX-071113-DUP | MC22664-9     | 07/11/2013  | Acetone                   | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration Verification outside of acceptance criteria. Sample result may be biased low. | UJ              |
| SW846 8260B       | P56-ROX-071513      | MC22754-1     | 07/15/2013  | Acrolein                  | ND              | ND               |                      | ug/l  | Ana: Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low.    | UJ              |
| SW846 8260B       | P74-ROX-071513      | MC22754-2     | 07/15/2013  | Acrolein                  | ND              | ND               |                      | ug/l  | Ana: Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low.    | UJ              |
| SW846 8260B       | MW4-ROX-071713      | MC22808-1     | 07/17/2013  | cis-1,3-Dichloropropene   | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.              | UJ              |
| SW846 8260B       | MW4-ROX-071713      | MC22808-1     | 07/17/2013  | trans-1,3-Dichloropropene | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.              | UJ              |
| SW846 8260B       | MW4-ROX-071713      | MC22808-1     | 07/17/2013  | Methyl Tert Butyl Ether   | 55.9            | 55.9             |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.              | J               |
| SW846 8260B       | MW4-ROX-071713      | MC22808-1     | 07/17/2013  | Vinyl Acetate             | 39.2            | 39.2             |                      | ug/l  | Ana: Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low.    | J               |
| SW846 8260B       | MW7-ROX-071713      | MC22808-2     | 07/17/2013  | cis-1,3-Dichloropropene   | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.              | UJ              |

| Analytical Method | Sample ID          | Lab Sample ID | Sample Date | Analyte                   | Original Result | Corrected Result | Laboratory Qualifier | Units | Laboratory Footnote  | AECOM Qualifier |
|-------------------|--------------------|---------------|-------------|---------------------------|-----------------|------------------|----------------------|-------|--|-----------------|
| SW846 8260B       | MW7-ROX-071713     | MC22808-2     | 07/17/2013  | trans-1,3-Dichloropropene | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.           | UJ              |
| SW846 8260B       | MW7-ROX-071713     | MC22808-2     | 07/17/2013  | Methyl Tert Butyl Ether   | 3.1             | 3.1              |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.           | J               |
| SW846 8260B       | MW7-ROX-071713     | MC22808-2     | 07/17/2013  | Vinyl Acetate             | 9.4             | 9.4              |                      | ug/l  | Ana: Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low. | J               |
| SW846 8260B       | MW8-ROX-071713     | MC22808-3     | 07/17/2013  | cis-1,3-Dichloropropene   | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.           | UJ              |
| SW846 8260B       | MW8-ROX-071713     | MC22808-3     | 07/17/2013  | trans-1,3-Dichloropropene | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.           | UJ              |
| SW846 8260B       | MW8-ROX-071713     | MC22808-3     | 07/17/2013  | Methyl Tert Butyl Ether   | 197             | 197              |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.           | J               |
| SW846 8260B       | MW8-ROX-071713     | MC22808-3     | 07/17/2013  | Vinyl Acetate             | ND              | ND               |                      | ug/l  | Ana: Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low. | UJ              |
| SW846 8260B       | MW8-ROX-071713-DUP | MC22808-4     | 07/17/2013  | cis-1,3-Dichloropropene   | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.           | UJ              |

| Analytical Method | Sample ID          | Lab Sample ID | Sample Date | Analyte                   | Original Result | Corrected Result | Laboratory Qualifier | Units | Laboratory Footnote  | AECOM Qualifier |
|-------------------|--------------------|---------------|-------------|---------------------------|-----------------|------------------|----------------------|-------|--|-----------------|
| SW846 8260B       | MW8-ROX-071713-DUP | MC22808-4     | 07/17/2013  | trans-1,3-Dichloropropene | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.           | UJ              |
| SW846 8260B       | MW8-ROX-071713-DUP | MC22808-4     | 07/17/2013  | Methyl Tert Butyl Ether   | 187             | 187              |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.           | J               |
| SW846 8260B       | MW8-ROX-071713-DUP | MC22808-4     | 07/17/2013  | Vinyl Acetate             | ND              | ND               |                      | ug/l  | Ana: Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low. | UJ              |
| SW846 8260B       | P93B-ROX-071813    | MC22834-1     | 07/18/2013  | cis-1,3-Dichloropropene   | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.           | UJ              |
| SW846 8260B       | P93B-ROX-071813    | MC22834-1     | 07/18/2013  | trans-1,3-Dichloropropene | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.           | UJ              |
| SW846 8260B       | P93B-ROX-071813    | MC22834-1     | 07/18/2013  | Methyl Tert Butyl Ether   | 3.5             | 3.5              |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.           | J               |
| SW846 8260B       | P93B-ROX-071813    | MC22834-1     | 07/18/2013  | Vinyl Acetate             | 17.6            | 17.6             |                      | ug/l  | Ana: Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low. | J               |
| SW846 8260B       | P93C-ROX-071813    | MC22834-2     | 07/18/2013  | cis-1,3-Dichloropropene   | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.           | UJ              |

| Analytical Method | Sample ID       | Lab Sample ID | Sample Date | Analyte                   | Original Result | Corrected Result | Laboratory Qualifier | Units | Laboratory Footnote  | AECOM Qualifier |
|-------------------|-----------------|---------------|-------------|---------------------------|-----------------|------------------|----------------------|-------|--|-----------------|
| SW846 8260B       | P93C-ROX-071813 | MC22834-2     | 07/18/2013  | trans-1,3-Dichloropropene | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.           | UJ              |
| SW846 8260B       | P93C-ROX-071813 | MC22834-2     | 07/18/2013  | Methyl Tert Butyl Ether   | 4.9             | 4.9              |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.           | J               |
| SW846 8260B       | P93C-ROX-071813 | MC22834-2     | 07/18/2013  | Vinyl Acetate             | ND              | ND               |                      | ug/l  | Ana: Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low. | UJ              |
| SW846 8260B       | P93A-ROX-071813 | MC22834-3     | 07/18/2013  | cis-1,3-Dichloropropene   | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.           | UJ              |
| SW846 8260B       | P93A-ROX-071813 | MC22834-3     | 07/18/2013  | trans-1,3-Dichloropropene | ND              | ND               |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.           | UJ              |
| SW846 8260B       | P93A-ROX-071813 | MC22834-3     | 07/18/2013  | Methyl Tert Butyl Ether   | 5.4             | 5.4              |                      | ug/l  | Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.           | J               |



| Analytical Method | Sample ID       | Lab Sample ID | Sample Date | Analyte       | Original Result | Corrected Result | Laboratory Qualifier | Units | Laboratory Footnote  | AECOM Qualifier |
|-------------------|-----------------|---------------|-------------|---------------|-----------------|------------------|----------------------|-------|--|-----------------|
| SW846 8260B       | P93A-ROX-071813 | MC22834-3     | 07/18/2013  | Vinyl Acetate | ND              | ND               |                      | ug/l  | Ana: Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low. | UJ              |

**LABORATORY QUALIFIERS:**

ND = Not detected.

**AECOM QUALIFIERS:**

J = The result is estimated.

UJ = Estimated nondetect.





















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

Table with columns for Location, Sample ID, Sample Date, Screened Interval (ft btoc), Depth to Water (ft btoc), Product Thickness (ft), Screening Values (mg/L), and 19 VOCs. Rows are grouped by well ID (P-93B, P-93C, P-93D) and include data for various monitoring events and depths.















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

Table with columns for Location, Sample ID, Sample Date, Screening Values (mg/L), and VOCs (2-Hexanone, Isopropylbenzene, 4-Methyl-2-pentanone, Methyl tert-Butyl Ether, Naphthalene, 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)). Rows are grouped by monitoring well (MW-10, MW-11, MW-12) and include specific sample details and analytical results.



























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

Table with columns: Location, Sample ID, Sample Date, Screened Interval (ft btoc), Depth to Water (ft btoc), Product Thickness (ft), Screening Values (mg/L), and 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-Chloroethyl)ether, bis(2-Ethylhexyl)phthalate, Butyl benzy l phthalate, 4-Chloro-3-methylphenol (p-Chloro-m-cresol), Chrysene (1,2-Benzophenanthracene), Dibenzo(a,h)anthracene, Dibenzofuran, 2,4-Dichlorophenol, Diethyl phthalate, 2,4-Dimethylphenol). Rows are categorized by well ID (P-55, P-56, P-57, P-58).





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

|                         |                     |             |                             |                          |                        | SVOCs                     |                   |                  |                      |                     |                      |                      |                      |                 |                  |                         |                            |                  |   |                                    |                        |                    |                    |                   |                    |          |
|-------------------------|---------------------|-------------|-----------------------------|--------------------------|------------------------|---------------------------|-------------------|------------------|----------------------|---------------------|----------------------|----------------------|----------------------|-----------------|------------------|-------------------------|----------------------------|------------------|---|------------------------------------|------------------------|--------------------|--------------------|-------------------|--------------------|----------|
| Screening Values (mg/L) |                     |             |                             |                          |                        | 0.42 <sup>2</sup>         | 0.21 <sup>3</sup> | 2.1 <sup>2</sup> | 0.00013 <sup>2</sup> | 0.0002 <sup>1</sup> | 0.00018 <sup>2</sup> | 0.21 <sup>3</sup>    | 0.00017 <sup>2</sup> | 28 <sup>4</sup> | 0.7 <sup>3</sup> | 0.01 <sup>2</sup>       | 0.006 <sup>2</sup>         | 1.4 <sup>2</sup> | 0.0015 <sup>2</sup>                         | 0.0003 <sup>2</sup>                | 0.007 <sup>3</sup>     | 0.021 <sup>2</sup> | 5.6 <sup>2</sup>   | 0.14 <sup>2</sup> |                    |          |
| Location                | Sample ID           | Sample Date | Screened Interval (ft btoc) | Depth to Water (ft btoc) | Product Thickness (ft) | Analytical Results (mg/L) |                   |                  |                      |                     |                      |                      |                      |                 |                  |                         |                            |                  |   |                                    |                        |                    |                    |                   |                    |          |
|                         |                     |             |                             |                          |                        | 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-Chloroethyl)ether | bis(2-Ethylhexyl)phthalate | Butyl benzoate   | 4-Chloro-3-methylphenol (p-Chloro-m-cresol) | Chrysene (1,2-Benzophenanthracene) | Dibenzo(a,h)anthracene | Dibenzofuran       | 2,4-Dichlorophenol | Diethyl phthalate | 2,4-Dimethylphenol |          |
| P-93B                   | P93B-102610         | 10/26/2010  | 74.60 - 76.60               | 40.73                    | NE                     | <0.009                    | <0.009            | <0.009           | <0.009               | <0.009              | <0.009               | <0.009               | <0.009               | <0.047          |                  | <0.009                  | <0.009                     | <0.009           | <0.009                                      | <0.009                             | <0.009                 | <0.009             | <0.009             | <0.009            | <0.009             |          |
|                         | P93B-ROX_012611     | 1/26/2011   |                             | 41.03                    | NE                     | <0.0053                   | <0.0053           | <0.0053          | <0.0053              | <0.0053             | <0.0053              | <0.0053              | <0.0053              | <0.0053         | <0.111 UJ        |                         | <0.0053                    | <0.0021          | <0.0053                                     | <0.011                             | <0.0053                | <0.0053            | <0.0053            | <0.011            | <0.00086 U         | <0.011   |
|                         | 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           | <0.0001 UJ      | <0.01            | <0.01                   | <0.005                     | <0.002           | <0.005                                      | <0.01                              | <0.0001 UJ             | <0.0001 UJ         | <0.005             | <0.01             | <0.005             | <0.01    |
|                         | 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              | <0.0001         | <0.01            | <0.01                   | <0.0052                    | 0.001 J          | <0.0052                                     | <0.01                              | <0.0001                | <0.0001            | <0.0052            | <0.01             | <0.0021 U          | <0.01    |
|                         | 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              | <0.0001         | <0.01            | <0.01                   | <0.0052                    | 0.0103           | <0.0052                                     | <0.01                              | <0.0001                | <0.0001            | <0.0052            | <0.01             | <0.0052            | <0.01    |
|                         | 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            | <0.000095       | <0.0095 UJ       | <0.0095                 | <0.0048                    | <0.0033 U        | <0.0033 U                                   | <0.0095                            | <0.000095              | <0.000095          | <0.0048            | <0.0095           | <0.0048            | <0.0095  |
|                         | P93B-ROX-050812     | 5/8/2012    |                             | 42.79                    | NE                     | <0.0001                   | <0.0001           | <0.0001          | <0.000051            | <0.00012 U          | <0.000051            | <0.0001              | <0.0001              | <0.0001         | <0.01            | <0.01                   | <0.0051                    | <0.002           | <0.0051                                     | <0.01                              | <0.0001                | <0.0001            | <0.0051            | <0.01             | <0.0051            | <0.01    |
|                         | P93B-ROX-080912     | 8/9/2012    |                             | 43.69                    | NE                     | <0.00011                  | 0.000087 J        | <0.00011         | <0.000054            | <0.00011            | <0.000054            | <0.00011             | <0.00011             | <0.00011        | <0.111           | <0.111                  | <0.0054                    | 0.0036           | <0.0054                                     | <0.011                             | <0.00011               | <0.00011           | <0.0022            | <0.011            | <0.00051 U         | <0.011   |
|                         | P93B-ROX-110712     | 11/7/2012   |                             | 45.05                    | NE                     | <0.0001                   | 0.000073 JB       | <0.0001          | <0.000051            | <0.0001             | <0.000051            | <0.0001              | <0.0001              | <0.0001         | <0.01            | <0.01                   | <0.0051                    | 0.0017 J         | <0.0051                                     | <0.01                              | <0.0001                | <0.0001            | <0.002             | <0.01             | <0.0051            | <0.01    |
|                         | P93B-ROX-110712-DUP | 11/7/2012   |                             | 45.05                    | NE                     | <0.000047 U               | 0.000058 J        | <0.0001          | <0.00005             | <0.0001             | <0.00005             | <0.0001              | <0.0001              | <0.0001         | <0.01            | <0.01                   | <0.005                     | 0.00057 J        | <0.005                                      | <0.01                              | <0.0001                | <0.0001            | <0.002             | <0.01             | <0.005             | <0.01    |
|                         | 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              | 0.00012         | <0.011           | <0.011                  | <0.0053                    | 0.0055           | 0.0032 J                                    | 0.0013 J                           | 0.00012                | 0.00012            | <0.0021            | <0.011            | <0.0053 UJ         | 0.0021 J |
|                         | 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              | <0.0001         | <0.01            | <0.01                   | <0.0051                    | <0.002           | <0.0051                                     | <0.01                              | <0.0001                | <0.0001            | <0.002             | <0.01             | <0.0051            | <0.01    |
|                         | 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             | <0.00011        | <0.011 UJ        | <0.011                  | <0.0056                    | <0.0022          | <0.0056                                     | <0.011                             | <0.00011               | <0.00011           | <0.0022            | <0.011            | <0.0056            | <0.011   |
| P-93C                   | P93C-102610         | 10/26/2010  | 94.26 - 96.26               | 40.69                    | NE                     | <0.009                    | <0.009            | <0.009           | <0.009               | <0.009              | <0.009               | <0.009               | <0.009               | <0.047          |                  | <0.009                  | <0.001 U                   | <0.009           | <0.009                                      | <0.009                             | <0.009                 | <0.009             | <0.009             | <0.009            | <0.009             |          |
|                         | P93C-ROX_012611     | 1/26/2011   |                             | 40.91                    | NE                     | <0.0051                   | <0.0051           | <0.0051          | <0.0051              | <0.0051             | <0.0051              | <0.0051              | <0.0051              | <0.01 UJ        |                  | <0.0051                 | <0.002                     | <0.0051          | <0.01                                       | <0.0051                            | <0.0051                | <0.0051            | <0.01              | <0.00097 U        | <0.01              |          |
|                         | 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            | <0.005                  | <0.0022 U                  | <0.005           | <0.01                                       | <0.0001 UJ                         | <0.0001 UJ             | <0.005             | <0.01              | <0.005            | <0.01              |          |
|                         | 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            | <0.005                  | 0.0092                     | <0.005           | <0.01                                       | <0.0001                            | <0.0001                | <0.005             | <0.01              | <0.0015 U         | <0.01              |          |
|                         | P93C-ROX-102611     | 10/26/2011  |                             | 39.36                    | NE                     | <0.0001                   | <0.0001           | <0.0001          | <0.000052            | <0.0001             | <0.000052            | <0.0001              | <0.0001              | <0.01           | <0.01            | <0.0052                 | <0.0021                    | <0.0052          | <0.01                                       | <0.0001                            | <0.0001                | <0.0052            | <0.01              | <0.0052           | <0.01              |          |
|                         | 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            | <0.0051                 | <0.0096 U                  | <0.00037 U       | <0.01                                       | <0.0001                            | <0.0001                | <0.0051            | <0.01              | <0.0051           | <0.01              |          |
|                         | P93C-ROX-050812     | 5/8/2012    |                             | 42.68                    | NE                     | <0.00011                  | <0.00011          | <0.00011         | <0.000012 U          | <0.00011            | <0.000053            | <0.00011             | <0.00011             | <0.011          | <0.011           | <0.0053                 | 0.008                      | <0.0053          | <0.011                                      | <0.00011                           | <0.00011               | <0.0053            | <0.011             | <0.0053           | <0.011             |          |
|                         | 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            | <0.0052                 | 0.0043                     | <0.0052          | <0.01                                       | <0.0001                            | <0.0001                | <0.0021            | <0.01              | <0.00046 U        | <0.01              |          |
|                         | P93C-ROX-110812     | 11/8/2012   |                             | 45.12                    | NE                     | <0.0001                   | <0.0001           | <0.0001          | <0.00005             | <0.0001             | <0.00005             | <0.0001              | <0.0001              | <0.01           | <0.01            | <0.005                  | 0.00081 J                  | <0.005           | <0.01                                       | <0.0001                            | <0.0001                | <0.002             | <0.01              | <0.005            | <0.01              |          |
|                         | P93C-ROX-012313     | 1/23/2013   |                             | 45.78                    | NE                     | <0.00011                  | <0.00011          | <0.00011         | <0.000055            | <0.00011            | <0.000055            | <0.00011             | <0.00011             | <0.011          | <0.011           | <0.0055                 | 0.0049                     | <0.0055          | <0.011                                      | <0.00011                           | <0.00011               | <0.0022            | <0.011             | <0.0055 UJ        | <0.011             |          |
|                         | 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            | <0.005                  | <0.002                     | <0.005           | <0.01                                       | <0.0001                            | <0.0001                | <0.002             | <0.01              | <0.005            | <0.01              |          |
|                         | P93C-ROX-071813     | 7/18/2013   |                             | 43.31                    | NE                     | <0.000045 U               | <0.00011          | 0.000021 J       | <0.000056            | 0.00015             | <0.000056            | <0.00011             | <0.00011             | <0.011 UJ       | <0.011           | <0.0056                 | <0.0022                    | <0.0056          | <0.011                                      | <0.00011                           | <0.00011               | <0.0022            | <0.011             | <0.0056           | <0.011             |          |
|                         | P93C-ROX-080813     | 8/8/2013    |                             | 43.31                    | NE                     |                           |                   |                  |                      |                     |                      |                      |                      |                 |                  |                         |                            |                  |   |                                    |                        |                    |                    |                   |                    |          |
| P-93D                   | P93D-102610         | 10/26/2010  | 125.44 - 127.44             | 40.59                    | NE                     | <0.01                     | <0.01             | <0.01            | <0.01                | <0.01               | <0.01                | <0.01                | <0.01                | <0.048          |                  | <0.01                   | <0.01                      | <0.01            | <0.01                                       | <0.01                              | <0.01                  | <0.01              | <0.01              | <0.01             |                    |          |
|                         | P93D-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            | <0.005                  | <0.0027 U                  | <0.005           | <0.01                                       | <0.0001 UJ                         | <0.0001 UJ             | <0.005             | <0.01              | <0.005            | <0.01              |          |
|                         | 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            | <0.005                  | <0.002                     | <0.005           | <0.01                                       | <0.000015 U                        | <0.0001                | <0.005             | <0.01              | <0.0018 U         | <0.01              |          |
|                         | P93D-ROX-102711     | 10/27/2011  |                             | 39.59                    | NE                     | <0.0001                   | <0.0001           | <0.0001          | <0.00005             | <0.0001             | <0.00005             | <0.0001              | <0.0001              | <0.01           | <0.01            | <0.005                  | <0.002                     | <0.005           | <0.01                                       | <0.0001                            | <0.0001                | <0.005             | <0.01              | <0.005            | <0.01              |          |
|                         | 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           | <0.0054                 | <0.0022                    | <0.0054          | <0.011                                      | <0.00011                           | <0.00011               | <0.0054            | <0.011             | <0.0054           | <0.011             |          |
|                         | P93D-ROX-050812     | 5/8/2012    |                             | 42.96                    | NE                     | <0.0001                   | <0.0001           | <0.0001          | <0.0001 U            | <0.0001             | <0.000051            | <0.0001              | <0.0001              | <0.01           | <0.01            | <0.0051                 | <0.002                     | <0.0051          | <0.01                                       | <0.0001                            | <0.0001                | <0.0051            | <0.01              | <0.0051           | <0.01              |          |
|                         | P93D-ROX-080812     | 8/8/2012    |                             | 43.71                    | NE                     | 0.00017                   | 0.000051 J        | <0.0001          | <0.000052            | <0.0001             | <0.000052            | <0.0001              | <0.0001              | <0.01           | <0.0021 U        | <0.0052                 | <0.0021                    | <0.0052          | <0.01                                       | <0.0001                            | <0.0001                | <0.0021            | <0.01              | <0.0052           | <0.01              |          |
|                         | 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           | <0.0055                 | <0.0022                    | <0.0055          | <0.011                                      | <0.00011                           | <0.00011               | <0.0022            | <0.011             | <0.0055           | <0.011             |          |
|                         | P93D-ROX-012213     | 1/22/2013   |                             | 44.21                    |                        |                           |                   |                  |                      |                     |                      |                      |                      |                 |                  |                         |                            |                  |   |                                    |                        |                    |                    |                   |                    |          |

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

|                         |                       |               |                             |                          |                        | SVOCs                     |                   |                  |                      |                     |                      |                      |                      |                 |                  |                         |                            |                       |   |                                    |                        |                    |                    |                   |                    |
|-------------------------|-----------------------|---------------|-----------------------------|--------------------------|------------------------|---------------------------|-------------------|------------------|----------------------|---------------------|----------------------|----------------------|----------------------|-----------------|------------------|-------------------------|----------------------------|-----------------------|---|------------------------------------|------------------------|--------------------|--------------------|-------------------|--------------------|
| Screening Values (mg/L) |                       |               |                             |                          |                        | 0.42 <sup>2</sup>         | 0.21 <sup>3</sup> | 2.1 <sup>2</sup> | 0.00013 <sup>2</sup> | 0.0002 <sup>1</sup> | 0.00018 <sup>2</sup> | 0.21 <sup>3</sup>    | 0.00017 <sup>2</sup> | 28 <sup>4</sup> | 0.7 <sup>3</sup> | 0.01 <sup>2</sup>       | 0.006 <sup>2</sup>         | 1.4 <sup>2</sup>      |   | 0.0015 <sup>2</sup>                | 0.0003 <sup>2</sup>    | 0.007 <sup>3</sup> | 0.021 <sup>2</sup> | 5.6 <sup>2</sup>  | 0.14 <sup>2</sup>  |
| Location                | Sample ID             | Sample Date   | Screened Interval (ft btoc) | Depth to Water (ft btoc) | Product Thickness (ft) | Analytical Results (mg/L) |                   |                  |                      |                     |                      |                      |                      |                 |                  |                         |                            |                       |   |                                    |                        |                    |                    |                   |                    |
|                         |                       |               |                             |                          |                        | Acenaphthene              | Acenaphthylene    | Anthracene       | Benzo(a)anthracene   | Benzo(a)pyrene      | Benzo(b)fluoranthene | Benzo(g,h,i)perylene | Benzo(k)fluoranthene | Benzoic Acid    | Benzy alcohol    | bis(2-Chloroethyl)ether | bis(2-Ethylhexyl)phthalate | Butyl benzy phthalate | 4-Chloro-3-methylphenol (p-Chloro-m-cresol) | Chrysene (1,2-Benzophenanthracene) | Dibenzo(a,h)anthracene | Dibenzofuran       | 2,4-Dichlorophenol | Diethyl phthalate | 2,4-Dimethylphenol |
| 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          | <0.0048                 | 0.0053                     | <0.0048               | <0.0095                                     | <0.000095                          | <0.000095              | <0.0048            | <0.0095            | <0.0048           | <0.0095            |
|                         | P114-ROX-012012       | 1/20/2012     |                             | 27.17                    | NE                     | <0.0001                   | <0.0001           | <0.0001          | <0.000051            | 0.000055 J          | 0.00005 J            | <0.000058 J          | <0.0001              | <0.01 UJ        | <0.01            | <0.0051                 | <0.0013 U                  | <0.00044 U            | <0.01                                       | <0.0001                            | 0.000053 J             | <0.0051            | <0.01              | <0.0051           | <0.01              |
|                         | P114-ROX-050912       | 5/9/2012      |                             | 28.09                    | NE                     | <0.0001                   | <0.0001           | <0.0001          | <0.00005             | <0.0001             | <0.00005             | <0.0001              | <0.0001              | <0.01           | <0.01            | <0.0052                 | 0.0015 J                   | <0.0052               | <0.01                                       | <0.0001                            | <0.0001                | <0.0052            | <0.01              | <0.0052           | <0.01              |
|                         | P114-ROX-080912       | 8/9/2012      |                             | 29.13                    | NE                     | <0.0001                   | 0.000029 J        | <0.0001          | <0.00005             | <0.0001             | <0.00005             | <0.0001              | <0.0001              | <0.01           | <0.01            | <0.005                  | 0.0039                     | <0.005                | <0.01                                       | <0.0001                            | <0.0001                | <0.002             | <0.01              | <0.005            | <0.01              |
|                         | 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            | <0.0052                 | <0.0021                    | <0.0052               | <0.01                                       | <0.0001                            | <0.0001                | <0.0021            | <0.01              | <0.0052           | <0.01              |
|                         | P114-ROX-012313       | 1/23/2013     |                             | 30.22                    | NE                     | <0.00011                  | <0.00011          | <0.00011         | <0.000053            | <0.00011            | <0.000053            | <0.00011             | <0.00011             | <0.011          | <0.011           | <0.0053                 | 0.0059                     | <0.0053               | <0.011                                      | <0.00011                           | <0.00011               | <0.0021            | <0.011             | <0.0053 UJ        | <0.011             |
|                         | 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            | <0.0052                 | 0.0023                     | <0.0052               | <0.01                                       | <0.0001                            | <0.0001                | <0.0021            | <0.01              | <0.0052           | <0.01              |
|                         | P114-ROX-071813       | 7/18/2013     |                             | 27.22                    | NE                     | 0.00013 B                 | <0.00011          | 0.00011          | 0.000045 J           | 0.000034 J          | 0.000064             | 0.000067 J           | <0.00011             | <0.011 UJ       | <0.011           | <0.0055                 | <0.0022                    | <0.0055               | <0.011                                      | <0.00011                           | 0.000073 J             | <0.0022            | <0.011             | <0.0055           | <0.011             |
| P114-ROX-071813-DUP     | 7/18/2013             | 27.22         | NE                          | <0.00011                 | <0.00011               | 0.00013                   | <0.000053         | <0.00011         | <0.000053            | <0.00011            | <0.00011             | <0.011 UJ            | <0.011               | <0.0053         | <0.0021          | <0.0053                 | <0.011                     | <0.00011              | <0.00011                                    | <0.0021                            | <0.011                 | <0.0053            | <0.011             |                   |                    |
| 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            | <0.0052                 | 0.00065 J                  | <0.0052               | <0.01                                       | <0.0001                            | <0.0001                | <0.0052            | <0.01              | <0.0052           | <0.01              |
|                         | ROST3PZ-ROX-080712    | 8/7/2012      |                             | 39.00                    | NE                     | <0.00011                  | <0.00011          | <0.00011         | <0.000054            | <0.00011            | <0.000054            | <0.00011             | <0.011               | <0.011          | <0.0054          | <0.0022                 | 0.0016 J                   | <0.011                | <0.00011                                    | <0.00011                           | <0.0022                | <0.011             | <0.0033 J          | <0.011            |                    |
|                         | ROST3PZ-ROX-110112    | 11/1/2012     |                             | 40.82                    | NE                     | <0.00011                  | <0.00011          | <0.00011         | <0.000053            | <0.00011            | <0.000053            | <0.00011             | <0.011 UJ            | <0.011          | <0.0053          | <0.0021                 | <0.0053                    | <0.011                | <0.00011                                    | <0.00011                           | <0.0021                | <0.011             | <0.0053            | <0.011 UJ         |                    |
| ROST-3-MW               | ROST3MW-ROX-012313    | 1/23/2013     | 38.18 - 48.18               | 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            | <0.005                  | <0.002                     | <0.005                | <0.01                                       | <0.0001                            | <0.0001                | <0.002             | <0.01              | <0.005 UJ         | <0.01              |
|                         | ROST3MW-ROX-040513    | 4/5/2013      |                             | 42.24                    | NE                     | 0.00016                   | <0.00011 UJ       | <0.00011         | <0.000054            | <0.00011            | <0.000054            | <0.00011             | <0.00011             | <0.011          | <0.011           | <0.0054                 | <0.0022                    | <0.0054               | <0.011                                      | <0.00011                           | <0.00011               | <0.0022            | <0.011             | <0.0054           | <0.011             |
|                         | ROST3MW-ROX-071113    | 7/11/2013     |                             | 39.50                    | NE                     | 0.00029                   | <0.00011          | 0.000091 J       | <0.000054            | <0.00011            | <0.000054            | <0.00011             | <0.00011             | <0.011 UJ       | <0.011           | <0.0054                 | 0.00061 J                  | <0.0054               | <0.011 UJ                                   | <0.00011                           | <0.00011               | 0.00025 J          | <0.011 UJ          | <0.0054           | 0.0016 J J         |
| 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            | <0.005                  | <0.002                     | <0.005                | <0.01                                       | <0.0001                            | <0.0001                | 0.00027 J          | <0.01              | <0.005            | <0.01              |
|                         | ROST4PZ-C-ROX-072512  | 7/25/2012     |                             | 39.10                    | NE                     | 0.00039 B                 | <0.00011          | <0.00018 U       | <0.000053            | <0.00011            | <0.000053            | <0.00011             | <0.00011             | <0.011          | 0.00042 J        | <0.0053                 | <0.00051 U                 | <0.0053               | <0.011                                      | <0.00011                           | <0.00011               | 0.00036 J          | <0.011             | 0.0012 J          | 0.003 J            |
|                         | ROST4PZC-ROX-102912   | 10/29/2012    |                             | 40.75                    | NE                     | 0.000054 J                | <0.0001           | 0.00005 J        | <0.000052            | <0.0001             | <0.000052            | <0.0001              | <0.0001              | <0.01           | <0.01            | <0.0052                 | 0.0045                     | <0.0052               | <0.01                                       | <0.0001                            | <0.0001                | <0.0021            | <0.01              | <0.0052           | <0.01              |
|                         | ROST4PZ(C)-ROX-011113 | 1/11/2013     |                             | 41.42                    | NE                     | <0.00011                  | <0.00011          | <0.00011         | <0.000053            | <0.00011            | <0.000053            | <0.00011             | <0.00011             | <0.011          | <0.011           | <0.0053                 | <0.0021                    | <0.0053               | <0.011                                      | <0.00011                           | <0.00011               | <0.0021            | <0.011             | <0.0053           | <0.011             |
|                         | 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           | <0.0055                 | <0.0022                    | <0.0055               | <0.011                                      | <0.00011                           | <0.00011               | <0.0022            | <0.011             | <0.0055           | <0.011             |
| ROST4PZC-ROX-071113     | 7/11/2013             | 34.95 - 44.95 | 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          | <0.0054          | 0.0032                  | <0.0054                    | <0.011                | <0.00011                                    | <0.00011                           | <0.0022                | <0.011             | <0.0054            | <0.011            |                    |
| T-12                    | T12-ROX-102711        | 10/27/2011    | 46.72 - 72.72               | 38.54                    | NE                     | 0.00079                   | 0.00012           | 0.00017          | <0.000051            | <0.0001             | <0.000051            | <0.0001              | <0.0001              | <0.01           | <0.01            | <0.0051                 | 0.0025                     | <0.0051               | <0.01                                       | <0.0001                            | <0.0001                | <0.0051            | <0.01              | <0.0051           | 0.0109             |
|                         | T12-ROX-011912        | 1/19/2012     |                             | 41.0                     | NE                     | 0.00047                   | <0.00011          | 0.00014          | <0.000056            | 0.000032 J          | 0.000035 J           | 0.000069 J           | <0.00011             |                 | <0.011 UJ        | <0.0056                 | <0.0017 U                  | <0.00062 U            | <0.011                                      | <0.00011                           | 0.00005 J              | 0.00029 J          | <0.011             | <0.0056           | 0.0095 J           |
|                         | T12-ROX-050912        | 5/9/2012      |                             | 42.62                    | NE                     | 0.00032                   | <0.0001           | 0.000081 J       | <0.00005             | <0.0001             | <0.00005             | <0.0001              | <0.0001              | <0.01           | <0.01            | <0.005                  | <0.002                     | <0.005                | <0.01                                       | <0.0001                            | <0.0001                | <0.005             | <0.01              | <0.005            | <0.01              |
|                         | T12-ROX-080212        | 8/2/2012      |                             | 41.92                    | NE                     | 0.00044                   | 0.000082 J        | 0.0001 J         | <0.000054            | <0.00011            | <0.000054            | <0.00011             | <0.00011             | <0.011          | <0.011           | <0.0054                 | <0.0022                    | <0.0054               | <0.011                                      | <0.00011                           | <0.00011               | 0.0003 J           | <0.011             | <0.0054           | 0.0153             |
|                         | T12-ROX-110512        | 11/5/2012     |                             | 43.91                    | NE                     | 0.00044                   | <0.0001           | 0.0001           | <0.00005             | <0.0001             | <0.00005             | <0.0001              | <0.0001              | <0.01 UJ        | <0.01            | <0.005                  | 0.00054 J                  | <0.005                | <0.01                                       | <0.0001                            | <0.0001                | 0.00029 J          | <0.01              | <0.005            | 0.0028 J J         |
|                         | T12-ROX-011813        | 1/18/2013     |                             | 44.50                    | NE                     | 0.0005                    | 0.000093 J        | <0.00013 U       | <0.000053            | <0.00011            | <0.000053            | <0.00011             | <0.00011             | <0.011          | <0.011           | <0.0053                 | <0.0021                    | <0.0053               | <0.011                                      | <0.00011                           | <0.00011               | <0.0021            | <0.011             | <0.0053           | 0.0065 J           |
|                         | T12-ROX-041513        | 4/15/2013     |                             | 44.99                    | NE                     | 0.00063                   | 0.00009 J         | <0.0001          | <0.000051            | <0.0001             | <0.000051            | <0.0001 UJ           | <0.0001 UJ           | <0.01           | <0.01            | <0.0051                 | <0.002                     | <0.0051               | <0.01                                       | <0.0001                            | <0.0001                | 0.00048 J          | <0.01              | <0.0051           | <0.01              |
|                         | T12-ROX-071613        | 7/16/2013     |                             | 46.72 - 72.72            | 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                 | <0.0054 UJ                 | <0.0044 U             | <0.0054                                     | <0.011                             | <0.00011               | <0.00011           | 0.00042 J          | <0.011            | <0.0054            |

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

| Screening Values (mg/L) |                    |               |                             |                          |                        | SVOCs              |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                   |            |            |           |         |
|-------------------------|--------------------|---------------|-----------------------------|--------------------------|------------------------|--------------------|----------------------|----------------------|-------------------|----------------------|----------------------|------------------------|--|---------------------|---------------------|---------------------------|-----------------------------------|---------------------|---------------------|------------------------|------------------------|-------------------|-------------------|------------|------------|-----------|---------|
| Location                | Sample ID          | Sample Date   | Screened Interval (ft btoc) | Depth to Water (ft btoc) | Product Thickness (ft) | Dimethyl phthalate | Di-n-butyl phthalate | Di-n-octyl phthalate | Fluoranthene      | Fluorene             | Hexachlorobenzene    | Indene(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     |           |         |
|                         |                    |               |                             |                          |                        | 0.7 <sup>2</sup>   | 0.14 <sup>2</sup>    | 0.28 <sup>2</sup>    | 0.28 <sup>2</sup> | 0.00006 <sup>2</sup> | 0.00043 <sup>2</sup> | 1.4 <sup>2</sup>       | 0.49 <sup>3</sup>                                | 0.028 <sup>4</sup>  | 0.35 <sup>2</sup>   | 0.35 <sup>3</sup>         | 0.0035 <sup>2</sup>               | 0.0006 <sup>3</sup> | 0.0032 <sup>2</sup> | 0.001 <sup>2</sup>     | 0.21 <sup>3</sup>      | 0.1 <sup>1</sup>  | 0.21 <sup>2</sup> |            |            |           |         |
| MW-01                   | MW-1-111110        | 11/11/2010    | 43.41 - 58.41               | 36.91                    | NE                     | <0.01              | <0.01                | <0.01                | <0.01             | <0.01                | <0.01                | <0.01                  | <0.01  | <0.01               | <0.01               | <0.01                     | <0.01                             | <0.01               | <0.01               | <0.01                  | <0.01                  | <0.01             | <0.01             | <0.01      | <0.01      | <0.01     |         |
|                         | MW-1-111110-Dup    | 11/11/2010    |                             | 36.91                    | NE                     | <0.01              | <0.01                | <0.01                | <0.01             | <0.01                | <0.01                | <0.01                  | <0.01  | <0.01               | <0.01               | <0.01                     | <0.01                             | <0.01               | <0.01               | <0.01                  | <0.01                  | <0.01             | <0.01             | <0.01      | <0.01      | <0.01     | <0.01   |
|                         | MW1-ROX-011711     | 1/17/2011     |                             | 37.58                    | NE                     | <0.0063            | <0.0063              | <0.0063              | <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    | <0.0063   | <0.0063 |
|                         | MW1-ROX-042911     | 4/29/2011     |                             | 38.37                    | NE                     | <0.0063            | <0.00085 U           | <0.0063              | <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    | <0.0063   | <0.0063 |
|                         | MW1-ROX-072711     | 7/27/2011     |                             | 35.77                    | NE                     | <0.005             | <0.005               | <0.005               | <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    | <0.0001   | <0.0001 |
|                         | MW1-ROX-120511     | 12/5/2011     |                             | 37.10                    | NE                     | <0.0051            | <0.0051              | <0.0051              | <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    | <0.0001   | <0.0001 |
|                         | MW1-ROX-011612     | 1/16/2012     | 48.80 - 58.80               | 37.75                    | NE                     | <0.0051            | <0.0051              | <0.0051              | 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  | <0.0001   | <0.0001 |
|                         | MW1-ROX-050112     | 5/1/2012      |                             | 39.09                    | NE                     | <0.0051            | <0.00054 U           | <0.0051              | <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    | <0.0001   |         |
|                         | MW1-ROX-073012     | 7/30/2012     |                             | 39.39                    | NE                     | <0.0053            | <0.00043 U           | <0.0053              | <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   | <0.00011  |         |
|                         | MW1-ROX-102612     | 10/26/2012    |                             | 41.22                    | NE                     | <0.0057            | <0.0057              | <0.0057              | <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   | <0.00011  |         |
|                         | MW1-ROX-121712     | 12/17/2012    |                             | 41.22                    | NE                     |                    |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                   |            |            |           |         |
|                         | MW1-ROX-011013     | 1/10/2013     |                             | 41.89                    | NE                     | <0.0052 UJ         | <0.0052              | <0.0052              | <0.0001           | <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    | <0.0001   |         |
| MW1-ROX-040913          | 4/9/2013           | 42.55         | NE                          | <0.0053 UJ               | <0.0012 U              | <0.0053            | <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          | <0.00011   |            |           |         |
| MW1-ROX-070813          | 7/8/2013           | 48.80 - 58.80 | 39.56                       | NE                       | <0.0051                | <0.0051            | <0.0051              | 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    | <0.0001    |           |         |
| MW-02                   | MW-2-111010        | 11/11/2010    | 47.19 - 62.19               | 38.12                    | NE                     | <0.01              | <0.01                | <0.01                | <0.01             | <0.01                | <0.01                | <0.01                  |  | 0.014               | <0.01               | 0.007 J                   | <0.019                            | <0.01               |                     | <0.01                  | <0.01                  | <0.01             | 0.006 J           | <0.01      | <0.01      |           |         |
|                         | MW2-ROX-011711     | 1/17/2011     |                             | 38.67                    | NE                     | <0.0048            | <0.0048              | <0.0048              | <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                     | <0.0052 UJ         | <0.001 U             | <0.0052              | <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    | <0.0001   |         |
|                         | MW2-ROX-072711     | 7/27/2011     |                             | 37.04                    | NE                     | <0.005             | <0.005               | <0.005               | <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    | <0.0001   |         |
|                         | MW2-ROX-072711-DUP | 7/27/2011     |                             | 37.04                    | NE                     | <0.005             | <0.005               | <0.005               | <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    | <0.0001   |         |
|                         | MW2-ROX-112811     | 11/28/2011    |                             | 38.03                    | NE                     | <0.005             | <0.005               | <0.005               | <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    | <0.0001   |         |
|                         | MW2-ROX-011612     | 1/16/2012     | 49.87 - 59.87               | 38.89                    | NE                     | <0.0053            | 0.00056 J            | <0.0053              | <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   | <0.00011  |         |
|                         | MW2-ROX-050112     | 5/1/2012      |                             | 40.25                    | NE                     | <0.0052            | <0.0005 U            | <0.0052              | <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    | <0.0001   |         |
|                         | MW2-ROX-073012     | 7/30/2012     |                             | 40.60                    | NE                     | <0.0053            | <0.00047 U           | <0.0053              | <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 | <0.0001   |         |
|                         | MW2-ROX-102612     | 10/26/2012    |                             | 42.35                    | NE                     | <0.0054            | <0.0054              | <0.0054              | 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 | <0.0001   |         |
|                         | MW2-ROX-011113     | 1/11/2013     |                             | 42.94                    | NE                     | <0.0056 UJ         | <0.0056              | <0.0056              | 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 | <0.0001   |         |
|                         | MW2-ROX-040913     | 4/9/2013      |                             | 43.70                    | NE                     | <0.0054 UJ         | <0.0054              | <0.0054              | <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   | <0.00011  |         |
| MW2-ROX-071113          | 7/11/2013          | 49.87 - 59.87 | 40.82                       | NE                       | <0.0055                | <0.0055            | <0.0055              | <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   | <0.00011   |           |         |
| MW-03                   | MW-3-111210        | 11/12/2010    | 30.98 - 45.98               | 24.05                    | NE                     | <0.01              | <0.01                | <0.01                | <0.01             | <0.01                | <0.01                | <0.01                  | <0.01  | <0.01               | <0.01               | <0.01                     | <0.01                             | <0.01               | <0.01               | <0.01                  | <0.01                  | <0.01             | <0.01             | <0.01      | <0.01      |           |         |
|                         | MW3-ROX-011811     | 1/18/2011     |                             | 24.92                    | NE                     | <0.0053            | <0.0053              | <0.0053              | <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    | <0.0053    |           |         |
|                         | MW03-ROX-051011    | 5/10/2011     |                             | 24.79                    | NE                     | <0.005 UJ          | <0.0014 U            | <0.005               | <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    | <0.0001   |         |
|                         | MW3-ROX-080311     | 8/3/2011      |                             | 22.72                    | NE                     | <0.0048            | <0.00081 U           | <0.0048              | <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  | <0.000095 |         |
|                         | MW3-ROX-112911     | 11/29/2011    |                             | 24.06                    | NE                     | <0.0052            | <0.0052              | <0.0052              | <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    | <0.0001   |         |
|                         | MW3-ROX-112911-DUP | 11/29/2011    |                             | 24.06                    | NE                     | <0.0051            | <0.0051              | <0.0051              | <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    | <0.0001   |         |
|                         | MW3-ROX-011612     | 1/16/2012     | 34.67 - 44.67               | 24.93                    | NE                     | <0.0052            | <0.0052              | <0.0052              | 0.000098 J        | <0.0001              | <0.0052              | <0.00015 U             | <0.0052  | <0.                 |                     |                           |                                   |                     |                     |                        |                        |                   |                   |            |            |           |         |

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

|                         |                    |               |                             |                          |                        | SVOCs                     |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |            |          |  |
|-------------------------|--------------------|---------------|-----------------------------|--------------------------|------------------------|---------------------------|----------------------|----------------------|-------------------|----------------------|----------------------|------------------------|--|---------------------|---------------------|---------------------------|-----------------------------------|---------------------|---------------------|------------------------|------------------------|-------------------|------------------|-------------------|------------|----------|--|
| Screening Values (mg/L) |                    |               |                             |                          |                        | 0.7 <sup>2</sup>          | 0.14 <sup>2</sup>    | 0.28 <sup>2</sup>    | 0.28 <sup>2</sup> | 0.00006 <sup>2</sup> | 0.00043 <sup>2</sup> | 1.4 <sup>2</sup>       | 0.49 <sup>3</sup>                                | 0.028 <sup>4</sup>  | 0.35 <sup>2</sup>   | 0.35 <sup>3</sup>         |                                   | 0.0035 <sup>2</sup> | 0.0006 <sup>3</sup> | 0.0032 <sup>2</sup>    | 0.001 <sup>2</sup>     | 0.21 <sup>3</sup> | 0.1 <sup>1</sup> | 0.21 <sup>2</sup> |            |          |  |
| Location                | Sample ID          | Sample Date   | Screened Interval (ft btoc) | Depth to Water (ft btoc) | Product Thickness (ft) | Analytical Results (mg/L) |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |            |          |  |
|                         |                    |               |                             |                          |                        | Dimethyl phthalate        | Di-n-butyl phthalate | Di-n-octyl phthalate | Fluoranthene      | Fluorene             | Hexachlorobenzene    | Indene(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     |          |  |
| MW-04                   | MW-4-111210        | 11/12/2010    | 42.63 - 57.63               | 35.38                    | NE                     | <0.009                    | <0.009               | <0.009               | <0.009            | <0.009               | <0.009               | <0.009                 | <0.009   | <0.009              | <0.009              | <0.009                    | <0.009                            | <0.019              | <0.009              |                        | <0.009                 | <0.009            | <0.009           | <0.009            | <0.009     |          |  |
|                         | MW4-ROX-011811     | 1/18/2011     |                             | 36.04                    | NE                     | <0.0052                   | <0.0052              | <0.0052              | <0.0052           | <0.0052              | <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                     | <0.005 UJ                 | <0.0012 U            | <0.005               | <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    | <0.0001  |  |
|                         | MW4-ROX-072611     | 7/26/2011     |                             | 34.15                    | NE                     | <0.005                    | <0.005               | <0.005               | <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    | <0.0001  |  |
|                         | MW4-ROX-072611-DUP | 7/26/2011     |                             | 34.15                    | NE                     | <0.005                    | <0.005               | <0.005               | <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    | <0.0001  |  |
|                         | MW4-ROX-121511     | 12/15/2011    |                             | 33.99                    | NE                     | <0.0052                   | <0.0052              | <0.0052              | <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    | <0.0001  |  |
|                         | MW4-ROX-011612     | 1/16/2012     | 46.06 - 56.06               | 36.00                    | NE                     | <0.0052                   | 0.00077 J            | <0.0052              | 0.000047 J        | <0.0001              | <0.0052              | <0.00018 U             | <0.0052  | 0.0006              | 0.00059             | <0.01                     | <0.01                             | <0.01               | <0.0052             | <0.0052                | <0.0052                | <0.01             | 0.000057         | <0.0052           | 0.000065 J |          |  |
|                         | MW4-ROX-050312     | 5/3/2012      |                             | 37.45                    | NE                     | <0.005                    | <0.00062 U           | <0.005               | <0.0001           | <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    | <0.0001  |  |
|                         | MW4-ROX-050312-DUP | 5/3/2012      |                             | 37.45                    | NE                     | <0.0051                   | <0.00061 U           | <0.0051              | <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    | <0.0001  |  |
|                         | MW4-ROX-072512     | 7/25/2012     |                             | 37.63                    | NE                     | <0.0051                   | 0.00075 J            | <0.0051              | <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    | <0.0001  |  |
|                         | MW4-ROX-072512-Dup | 7/25/2012     |                             | 37.63                    | NE                     | <0.0051                   | 0.00057 J            | <0.0051              | <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    | <0.0001  |  |
|                         | MW4-ROX-102912     | 10/29/2012    |                             | 39.45                    | NE                     | <0.0052                   | <0.0052              | <0.0052              | <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    | <0.0001  |  |
|                         | MW4-ROX-011113     | 1/11/2013     |                             | 40.20                    | NE                     | <0.0056 UJ                | <0.0056              | <0.0056              | <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   | <0.00011 |  |
|                         | MW4-ROX-011113-DUP | 1/11/2013     |                             | 40.20                    | NE                     | <0.006 UJ                 | <0.006               | <0.006               | <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   | <0.00012 |  |
|                         | MW4-ROX-030413     | 3/4/2013      |                             | 40.20                    | NE                     |                           |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |            |          |  |
|                         | MW4-ROX-040913     | 4/9/2013      |                             | 40.90                    | NE                     | <0.0053 UJ                | <0.0053              | <0.0053              | <0.00011          | <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   | <0.00011 |  |
| MW4-ROX-040913-DUP      | 4/9/2013           | 40.90         | NE                          | <0.0053 UJ               | <0.00062 U             | <0.0053                   | <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         | <0.00011          |            |          |  |
| MW4-ROX-071713          | 7/17/2013          | 46.06 - 56.06 | 37.61                       | NE                       | <0.0055                | <0.0055                   | <0.0055              | <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          | <0.00011   |          |  |
| MW-05                   | MW-5-111210        | 11/12/2010    | 31.13 - 46.13               | 23.32                    | NE                     | <0.01                     | <0.01                | <0.01                | <0.01             | <0.01                | <0.01                | <0.01                  |  | <0.01               | <0.01               | <0.01                     | <0.019                            | <0.01               |                     | <0.01                  | <0.01                  | <0.01             | <0.01            | <0.01             |            |          |  |
|                         | MW5-ROX-011811     | 1/18/2011     |                             | 24.15                    | NE                     | <0.0053                   | <0.0053              | <0.0053              | <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                     | <0.0053                   | <0.0009 U            | <0.0053              | <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   | <0.00011 |  |
|                         | MW5-ROX-072611     | 7/26/2011     |                             | 22.00                    | NE                     | <0.005                    | <0.005               | <0.005               | <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    | <0.0001  |  |
|                         | MW5-ROX-072611-DUP | 7/26/2011     |                             | 22.00                    | NE                     | <0.005                    | <0.005               | <0.005               | <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    | <0.0001  |  |
|                         | MW5-ROX-112111     | 11/21/2011    | 33.97 - 43.97               | 23.46                    | NE                     | <0.0053                   | 0.00052 J            | <0.0053              | 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   | <0.00011 |  |
|                         | MW5-ROX-011712     | 1/17/2012     |                             | 24.76                    | NE                     | <0.0053                   | <0.0053              | <0.0053              | <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   | <0.00011 |  |
|                         | MW5-ROX-050312     | 5/3/2012      |                             | 25.89                    | NE                     | <0.0051                   | <0.0005 U            | <0.0051              | <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    | <0.0001  |  |
|                         | MW5-ROX-072512     | 7/25/2012     |                             | 26.18                    | NE                     | <0.0052                   | 0.00057 J            | <0.0052              | <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    | <0.0001  |  |
|                         | MW5-ROX-102912     | 10/29/2012    |                             | 28.16                    | NE                     | <0.0051                   | <0.0051              | <0.0051              | <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    | <0.0001  |  |
|                         | MW5-ROX-011113     | 1/11/2013     |                             | 28.75                    | NE                     | <0.0055 UJ                | <0.0055              | <0.0055              | <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   | <0.00011 |  |
| MW5-ROX-040913          | 4/9/2013           | 29.41         | NE                          | <0.0054 UJ               | <0.0054                | <0.0054                   | <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         | <0.00011          |            |          |  |
| MW5-ROX-070913          | 7/9/2013           | 33.97 - 43.97 | 26.04                       | NE                       | <0.005                 | <0.005                    | <0.005               | <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           | <0.0001    |          |  |

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

| Screening Values (mg/L)   |                     |               |                             |                          |                        | SVOCs              |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |             |             |
|---------------------------|---------------------|---------------|-----------------------------|--------------------------|------------------------|--------------------|----------------------|----------------------|-------------------|----------------------|----------------------|------------------------|--|---------------------|---------------------|---------------------------|-----------------------------------|---------------------|---------------------|------------------------|------------------------|-------------------|------------------|-------------------|-------------|-------------|
| Location                  | Sample ID           | Sample Date   | Screened Interval (ft btoc) | Depth to Water (ft btoc) | Product Thickness (ft) | Dimethyl phthalate | Di-n-butyl phthalate | Di-n-octyl phthalate | Fluoranthene      | Fluorene             | Hexachlorobenzene    | Indene(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      |             |
|                           |                     |               |                             |                          |                        | 0.7 <sup>2</sup>   | 0.14 <sup>2</sup>    | 0.28 <sup>2</sup>    | 0.28 <sup>2</sup> | 0.00006 <sup>2</sup> | 0.00043 <sup>2</sup> | 1.4 <sup>2</sup>       | 0.49 <sup>3</sup>                                | 0.028 <sup>4</sup>  | 0.35 <sup>2</sup>   | 0.35 <sup>3</sup>         |                                   | 0.0035 <sup>2</sup> | 0.0006 <sup>3</sup> | 0.0032 <sup>2</sup>    | 0.001 <sup>2</sup>     | 0.21 <sup>3</sup> | 0.1 <sup>1</sup> | 0.21 <sup>2</sup> |             |             |
| Analytical Results (mg/L) |                     |               |                             |                          |                        |                    |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |             |             |
| MW-06A                    | MW-6A-110910        | 11/9/2010     | 31.98 - 46.98               | 25.62                    | NE                     | <0.01              | <0.01                | <0.01                | <0.01             | <0.01                | <0.01                | <0.01                  | <0.01  | <0.01               | <0.01               | <0.01                     | <0.01                             | <0.019              | <0.01               | <0.01                  | <0.01                  | <0.01             | <0.01            | <0.01             | <0.01       |             |
|                           | MW6A-ROX-011911     | 1/19/2011     |                             | 26.36                    | NE                     | <0.005             | 0.00081 J            | <0.005               | <0.005            | <0.005               | <0.005               | <0.005                 | <0.005   | <0.005              | <0.005              | <0.01                     | <0.01                             | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | <0.005           | <0.005            | <0.005      | <0.005      |
|                           | MW6A-ROX-051611     | 5/16/2011     |                             | 26.10                    | NE                     | <0.005             | <0.0016 U            | <0.005               | <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     | <0.0001     |
|                           | MW6A-ROX-072611     | 7/26/2011     | 34.83 - 44.83               | 23.76                    | NE                     | <0.005             | <0.005               | <0.005               | <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     | <0.0001     |
|                           | MW6A-ROX-112111     | 11/21/2011    |                             | 25.49                    | NE                     | <0.0052            | 0.00053 J            | 0.00093 J            | <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     | <0.0001     |
|                           | MW6A-ROX-112111-DUP | 11/21/2011    |                             | 25.49                    | NE                     | <0.0051            | 0.00069 J            | <0.0051              | <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     | <0.0001     |
|                           | MW6A-ROX-011712     | 1/17/2012     |                             | 26.74                    | NE                     | <0.0054            | <0.0054              | <0.0054              | <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    | <0.00011    |
|                           | MW6A-ROX-050212     | 5/2/2012      |                             | 27.77                    | NE                     | <0.005             | <0.005               | <0.005               | <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     | <0.0001     |
|                           | MW6A-ROX-080112     | 8/1/2012      |                             | 28.36                    | NE                     | <0.005             | 0.00049 J            | <0.005               | <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     | <0.0001     |
|                           | MW6A-ROX-102412     | 10/24/2012    |                             | 30.06                    | NE                     | <0.0053            | <0.0053              | <0.0053              | <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    | <0.00011    |
|                           | MW6A-ROX-011413     | 1/14/2013     | 31.00                       | NE                       | <0.0051 UJ             | <0.0051            | <0.0051              | <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           | <0.0001     |             |
|                           | MW6A-ROX-040313     | 4/3/2013      | 31.62                       | NE                       | <0.0053                | 0.0018 J           | <0.0053              | <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        | 0.000053 J  |             |
|                           | MW6A-ROX-070913     | 7/9/2013      | 34.83 - 44.83               | 28.25                    | NE                     | <0.0055            | <0.0055              | <0.0055              | <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    | <0.00011    |
| MW6A-ROX-070913-DUP       | 7/9/2013            | 28.25         |                             | NE                       | <0.0055                | <0.0055            | <0.0055              | <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          | <0.00011    |             |
| MW-06B                    | MW-6B-111610        | 11/16/2010    | 64.05 - 69.05               | 25.47                    | NE                     | <0.01              | <0.01                | <0.01                | <0.01             | <0.01                | <0.01                | <0.01                  | <0.01  | <0.01               | <0.01               | <0.01                     | <0.01                             | <0.02               | <0.01               | <0.01                  | <0.01                  | <0.01             | <0.01            | <0.01             | <0.01       |             |
|                           | MW6B-ROX-011911     | 1/19/2011     |                             | 26.21                    | NE                     | <0.005             | <0.005               | <0.005               | <0.005            | <0.005               | <0.005               | <0.005                 | <0.005   | <0.005              | <0.005              | <0.01                     | <0.01                             | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | <0.005           | <0.005            | <0.005      | <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  | <0.0051             | <0.0051             | <0.01                     | <0.01                             | <0.01               | <0.0051             | <0.0051                | <0.0051                | <0.01             | <0.0051          | <0.0051           | <0.0051     | <0.0051     |
|                           | MW6B-ROX-051611     | 5/16/2011     |                             | 25.95                    | NE                     | <0.0048            | <0.0012 U            | <0.0048              | <0.000095 UJ      | <0.000095 UJ         | <0.0048              | <0.000095 UJ           | <0.0048  | <0.0048 UJ          | <0.00019 UJ         | <0.0095                   | <0.0095                           | <0.0095             | <0.0048 UJ          | <0.0048                | <0.0048                | <0.0095           | <0.000048 UJ     | <0.0048           | <0.000095   | <0.000095   |
|                           | MW6B-ROX-051611-DUP | 5/16/2011     |                             | 25.95                    | NE                     | <0.005             | <0.0014 U            | <0.005               | <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     | <0.0001     |
|                           | MW6B-ROX-072311     | 7/23/2011     |                             | 23.60                    | NE                     | <0.0053 UJ         | <0.00047 U           | <0.0053              | <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  | <0.00023 U  |
|                           | MW6B-ROX-110311     | 11/3/2011     |                             | 24.67                    | NE                     | <0.005             | <0.005               | <0.005               | <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     | <0.0001     |
|                           | MW6B-ROX-011712     | 1/17/2012     |                             | 26.77                    | NE                     | <0.0055            | 0.00055 J            | <0.0055              | <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    | <0.00011    |
|                           | MW6B-ROX-050212     | 5/2/2012      |                             | 27.82                    | NE                     | <0.005             | 0.00039 J            | <0.005               | <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     | <0.0001     |
|                           | MW6B-ROX-080112     | 8/1/2012      |                             | 28.39                    | NE                     | <0.0051            | 0.0007 J             | <0.0051              | <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     | <0.0001     |
|                           | MW6B-ROX-102412     | 10/24/2012    |                             | 30.11                    | NE                     | <0.0051            | 0.00079 J            | <0.0051              | <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     | <0.0001     |
|                           | MW6B-ROX-011713     | 1/17/2013     |                             | 31.11                    | NE                     | <0.005             | 0.0026 J             | <0.005               | <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     | <0.0001     |
|                           | MW6B-ROX-040313     | 4/3/2013      |                             | 31.68                    | NE                     | <0.0054            | 0.0012 J             | <0.0054              | <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    | <0.00011    |
| MW6B-ROX-070913           | 7/9/2013            | 64.05 - 69.05 | 28.25                       | NE                       | <0.0056                | <0.0056            | <0.0056              | <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          | <0.00011    |             |
| MW-06C                    | MW-6C-111610        | 11/16/2010    | 84.95 - 89.95               | 25.25                    | NE                     | <0.01              | <0.01                | <0.01                | <0.01             | <0.01                | <0.01                | <0.01                  | <0.01  | <0.01               | <0.01               | <0.01                     | <0.02                             | <0.01               | <0.01               | <0.01                  | <0.01                  | <0.01             | <0.01            | <0.01             | <0.01       |             |
|                           | MW6C-ROX-012111     | 1/21/2011     |                             | 25.97                    | NE                     | <0.0053            | <0.0053              | <0.0053              | <0.0053           | <0.0053              | <0.0053              | <0.0053                | <0.0053  | <0.0053             | <0.011              | <0.011                    | <0.011                            | <0.0053             | <0.0053             | <0.0053                | <0.011                 | <0.0053           | <0.0053          | <0.0053           | <0.0053     |             |
|                           | MW6C-ROX-051611     | 5/16/2011     |                             | 25.76                    | NE                     | <0.005             | <0.0013 U            | <0.005               | <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     | <0.0001     |
|                           | MW6C-ROX-072411     | 7/24/2011     |                             | 23.43                    | NE                     | <0.0053 UJ         | <0.0004 U            | <0.0053              | 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 | 0.000023 JB |
|                           | MW6C-ROX-110311     | 11/3/2011     |                             | 24.47                    | NE                     | <0.005             | <0.005               | <0.005               | <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             | <0.00            |                   |             |             |

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

| Screening Values (mg/L)   |                    |                 |                             |                          |                        | SVOCs              |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |             |             |
|---------------------------|--------------------|-----------------|-----------------------------|--------------------------|------------------------|--------------------|----------------------|----------------------|-------------------|----------------------|----------------------|------------------------|--|---------------------|---------------------|---------------------------|-----------------------------------|---------------------|---------------------|------------------------|------------------------|-------------------|------------------|-------------------|-------------|-------------|
| Location                  | Sample ID          | Sample Date     | Screened Interval (ft btoc) | Depth to Water (ft btoc) | Product Thickness (ft) | Dimethyl phthalate | Di-n-butyl phthalate | Di-n-octyl phthalate | Fluoranthene      | Fluorene             | Hexachlorobenzene    | Indene(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      |             |
|                           |                    |                 |                             |                          |                        | 0.7 <sup>2</sup>   | 0.14 <sup>2</sup>    | 0.28 <sup>2</sup>    | 0.28 <sup>2</sup> | 0.00006 <sup>2</sup> | 0.00043 <sup>2</sup> | 1.4 <sup>2</sup>       | 0.49 <sup>3</sup>                                | 0.028 <sup>4</sup>  | 0.35 <sup>2</sup>   | 0.35 <sup>3</sup>         |                                   | 0.0035 <sup>2</sup> | 0.0006 <sup>3</sup> | 0.0032 <sup>2</sup>    | 0.001 <sup>2</sup>     | 0.21 <sup>3</sup> | 0.1 <sup>1</sup> | 0.21 <sup>2</sup> |             |             |
| Analytical Results (mg/L) |                    |                 |                             |                          |                        |                    |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |             |             |
| MW-06D                    | MW-6D-111610       | 11/16/2010      | 104.72 - 109.72             | 25.13                    | NE                     | <0.01              | <0.01                | <0.01                | <0.01             | <0.01                | <0.01                | <0.01                  | <0.01  | <0.01               | <0.01               | <0.01                     | <0.01                             | <0.02               | <0.01               | <0.01                  | <0.01                  | <0.01             | <0.01            | <0.01             | <0.01       |             |
|                           | MW6D-ROX-012111    | 1/21/2011       |                             | 25.87                    | NE                     | <0.0053            | 0.00071 J            | <0.0053              | <0.0053           | <0.0053              | <0.0053              | <0.0053                | <0.0053  | <0.0053             | <0.0053             | <0.011                    | <0.011                            | <0.011              | <0.0053             | <0.0053                | <0.0053                | <0.011            | <0.0053          | <0.0053           | <0.0053     | <0.0053     |
|                           | MW6D-ROX-051611    | 5/16/2011       |                             | 25.60                    | NE                     | <0.0055            | <0.0015 U            | <0.0055              | <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    | <0.00011    |
|                           | MW6D-ROX-072311    | 7/23/2011       |                             | 23.29                    | NE                     | <0.0053 UJ         | <0.00046 U           | <0.0053              | <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 | <0.000063 U |
|                           | MW6D-ROX-110311    | 11/3/2011       |                             | 24.31                    | NE                     | <0.0052            | <0.0052              | <0.0052              | <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     | <0.0001     |
|                           | MW6D-ROX-011712    | 1/17/2012       |                             | 26.33                    | NE                     | <0.0055            | 0.00047 J            | <0.0055              | <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    | <0.00011    |
|                           | MW6D-ROX-050212    | 5/2/2012        |                             | 27.45                    | NE                     | <0.005             | 0.00047 J            | <0.005               | <0.0001           | <0.0001              | <0.005               | <0.0001                | <0.005   | <0.0005 U           | <0.00021            | <0.00021                  | <0.01                             | <0.01               | <0.01               | <0.005                 | <0.005                 | <0.005            | <0.01            | <0.000052         | <0.005      | <0.0001     |
|                           | MW6D-ROX-080212    | 8/2/2012        |                             | 30.56                    | NE                     | <0.0051            | <0.0051              | <0.0051              | <0.0001           | <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     | <0.0001     |
|                           | MW6D-ROX-102412    | 10/24/2012      |                             | 29.71                    | NE                     | <0.0052            | <0.0052              | <0.0052              | <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     | <0.0001     |
|                           | MW6D-ROX-011713    | 1/17/2013       |                             | 30.75                    | NE                     | <0.005             | <0.005               | <0.005               | <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     | <0.0001     |
| MW6D-ROX-040313           | 4/3/2013           | 31.27           | NE                          | <0.0053                  | 0.00069 J              | <0.0053            | <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         | <0.00011          |             |             |
| MW6D-ROX-070913           | 7/9/2013           | 104.72 - 109.72 | 27.91                       | NE                       | <0.0055                | <0.0055            | <0.0055              | <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          | <0.00011    |             |
| MW-07                     | MW-7-111710        | 11/17/2010      | 42.92 - 52.92               | 36.93                    | NE                     | <0.01              | <0.01                | <0.01                | <0.01             | <0.01                | <0.01                | <0.01                  | <0.01  | <0.01               | <0.01               | <0.01                     | <0.01                             | <0.01               | <0.01               | <0.01                  | <0.01                  | <0.01             | <0.01            | 0.034             | <0.01       |             |
|                           | MW-7-111710-Dup    | 11/17/2010      |                             | 36.93                    | NE                     | <0.01              | <0.01                | <0.01                | <0.01             | <0.01                | <0.01                | <0.01                  | <0.01  | <0.01               | <0.01               | <0.01                     | <0.01                             | <0.01               | <0.01               | <0.01                  | <0.01                  | <0.01             | <0.01            | <0.01             | 0.032       | <0.01       |
|                           | MW7-ROX-012511     | 1/25/2011       |                             | 37.52                    | NE                     | <0.0053            | <0.0053              | <0.0053              | <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     | <0.0053     |
|                           | MW7-ROX-051311     | 5/13/2011       |                             | 37.50                    | NE                     | <0.0054            | <0.0017 U            | <0.0054              | <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  | 0.000044 J  |
|                           | MW7-ROX-051311D    | 5/13/2011       |                             | 37.50                    | NE                     | <0.0055            | <0.0018 U            | <0.0055              | <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  | 0.000051 J  |
|                           | MW7-ROX-072411     | 7/24/2011       |                             | 35.65                    | NE                     | <0.0054 UJ         | <0.00044 U           | <0.0054              | 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   | 0.00003 J   |
|                           | MW-7-ROX-110211    | 11/2/2011       |                             | 35.95                    | NE                     | <0.005             | <0.005               | <0.005               | <0.0001           | <0.00028 U           | <0.005               | <0.0001                | <0.005   | <0.0043 U           | <0.01               | <0.01                     | <0.01                             | <0.005              | <0.005              | <0.005                 | <0.01                  | <0.00033 U        | 0.0702           | <0.0001           | <0.0001     | <0.0001     |
|                           | MW7-ROX-011812     | 1/18/2012       |                             | 38.10                    | NE                     | <0.005             | 0.00045 J            | <0.005               | <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 | <0.000042 U |
|                           | MW7-ROX-011812-DUP | 1/18/2012       |                             | 38.10                    | NE                     | <0.0056            | <0.0056              | <0.0056              | <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 | <0.000043 U |
|                           | MW7-ROX-050412     | 5/4/2012        |                             | 39.19                    | NE                     | <0.005             | <0.00095 U           | <0.005               | 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     | <0.0001     |
|                           | MW7-ROX-080712     | 8/7/2012        |                             | 39.50                    | NE                     | <0.0051            | <0.0051              | <0.0051              | <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     | <0.0001     |
|                           | MW7-ROX-103012     | 10/30/2012      |                             | 41.23                    | NE                     | <0.0058            | <0.0058              | <0.0058              | <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  | <0.00005 U  |
|                           | MW7-ROX-103012-DUP | 10/30/2012      |                             | 41.23                    | NE                     | <0.0056            | <0.0056              | <0.0056              | <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  | <0.00005 U  |
|                           | MW7-ROX-011513     | 1/15/2013       |                             | 42.21                    | NE                     | <0.0053 UJ         | <0.0053              | <0.0053              | 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  | 0.000089 J  |
|                           | MW7-ROX-011513-DUP | 1/15/2013       |                             | 42.21                    | NE                     | <0.0052 UJ         | <0.0052              | <0.0052              | <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  | 0.000078 J  |
|                           | MW7-ROX-041013     | 4/10/2013       |                             | 42.70                    | NE                     | <0.0054            | <0.0054              | <0.0054              | 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     | 0.00015     |
| MW7-ROX-041013-DUP        | 4/10/2013          | 42.70           | NE                          | <0.0053                  | <0.0053                | <0.0053            | 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          | 0.00016           |             |             |
| MW7-ROX-071713            | 7/17/2013          | 42.92 - 52.92   | 39.60                       | NE                       | <0.0054                | <0.0054            | <0.0054              | <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        | 0.000039 J  |             |

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

| Screening Values (mg/L) |                    |             |                             |                          |                        | SVOCs                     |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |            |         |
|-------------------------|--------------------|-------------|-----------------------------|--------------------------|------------------------|---------------------------|----------------------|----------------------|-------------------|----------------------|----------------------|------------------------|--|---------------------|---------------------|---------------------------|-----------------------------------|---------------------|---------------------|------------------------|------------------------|-------------------|------------------|-------------------|------------|---------|
|                         |                    |             |                             |                          |                        | Dimethyl phthalate        | Di-n-butyl phthalate | Di-n-octyl phthalate | Fluoranthene      | Fluorene             | Hexachlorobenzene    | Indene(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     |         |
| Location                | Sample ID          | Sample Date | Screened Interval (ft btoc) | Depth to Water (ft btoc) | Product Thickness (ft) | 0.7 <sup>2</sup>          | 0.14 <sup>2</sup>    | 0.28 <sup>2</sup>    | 0.28 <sup>2</sup> | 0.00006 <sup>2</sup> | 0.00043 <sup>2</sup> | 1.4 <sup>2</sup>       | 0.49 <sup>3</sup>                                | 0.028 <sup>4</sup>  | 0.35 <sup>2</sup>   | 0.35 <sup>3</sup>         |                                   | 0.0035 <sup>2</sup> | 0.0006 <sup>3</sup> | 0.0032 <sup>2</sup>    | 0.001 <sup>2</sup>     | 0.21 <sup>3</sup> | 0.1 <sup>1</sup> | 0.21 <sup>2</sup> |            |         |
|                         |                    |             |                             |                          |                        | Analytical Results (mg/L) |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |            |         |
| MW-08                   | MW-8-111710        | 11/17/2010  | 33.60 - 43.60               | 27.84                    | NE                     | <0.01                     | <0.01                | <0.01                | <0.01             | <0.01                | <0.01                | <0.01                  | <0.01  |                     | 0.005 J             | <0.01                     | 0.023                             | <0.019              | <0.01               |                        | <0.01                  | <0.01             | <0.01            | 0.053             | <0.01      |         |
|                         | MW8-ROX-012511     | 1/25/2011   |                             | 28.59                    | NE                     | <0.005                    | <0.005               | 0.0004 J             | <0.005            | <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              | <0.0057              | <0.0057           | <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                     | <0.0055                   | <0.0014 U            | <0.0055              | 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                     | <0.0056                   | <0.0021 U            | <0.0056              | <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                | <0.011                 | 0.00012 J         | 0.208            | <0.00011          |            |         |
|                         | MW8-ROX-072411     | 7/24/2011   |                             | 26.02                    | NE                     | <0.0054 UJ                | <0.0054              | 0.00077 J            | 0.000031 JB       | 0.00034              | <0.0054              | 0.000032 J             | <0.0054  | 0.0055              | 0.0068              | 0.0205                    | 0.0486                            | <0.011              | <0.0054             | <0.0054                | <0.011                 | 0.00014 B         | 0.0972 J         | 0.000031 JB       |            |         |
|                         | MW8-ROX-072411-DUP | 7/24/2011   |                             | 26.02                    | NE                     | <0.0055 UJ                | <0.00038 U           | 0.00054 J            | 0.000022 JB       | 0.0003               | <0.0055              | 0.000042 J             | <0.0055  | 0.0052              | 0.0064              | 0.0177                    | 0.0423                            | <0.011              | <0.0055             | <0.0055                | <0.011                 | 0.00011 B         | 0.0906 J         | 0.000023 JB       |            |         |
|                         | MW-8-ROX-110211    | 11/2/2011   |                             | 27.02                    | NE                     | <0.0048                   | <0.0048              | <0.0048              | <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                | <0.011                 | 0.000048          | 0.134            | <0.000095         |            |         |
|                         | MW8-ROX-011812     | 1/18/2012   |                             | 29.15                    | NE                     | <0.0053                   | <0.0053              | <0.0053              | <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                | <0.011                 | 0.00041           | 0.375            | <0.00053          |            |         |
|                         | MW8-ROX-050412     | 5/4/2012    |                             | 30.21                    | NE                     | <0.0053                   | <0.00063 U           | <0.0053              | <0.00011          | 0.00024              | <0.0053              | <0.00011               | <0.0053  | 0.0085              | 0.0099              | 0.0302                    | 0.0657                            | <0.011              | <0.0053             | <0.0053                | <0.011                 | 0.00014           | 0.258 J          | <0.00011          |            |         |
|                         | MW8-ROX-050412-DUP | 5/4/2012    |                             | 30.21                    | NE                     | <0.005                    | <0.005               | <0.005               | <0.0001           | 0.00031              | <0.005               | <0.0001                | <0.005   | 0.0086              | 0.0102              | 0.0275                    | 0.0569                            | <0.01               | <0.005              | <0.005                 | <0.01                  | 0.00014           | 0.12 J           | <0.0001           |            |         |
|                         | MW8-ROX-080712     | 8/7/2012    |                             | 30.97                    | NE                     | <0.0054                   | <0.0054              | <0.0054              | <0.00011          | 0.00027              | <0.0054              | <0.00011               | <0.0054  | 0.0091              | 0.0109              | 0.0075 J                  | 0.0231                            | <0.011              | <0.0054             | <0.0054                | <0.011                 | 0.00015           | 0.136            | <0.00011          |            |         |
|                         | MW8-ROX-080712-DUP | 8/7/2012    |                             | 30.97                    | NE                     | <0.0056                   | <0.0056              | <0.0056              | <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                | <0.011                 | 0.00014           | 0.134            | <0.00011          |            |         |
|                         | MW8-ROX-103012     | 10/30/2012  |                             | 32.32                    | NE                     | <0.0053                   | 0.00082 J            | 0.00063 J            | 0.00059 B         | 0.00053              | <0.0053              | 0.00059 B              | <0.0053  | 0.0097              | 0.0112              | 0.0058 J                  | 0.0158                            | <0.011              | <0.0053 UJ          | 0.00052 J              | 0.003 J                | 0.00057           | 0.165 J          | 0.00054 B         |            |         |
|                         | MW8-ROX-011513     | 1/15/2013   |                             | 33.30                    | NE                     | <0.0056 UJ                | <0.0056              | <0.0056              | <0.00011          | 0.00041              | <0.0056              | <0.00011               | <0.0056  | 0.011               | 0.0129              | 0.0332                    | 0.102                             | <0.011              | <0.0056 UJ          | <0.0056                | <0.011                 | 0.00016           | 0.0997 J         | <0.00011          |            |         |
|                         | MW8-ROX-041013     | 4/10/2013   |                             | 33.77                    | NE                     | <0.0053                   | 0.0013 J             | <0.0053              | 0.000056 J        | 0.00032              | <0.0053              | <0.00011               | <0.0053  | 0.0091              | 0.0113              | 0.0388                    | 0.084                             | <0.011              | <0.0053             | <0.0053                | <0.011                 | 0.00019           | 0.253 J          | 0.000042 J        |            |         |
|                         | MW8-ROX-071713     | 7/17/2013   |                             | 30.43                    | NE                     | <0.0052                   | <0.0052              | <0.0052              | <0.0001           | 0.00033              | <0.0052              | <0.0001                | <0.0052  | 0.0097 J            | 0.0113              | 0.0046 J                  | 0.0106                            | <0.01               | <0.0052             | <0.0052                | <0.011                 | 0.00015           | 0.328            | 0.000062 J        |            |         |
|                         | MW8-ROX-071713-DUP | 7/17/2013   |                             | 30.43                    | NE                     | <0.0054                   | <0.0054              | <0.0054              | <0.00011          | 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                | <0.011                 | 0.00016           | 0.303            | <0.00011          |            |         |
| MW-09                   | MW-9-111510        | 11/15/2010  | 46.45 - 56.45               | 39.00                    | NE                     | <0.01                     | <0.01                | <0.01                | <0.01             | <0.01                | <0.01                | <0.01                  | <0.01  |                     | <0.01               | <0.01                     | <0.01                             | <0.019              | <0.01               |                        | <0.01                  | <0.01             | <0.01            | <0.01             |            |         |
|                         | MW9-ROX-012111     | 1/21/2011   |                             | 39.62                    | NE                     | <0.0053                   | 0.00064 J            | <0.0053              | <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           | <0.0053    |         |
|                         | MW09-ROX-050611    | 5/6/2011    |                             | 40.12                    | NE                     | <0.0049                   | <0.00046 U           | <0.0049              | 0.00002 J J       | <0.000097 UJ         | <0.0049              | <0.000097 UJ           | <0.0049  | <0.0049 UJ          | <0.00019 UJ         | <0.0097                   | <0.0097                           | <0.0097             | <0.0049 UJ          | <0.0049                | <0.0049                | <0.0097           | <0.000049 UJ     | <0.0049           | <0.000097  |         |
|                         | MW9-ROX-072311     | 7/23/2011   |                             | 38.06                    | NE                     | <0.0054 UJ                | <0.0054              | <0.0054              | <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                | <0.011                 | <0.00003 U        | <0.005 UJ        | <0.000046 U       |            |         |
|                         | MW9-ROX-110111     | 11/1/2011   |                             | 37.78                    | NE                     | <0.005                    | <0.005               | <0.005               | <0.0001           | <0.0001              | <0.005               | <0.0001                | <0.005   | <0.0002             | <0.0002             | <0.01                     | <0.01                             | <0.01               | <0.005              | <0.005                 | <0.011                 | <0.00005          | <0.005           | <0.0001           |            |         |
|                         | MW9-ROX-011612     | 1/16/2012   |                             | 39.50                    | NE                     | <0.0057                   | 0.00048 J            | <0.0057              | <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                | <0.011                 | <0.000057         | <0.0057          | <0.00011          |            |         |
|                         | MW9-ROX-050312     | 5/3/2012    |                             | 41.03                    | NE                     |                           |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |            |         |
|                         | MW9-ROX-072712     | 7/27/2012   |                             | 41.30                    | NE                     | <0.005                    | <0.00054 U           | <0.005               | <0.0001           | <0.0001              | <0.005               | <0.0001                | <0.005   | <0.0002             | <0.0002             | <0.01                     | <0.01 UJ                          | <0.01               | <0.005              | <0.005                 | <0.011                 | <0.00005          | <0.005           | <0.0001           |            |         |
|                         | MW9-ROX-102912     | 10/29/2012  |                             | 43.17                    | NE                     | <0.0052                   | <0.0052              | <0.0052              | <0.0001           | <0.0001              | <0.0052              | <0.0001                | <0.0052  | <0.00021            | <0.00021            | <0.01                     | <0.01                             | <0.01               | <0.0052             | <0.0052                | <0.011                 | <0.000052         | <0.0052          | <0.0001           |            |         |
|                         | MW9-ROX-011113     | 1/11/2013   |                             | 43.90                    | NE                     | <0.0054 UJ                | <0.0054              | <0.0054              | 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                | <0.011                 | 0.00012           | <0.0054          | 0.000057 J        |            |         |
|                         | MW9-ROX-040913     | 4/9/2013    |                             | 44.67                    | NE                     | <0.0052 UJ                | <0.0018 UJ           | <0.0052 UJ           | <0.0001 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             | <0.01 UJ               | <0.000052 UJ      | <0.0052 UJ       | <0.0001 UJ        |            |         |
| MW9-ROX-070813          | 7/8/2013           | 42.35       | NE                          | <0.0056                  | <0.0056                | <0.0056                   | <0.00011             | <0.00011             | <0.0056           | <0.00011             | <0.0056              | <0.00022               | <0.00022   | R                   | R                   | <0.011                    | <0.0056                           | <0.0056             | <0.011              | R                      | <0.000028 U            | R                 | <0.00011         |                   |            |         |

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

| Screening Values (mg/L)   |                      |               |                             |                          |                        | SVOCs              |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |             |             |             |  |
|---------------------------|----------------------|---------------|-----------------------------|--------------------------|------------------------|--------------------|----------------------|----------------------|-------------------|----------------------|----------------------|------------------------|--|---------------------|---------------------|---------------------------|-----------------------------------|---------------------|---------------------|------------------------|------------------------|-------------------|------------------|-------------------|-------------|-------------|-------------|--|
| Location                  | Sample ID            | Sample Date   | Screened Interval (ft btoc) | Depth to Water (ft btoc) | Product Thickness (ft) | Dimethyl phthalate | Di-n-butyl phthalate | Di-n-octyl phthalate | Fluoranthene      | Fluorene             | Hexachlorobenzene    | Indene(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      |             |             |  |
|                           |                      |               |                             |                          |                        | 0.7 <sup>2</sup>   | 0.14 <sup>2</sup>    | 0.28 <sup>2</sup>    | 0.28 <sup>2</sup> | 0.00006 <sup>2</sup> | 0.00043 <sup>2</sup> | 1.4 <sup>2</sup>       | 0.49 <sup>3</sup>                                | 0.028 <sup>4</sup>  | 0.35 <sup>2</sup>   | 0.35 <sup>3</sup>         |                                   | 0.0035 <sup>2</sup> | 0.0006 <sup>3</sup> | 0.0032 <sup>2</sup>    | 0.001 <sup>2</sup>     | 0.21 <sup>3</sup> | 0.1 <sup>1</sup> | 0.21 <sup>2</sup> |             |             |             |  |
| Analytical Results (mg/L) |                      |               |                             |                          |                        |                    |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |             |             |             |  |
| MW-10                     | MW-10-111010         | 11/10/2010    | 44.43 - 54.43               | 38.97                    | NE                     | <0.01              | <0.01                | <0.01                | <0.01             | <0.01                | <0.01                | <0.01                  | <0.01  | <0.01               | <0.01               | <0.01                     | <0.01                             | <0.019              | <0.01               | <0.01                  | <0.01                  | <0.01             | <0.01            | <0.01             | <0.01       |             |             |  |
|                           | MW10-ROX-012411      | 1/24/2011     |                             | 39.40                    | NE                     | <0.0051            | <0.0051              | <0.0051              | <0.0051           | <0.0051              | <0.0051              | <0.0051                | <0.0051  | <0.0051             | <0.0051             | <0.01                     | <0.01                             | <0.01               | <0.01               | <0.0051                | <0.0051                | <0.01             | <0.0051          | <0.0051           | <0.0051     | <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   | <0.005              | <0.005              | <0.01                     | <0.01                             | <0.01               | <0.01               | <0.005                 | <0.005                 | <0.01             | <0.005           | <0.005            | <0.005      | <0.005      | <0.005      |  |
|                           | MW10-ROX-042811      | 4/28/2011     |                             | 40.20                    | NE                     | <0.0048            | <0.00081 U           | <0.0048              | <0.0048           | <0.0048              | <0.0048              | <0.0048                | <0.0048  | <0.0048             | <0.0048             | <0.0095                   | <0.0095                           | <0.0095             | <0.0095             | <0.0048                | <0.0048 UJ             | <0.0048           | <0.0095          | <0.0048           | <0.0048 UJ  | <0.0048     | <0.0048     |  |
|                           | MW10-ROX-072311      | 7/23/2011     |                             | 38.01                    | NE                     | <0.005 UJ          | <0.005               | <0.005               | <0.00047 U        | <0.0001              | <0.005               | <0.00031 U             | <0.005   | <0.0002             | <0.0002 U           | <0.01                     | <0.01                             | <0.01               | <0.01               | <0.005                 | <0.005                 | <0.005            | <0.01            | <0.00027 U        | <0.005 UJ   | <0.00044 U  | <0.00044 U  |  |
|                           | MW10-ROX-110111      | 11/1/2011     |                             | 37.72                    | NE                     | <0.005             | <0.005               | <0.005               | <0.0001           | <0.0001              | <0.005               | <0.0001                | <0.005   | <0.0002             | <0.0002             | <0.01                     | <0.01                             | <0.01               | <0.01               | <0.005                 | <0.005                 | <0.005            | <0.01            | <0.00005          | <0.005      | <0.005      | <0.0001     |  |
|                           | MW10-ROX-011612      | 1/16/2012     |                             | 39.28                    | NE                     | <0.0053            | 0.00081 J            | <0.0053              | 0.00052 J         | <0.00011             | <0.0053              | <0.00011               | <0.0053  | <0.00021            | 0.00055 J           | <0.011                    | <0.011                            | <0.011              | <0.011              | <0.0053                | <0.0053                | <0.0053           | <0.011           | 0.000072          | <0.0053     | 0.00005 J   | 0.00005 J   |  |
|                           | MW10-ROX-050112      | 5/1/2012      |                             | 40.86                    | NE                     | <0.0052            | <0.00041 U           | <0.0052              | <0.0001           | <0.0001              | <0.0052              | <0.0001                | <0.0052  | <0.00021            | <0.00021            | <0.01                     | <0.01                             | <0.01               | <0.01               | <0.0052                | <0.0052 UJ             | <0.0052           | <0.01            | 0.000033 J        | <0.0052 UJ  | <0.0001     | <0.0001     |  |
|                           | MW10-ROX-072712      | 7/27/2012     |                             | 41.21                    | NE                     | <0.005             | <0.00043 U           | <0.005               | <0.0001           | <0.0001              | <0.005               | <0.0001                | <0.005   | <0.0002             | <0.0002             | <0.01                     | <0.01 UJ                          | <0.01               | <0.01               | <0.005                 | <0.005                 | <0.005            | <0.01            | <0.00005          | <0.005      | <0.005      | <0.0001     |  |
|                           | MW10-ROX-102612      | 10/26/2012    |                             | 43.08                    | NE                     | <0.0056            | <0.0056              | <0.0056              | 0.00052 J         | 0.000086 J           | <0.0056              | <0.00011               | <0.0056  | <0.00022            | 0.00009 J           | <0.011                    | <0.011                            | <0.011              | <0.011              | <0.0056                | <0.0056                | <0.0056           | <0.011           | 0.000076          | <0.0056     | 0.00004 J   | 0.00004 J   |  |
|                           | MW10-ROX-121712      | 12/17/2012    |                             | 43.08                    | NE                     |                    |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |             |             |             |  |
|                           | MW10-ROX-011013      | 1/10/2013     |                             | 44.10                    | NE                     | <0.005 UJ          | <0.005               | <0.005               | <0.0001           | <0.0001              | <0.005               | <0.0001                | <0.005   | <0.0002             | <0.0002             | <0.01                     | <0.01                             | <0.01               | <0.01               | <0.005                 | <0.005                 | <0.005            | <0.01            | <0.000021 U       | <0.005      | <0.0001     | <0.0001     |  |
|                           | MW10-ROX-012113      | 1/21/2013     |                             | 44.10                    | NE                     | <0.01              | <0.01                | <0.01                | <0.0001           | <0.0001              | <0.002               | <0.0001                | <0.01  |                     |                     | <0.01                     | <0.01                             | <0.01               | <0.01               | <0.002                 | <0.004                 | <0.02             | <0.003           | <0.004            | <0.0001     | <0.005      | <0.0001     |  |
|                           | MW10-ROX-040913      | 4/9/2013      |                             | 44.60                    | NE                     | <0.0054 UJ         | <0.0019 U            | <0.0054              | <0.00011          | <0.00011             | <0.0054              | <0.00011               | <0.0054  | <0.00022            | <0.00022            | <0.011                    | <0.011                            | <0.011              | <0.011              | <0.0054                | <0.0054                | <0.0054           | <0.011           | <0.000054         | <0.0054     | <0.00011    | <0.00011    |  |
| MW10-ROX-070813           | 7/8/2013             | 44.43 - 54.43 | 42.27                       | NE                       | <0.0056                | <0.0056            | <0.0056              | <0.00011             | <0.00011          | <0.0056              | <0.00011             | <0.0056                | <0.00022   | <0.00022            | <0.011              | <0.011                    | <0.011                            | <0.011              | <0.0056             | <0.0056                | <0.0056                | <0.011            | <0.000021 U      | <0.0056           | <0.00011    | <0.00011    |             |  |
| MW-11                     | MW-11-111710         | 11/17/2010    | 41.66 - 51.66               | 36.39                    | NE                     | <0.01              | <0.01                | <0.01                | <0.01             | <0.01                | <0.01                | <0.01                  | <0.01  | <0.01               | <0.01               | <0.01                     | <0.01                             | <0.019              | <0.01               | <0.01                  | <0.01                  | <0.01             | <0.01            | <0.01             | <0.01       |             |             |  |
|                           | MW11-ROX-012411      | 1/24/2011     |                             | 37.15                    | NE                     | <0.0052            | <0.0052              | <0.0052              | <0.0052           | <0.0052              | <0.0052              | <0.0052                | <0.0052  | <0.0052             | <0.01               | <0.01                     | <0.01                             | <0.01               | <0.0052             | <0.0052                | <0.01                  | <0.0052           | <0.0052          | <0.0052           | <0.0052     | <0.0052     |             |  |
|                           | MW11-ROX-050611      | 5/6/2011      |                             | 37.60                    | NE                     | <0.0048            | <0.001 U             | <0.0048              | 0.000026 J J      | <0.000095 UJ         | <0.0048              | 0.000015 J J           | <0.0048  | <0.0048 UJ          | <0.00019 UJ         | <0.0095                   | <0.0095                           | <0.0095             | <0.0048 UJ          | <0.0048                | <0.0048                | <0.0095           | 0.000025 J J     | <0.0048           | 0.000026 J  | 0.000026 J  |             |  |
|                           | MW11-ROX-072411      | 7/24/2011     |                             | 34.3                     | NE                     | <0.0056 UJ         | <0.0056              | <0.0056              | 0.000025 JB       | <0.00011             | <0.0056              | 0.000026 J             | <0.0056  | <0.00022            | 0.000023 JB         | <0.011                    | <0.011                            | <0.011              | <0.011              | <0.0056                | <0.0056                | <0.0056           | <0.011           | 0.000021 JB       | <0.0056 UJ  | 0.000024 JB | 0.000024 JB |  |
|                           | MW-11-ROX-110211     | 11/2/2011     |                             | 35.44                    | NE                     | <0.0054            | <0.0054              | <0.0054              | <0.00011          | <0.00011             | <0.0054              | <0.00011               | <0.0054  | <0.00022            | <0.00022            | <0.011                    | <0.011                            | <0.011              | <0.011              | <0.0054                | <0.0054                | <0.0054           | <0.011           | <0.000054         | <0.0054     | <0.00011    | <0.00011    |  |
|                           | MW11-ROX-011712      | 1/17/2012     |                             | 37.44                    | NE                     |                    |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |             |             |             |  |
|                           | MW11-ROX-043012      | 4/30/2012     |                             | 38.66                    | NE                     | <0.0051            | <0.0051              | <0.0051              | <0.0001           | <0.0001              | <0.0051              | <0.0001                | <0.0051  | <0.0002             | <0.0002             | <0.01                     | <0.01                             | <0.01               | <0.01               | <0.0051                | <0.0051                | <0.0051           | <0.01            | <0.000051         | <0.0051     | <0.0001     | <0.0001     |  |
|                           | MW11-ROX-072712      | 7/27/2012     |                             | 38.90                    | NE                     | <0.0058            | <0.00057 U           | <0.0058              | <0.00012          | <0.00012             | <0.0058              | <0.00012               | <0.0058  | <0.00023            | <0.00023            | <0.012                    | <0.012 UJ                         | <0.012              | <0.012              | <0.0058                | <0.0058                | <0.0058           | <0.012           | <0.000058         | <0.0058     | <0.00012    | <0.00012    |  |
|                           | MW11-ROX-102512      | 10/25/2012    |                             | 40.59                    | NE                     | <0.0054            | <0.0054              | <0.0054              | <0.00011          | <0.00011             | <0.0054              | <0.00011               | <0.0054  | <0.00022            | <0.00022            | <0.011                    | <0.011                            | <0.011              | <0.011              | <0.0054                | <0.0054                | <0.0054           | <0.011           | <0.000054         | <0.0054 UJ  | <0.00011    | <0.00011    |  |
|                           | MW11-ROX-011013      | 1/10/2013     |                             | 41.43                    | NE                     | <0.005 UJ          | <0.005 UJ            | <0.005 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            | <0.01 UJ            | <0.005 UJ              | <0.005 UJ              | <0.005 UJ         | <0.01 UJ         | <0.000015 UJ      | <0.005 UJ   | <0.0001 UJ  | <0.0001 UJ  |  |
|                           | MW11-ROX-040813      | 4/8/2013      |                             | 42.02                    | NE                     | <0.0053            | <0.0053              | <0.0053              | <0.00011          | <0.00011             | <0.0053              | <0.00011               | <0.0053  | <0.00021            | <0.00021            | <0.011                    | <0.011                            | <0.011              | <0.011              | <0.0053                | <0.0053                | <0.0053           | <0.011           | <0.000053         | <0.0053     | <0.00011    | <0.00011    |  |
| MW11-ROX-070813           | 7/8/2013             | 41.66 - 51.66 | 39.24                       | NE                       | <0.0054                | <0.0054            | <0.0054              | <0.00011             | <0.00011          | <0.0054              | <0.00011             | <0.0054                | <0.00022   | <0.00022            | <0.011              | <0.011                    | <0.011                            | <0.011              | <0.0054             | <0.0054                | <0.0054                | <0.011            | <0.000054        | <0.0054           | <0.00011    | <0.00011    |             |  |
| MW-12                     | MW-12-111510         | 11/15/2010    | 41.92 - 51.92               | 36.63                    | NE                     | <0.01              | <0.01                | <0.01                | <0.01             | <0.01                | <0.01                | <0.01                  | <0.01  | <0.01               | <0.01               | <0.01                     | <0.019                            | <0.01               | <0.01               | <0.01                  | <0.01                  | <0.01             | <0.01            | <0.01             | <0.01       |             |             |  |
|                           | MW12-ROX-012411      | 1/24/2011     |                             | 37.42                    | NE                     | <0.005             | <0.005               | <0.005               | <0.005            | <0.005               | <0.005               | <0.005                 | <0.005   | <0.005              | <0.01               | <0.01                     | <0.01                             | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | <0.005           | <0.005            | <0.005      | <0.005      |             |  |
|                           | MW12-ROX-051211      | 5/12/2011     |                             | 37.58                    | NE                     | <0.005             | <0.0011 U            | <0.005               | <0.0001 UJ        | <0.0001 UJ           | <0.005               | <0.0001 UJ             | <0.005   | <0.0001 UJ          | <0.005 UJ           | <0.0002 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                     | <0.005 UJ          | <0.00039 U           | <0.005               | 0.000035 JB       | <0.0001              | <0.005               | 0.000047 J             | <0.005   | <0.0002             | <0.0002             | <0.01 UJ                  | <0.01 UJ                          | <0.01               | <0.01               | <0.005                 | <0.005                 | <0.005            | <0.01 UJ         | 0.000024 JB       | <0.005 UJ   | 0.00004 JB  | 0.00004 JB  |  |
|                           | MW-12-ROX-110211     | 11/2/2011     |                             | 35.70                    | NE                     | <0.0048            | <0.0048              | <0.0048              | <0.000095         | <0.000095            | <0.0048              | <0.000095              | <0.0048  | <0.00019            | <0.00019            | <0.0095                   | <0.0095                           | <0.0095             | <0.0095             | <0.0048                | <0.0048                | <0.0048           | <0.0095          | <0.000048         | <0.0048     | <0.000095   | <0.000095   |  |
|                           | MW-12-ROX-110211-DUP | 11/2/2011     |                             | 35.70                    | NE                     | <0.0048            | <0.0048              | <0.0048              | <0.000095         | <0.000095            | <0.0048              | <0.000095              | <0.0048  | <0.00019            | <0.00019            | <0.0095                   | <0.0095                           | <0.0095             | <0.0095             | <0.0048                | <0.0048                | <0.0048           | <0.0095          | <0.000048         |             |             |             |  |



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

| Screening Values (mg/L) |                     |               |                             |                          |                        | SVOCs                     |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |             |        |
|-------------------------|---------------------|---------------|-----------------------------|--------------------------|------------------------|---------------------------|----------------------|----------------------|-------------------|----------------------|----------------------|------------------------|--|---------------------|---------------------|---------------------------|-----------------------------------|---------------------|---------------------|------------------------|------------------------|-------------------|------------------|-------------------|-------------|--------|
| Location                | Sample ID           | Sample Date   | Screened Interval (ft btoc) | Depth to Water (ft btoc) | Product Thickness (ft) | Analytical Results (mg/L) |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |             |        |
|                         |                     |               |                             |                          |                        | Dimethyl phthalate        | Di-n-butyl phthalate | Di-n-octyl phthalate | Fluoranthene      | Fluorene             | Hexachlorobenzene    | Indene(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      |        |
|                         |                     |               |                             |                          |                        | 0.7 <sup>2</sup>          | 0.14 <sup>2</sup>    | 0.28 <sup>2</sup>    | 0.28 <sup>2</sup> | 0.00006 <sup>2</sup> | 0.00043 <sup>2</sup> | 1.4 <sup>2</sup>       | 0.49 <sup>3</sup>                                | 0.028 <sup>4</sup>  | 0.35 <sup>2</sup>   | 0.35 <sup>3</sup>         |                                   | 0.0035 <sup>2</sup> | 0.0006 <sup>3</sup> | 0.0032 <sup>2</sup>    | 0.001 <sup>2</sup>     | 0.21 <sup>3</sup> | 0.1 <sup>1</sup> | 0.21 <sup>2</sup> |             |        |
| MW-13                   | MW13-ROX-012511     | 1/25/2011     | 25.57 - 35.57               | 24.28                    | NE                     | <0.0052                   | <0.0052              | <0.0052              | <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                     | <0.005                    | <0.0013 U            | <0.005               | 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                     | <0.005                    | <0.00074 U           | <0.005               | <0.0001           | <0.0001              | <0.005               | 0.00004 J              | <0.005   | <0.0002             | 0.00011 J           | <0.01                     | <0.01                             | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | <0.000054 U      | <0.005 UJ         | 0.000041 J  |        |
|                         | MW13-ROX-110311     | 11/3/2011     |                             | 22.85                    | NE                     | <0.0056                   | <0.0056              | <0.0056              | <0.00011          | <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                     | <0.0053                   | <0.00058 U           | <0.0053              | <0.00011          | <0.00011             | <0.0053              | <0.00011               | <0.0053  | 0.00022             | <0.00027 U          | <0.011                    | <0.011                            | <0.011              | <0.0053             | <0.0053                | <0.0053                | <0.011            | <0.000053        | 0.0015 J          | 0.000065 J  |        |
|                         | MW13-ROX-050712     | 5/7/2012      |                             | 25.79                    | NE                     | <0.0052                   | <0.0052              | <0.0052              | <0.0001           | <0.0001              | <0.0052              | <0.0001                | <0.0052  | <0.00021            | <0.00021            | <0.01                     | <0.01                             | <0.01               | <0.0052             | <0.0052                | <0.0052                | <0.01             | <0.000052        | <0.0052           | <0.0001     |        |
|                         | MW13-ROX-080812     | 8/8/2012      |                             | 26.67                    | NE                     | <0.0053                   | <0.0053              | <0.0053              | <0.00011          | <0.00011             | <0.0053              | <0.00011               | <0.0053  | 0.00021             | <0.00014 UJ         | <0.011                    | <0.011                            | <0.011              | <0.0053             | <0.0053                | <0.0053                | <0.011            | <0.000053        | <0.0053           | <0.00011    |        |
|                         | MW13-ROX-110812     | 11/8/2012     |                             | 25.30                    | NE                     | <0.005                    | 0.00054 J            | <0.005               | <0.0001           | <0.0001              | <0.005               | <0.0001                | <0.005   | <0.0002             | <0.0002             | <0.01                     | <0.01                             | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | <0.00005         | <0.005            | <0.0001     |        |
|                         | MW13-ROX-012313     | 1/23/2013     | 29.26                       | NE                       | <0.0055 UJ             | 0.0027 J                  | <0.0055              | <0.00011             | <0.00011          | <0.0055              | <0.00011             | <0.0055                | <0.00022   | 0.00011 J           | <0.011              | <0.011                    | <0.011                            | <0.0055             | <0.0055             | <0.0055                | <0.011                 | <0.000055         | <0.0055          | <0.00011          |             |        |
| MW13-ROX-041213         | 4/12/2013           | 29.44         | NE                          | <0.0051                  | <0.0051                | <0.0051                   | <0.0001              | <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           | 25.57 - 35.57 | 25.67                       | NE                       | <0.0054 UJ             | <0.0054                   | <0.0054              | <0.00042             | <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          |             |        |
| MW-14                   | MW14-ROX-110911     | 11/9/2011     | 33.42 - 43.42               |                          | NE                     | <0.0053                   | <0.0053              | <0.0053              | <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     |                             | NM                       | NE                     | <0.0052                   | 0.00043 J            | <0.0052              | <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              | <0.0053              | <0.00011          | 0.00071              | <0.0053              | <0.00011               | <0.0053  | 0.019               | 0.0038              | <0.011                    | <0.011                            | <0.011              | 0.00032 J           | <0.0053                | <0.0053                | <0.011            | <0.000053        | <0.0053           | <0.00011    |        |
|                         | MW14-ROX-103112     | 10/31/2012    |                             | 32.02                    | NE                     | <0.005                    | 0.00044 J            | <0.005               | <0.0001           | 0.00029              | <0.005               | <0.0001                | <0.005   | 0.0192              | 0.004               | <0.01                     | <0.01                             | <0.01               | <0.005              | <0.005 UJ              | <0.005                 | <0.01             | <0.000051        | <0.005 UJ         | <0.0001     |        |
|                         | MW14-ROX-011813     | 1/18/2013     |                             | 33.05                    | NE                     | <0.005 UJ                 | <0.005               | <0.005               | <0.0001           | 0.00064              | <0.005               | <0.0001                | <0.005   | 0.0215              | 0.0084              | <0.01                     | <0.01                             | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | <0.00005         | <0.005            | <0.0001     |        |
|                         | MW14-ROX-041113     | 4/11/2013     |                             | 33.31                    | NE                     | <0.0054                   | <0.0054              | <0.0054              | 0.000068 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           | 33.42 - 43.42 | 30.36                       | NE                       | <0.0053 UJ             | 0.00043 J                 | <0.0053              | <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       |             |        |
| MW-16                   | MW16-ROX-012313     | 1/23/2013     | 37.06 - 47.06               | 43.05                    | NE                     | <0.0053 UJ                | <0.0053              | <0.0053              | <0.00011          | <0.00011             | <0.0053              | <0.00011               | <0.0053  | <0.00021            | 0.000085 J          | <0.011                    | <0.011                            | <0.011              | <0.0053             | <0.0053                | <0.0053                | <0.011            | 0.000025 J J     | <0.0053           | <0.00011    |        |
|                         | MW16-ROX-040813     | 4/8/2013      |                             | 43.39                    | NE                     | <0.0052                   | <0.0052              | <0.0052              | <0.0001           | <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      | 37.06 - 47.06               | 40.62                    | NE                     | <0.0056                   | <0.0056              | <0.0056              | <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    |        |
| MW-22                   | MW22-ROX-012313     | 1/23/2013     | 37.88 - 47.88               | 41.80                    | NE                     | <0.0052 UJ                | 0.0024 J             | <0.0052              | <0.0001           | 0.00018              | <0.0052              | <0.0001                | <0.0052  | 0.0276              | 0.05                | 0.018                     | 0.0322                            | <0.01               | <0.0052             | <0.0052                | <0.0052                | <0.01             | 0.00019          | 0.0111            | <0.0001     |        |
|                         | MW22-ROX-012313-DUP | 1/23/2013     |                             | 41.80                    | NE                     | <0.0053 UJ                | 0.0024 J             | <0.0053              | <0.00011          | 0.00018              | <0.0053              | <0.00011               | <0.0053  | 0.028               | 0.0501              | 0.0187                    | 0.0349                            | <0.011              | <0.0053             | <0.0053                | <0.0053                | <0.011            | 0.0002           | 0.0122            | <0.00011    |        |
|                         | MW22-ROX-040513     | 4/5/2013      |                             | 42.23                    | NE                     | <0.0053                   | 0.00057 J            | <0.0053              | <0.00011          | 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     | 37.88 - 47.88               | 39.35                    | NE                     | <0.0054                   | <0.0054              | <0.0054              | <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           | 37.88 - 47.88 | 39.35                       | NE                       | <0.0056                | 0.00052 J                 | <0.0056              | <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          |             |        |
| MW-24                   | MW24-ROX-040513     | 4/5/2013      | 38.89 - 48.89               | 43.39                    | NE                     | <0.0052                   | 0.00049 J            | <0.0052              | 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     | 38.89 - 48.89               | 40.35                    | NE                     | <0.0054                   | <0.0054              | <0.0054              | <0.00011          | <0.00011             | <0.0054              | <0.00011               | <0.0054  | <0.00022 UJ         | 0.000062 J          | <0.011 UJ                 | <0.011 UJ                         | <0.011 UJ           | <0.0054             | <0.0054                | <0.0054                | <0.011 UJ         | <0.000038 U      | <0.0053 UJ        | <0.00011    |        |
| P-54                    | P-54-111710         | 11/17/2010    | 38.00 - 63.00               | 36.43                    | NE                     | <0.01                     | <0.01                | <0.01                | <0.01             | <0.01                | <0.01                | <0.01                  | <0.01  | <0.01               | <0.01               | <0.01                     | <0.019                            | <0.01               |                     | <0.01                  | <0.01                  | <0.01             | <0.01            | <0.01             | <0.01       |        |
|                         | P54-ROX-012411      | 1/24/2011     |                             | 37.24                    | NE                     | <0.005                    | <0.005               | <0.005               | <0.005            | <0.005               | <0.005               | <0.005                 | <0.005   | <0.005              | <0.005              | <0.005                    | <0.005                            | <0.005              | <0.005              | <0.005                 | <0.005                 | <0.005            | <0.005           | <0.005            | <0.005      | <0.005 |
|                         | P54-ROX-051111      | 5/11/2011     |                             | 37.37                    | NE                     | <0.005 UJ                 | <0.0011 U            | <0.005               | 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                     | <0.005 UJ                 | <0.00049 U           | <0.005               | 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               | <0.005               | <0.0001           | <0.0001              | <0.005               | <0.0001                | <0.005   | <0.0002             | <0.0002             | <0.01                     | <0.01                             | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | <0.00005         | <0.005            | <0.0001     |        |
|                         | P54-ROX-011712      | 1/17/2012     |                             | 37.17                    | NE                     | <0.0052                   | <0.0052              | <0.0052              | <0.0001           | <0.0001              | <0.0052              | <0.0001                | <0.0052  | <0.00021            |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |             |        |

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

| Screening Values (mg/L) |                    |               |               |                             |                          | SVOCs                  |                           |                      |                   |                   |                      |                        |  |                     |                     |                           |                                   |                |                     |                        |                        |                    |                   |                  |                   |  |
|-------------------------|--------------------|---------------|---------------|-----------------------------|--------------------------|------------------------|---------------------------|----------------------|-------------------|-------------------|----------------------|------------------------|--|---------------------|---------------------|---------------------------|-----------------------------------|----------------|---------------------|------------------------|------------------------|--------------------|-------------------|------------------|-------------------|--|
|                         |                    |               |               |                             |                          | Dimethyl phthalate     | Di-n-butyl phthalate      | Di-n-octyl phthalate | Fluoranthene      | Fluorene          | Hexachlorobenzene    | Indene(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            |  |
| Location                |                    | Sample ID     | Sample Date   | Screened Interval (ft btoc) | Depth to Water (ft btoc) | Product Thickness (ft) | Analytical Results (mg/L) |                      |                   |                   |                      |                        |  |                     |                     |                           |                                   |                |                     |                        |                        |                    |                   |                  |                   |  |
|                         |                    |               |               |                             |                          |                        | 0.7 <sup>2</sup>          | 0.14 <sup>2</sup>    | 0.28 <sup>2</sup> | 0.28 <sup>2</sup> | 0.00006 <sup>2</sup> | 0.00043 <sup>2</sup>   | 1.4 <sup>2</sup>                                 | 0.49 <sup>3</sup>   | 0.028 <sup>4</sup>  | 0.35 <sup>2</sup>         | 0.35 <sup>3</sup>                 |                | 0.0035 <sup>2</sup> | 0.0006 <sup>3</sup>    | 0.0032 <sup>2</sup>    | 0.001 <sup>2</sup> | 0.21 <sup>3</sup> | 0.1 <sup>1</sup> | 0.21 <sup>2</sup> |  |
| P-55                    | P55-ROX-103111     | 10/31/2011    | 39.82 - 64.82 | 39.15                       | NE                       | <0.005                 | <0.005                    | <0.005               | <0.0001           | <0.0001           | <0.005               | <0.0001                | <0.005   | 0.00065             | 0.00096             | <0.01                     | <0.01                             | <0.01          | <0.005              | <0.005                 | <0.005                 | <0.01              | 0.00016           | <0.005           | <0.0001           |  |
|                         | P55-ROX-011912     | 1/19/2012     |               | 41.09                       | NE                       | <0.0052                | <0.0052                   | <0.0052              | <0.0001           | 0.00038           | <0.0052              | <0.0001                | <0.0052  | 0.0048              | 0.0076              | <0.01                     | <0.01                             | <0.01 UJ       | <0.0052             | <0.0052                | <0.0052                | <0.01              | 0.00039           | <0.0052          | <0.0001           |  |
|                         | P55-ROX-011912-D   | 1/19/2012     |               | 41.09                       | NE                       | <0.0054                | <0.0054                   | <0.0054              | <0.00011          | 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      | 40.85 - 50.85 | 42.44                       | NE                       | <0.0051                | <0.0051                   | <0.0051              | <0.0001           | 0.00069           | <0.0051              | <0.0001                | <0.0051  | 0.0118              | 0.0179              | <0.01                     | <0.01                             | <0.01          | <0.0051             | <0.0051                | <0.0051                | <0.01              | 0.00066           | <0.0051          | <0.0001           |  |
|                         | P55-ROX-012113     | 1/21/2013     |               | 43.6                        | NE                       | <0.01                  | <0.01                     | <0.01                | <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     |               | 43.6                        | NE                       | <0.0051                | 0.00069 J                 | <0.0051              | <0.0001           | 0.00093           | <0.0051              | <0.0001                | <0.0051  | 0.0176              | 0.0254              | <0.01                     | 0.0018 J                          | <0.01          | <0.0051             | <0.0051                | <0.0051                | <0.01              | 0.0017            | 0.0034 J         | <0.0001           |  |
|                         | P55-ROX-041513     | 4/15/2013     |               | 43.63                       | NE                       | <0.0052                | <0.0052                   | <0.0052              | <0.0001           | 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          | 40.85 - 50.85 | 40.06         | NE                          | <0.0056                  | <0.0056                | <0.0056                   | <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         |                   |  |
| P-56                    | P56-ROX-102711     | 10/27/2011    | 40.82 - 65.82 | 39.42                       | NE                       | <0.0052                | <0.0052                   | <0.0052              | <0.0001           | 0.00039           | <0.0052              | <0.0001                | <0.0052  | 0.016               | 0.0224              | <0.01                     | <0.01                             | <0.01          | <0.0052             | <0.0052                | <0.0052                | <0.01              | 0.0011            | <0.0052          | <0.0001           |  |
|                         | P56-ROX-011912     | 1/19/2012     |               | 41.81                       | NE                       | <0.0051                | <0.00044 U                | <0.0051              | <0.0001           | 0.00046           | <0.0051              | <0.0001                | <0.0051  | 0.0186              | 0.024               | <0.01                     | <0.01                             | <0.01 UJ       | <0.0051             | <0.0051                | <0.0051                | <0.01              | 0.0012            | <0.0051          | 0.000036 J        |  |
|                         | P56-ROX-050812     | 5/8/2012      |               | 43.09                       | NE                       | <0.0052                | <0.0052                   | <0.0052              | <0.0001           | 0.00033           | <0.0052              | <0.0001                | <0.0052  | 0.0186              | 0.0236              | <0.01                     | <0.01                             | <0.01          | <0.0052             | <0.0052                | <0.0052                | <0.01              | 0.0011            | <0.0052          | <0.0001           |  |
|                         | P56-ROX-080612     | 8/6/2012      | 43.60         | NE                          | <0.0051                  | <0.00075 U             | <0.0051                   | <0.0001              | 0.0003            | <0.0051           | <0.0001              | <0.0051                | 0.0143   | 0.0178              | <0.01               | <0.01                     | <0.01                             | <0.0051        | <0.0051             | <0.0051                | <0.01                  | 0.0013             | <0.0051           | <0.0001          |                   |  |
|                         | P56-ROX-103112     | 10/31/2012    | 44.80         | NE                          | <0.0051                  | <0.0051                | <0.0051                   | <0.0001              | 0.00046           | <0.0051           | <0.0001              | <0.0051                | 0.024  | 0.0307              | <0.01               | 0.0011 J                  | <0.01                             | <0.0051        | <0.0051 UJ          | <0.0051                | <0.01                  | 0.0013             | <0.0051 UJ        | <0.0001          |                   |  |
|                         | P56-ROX-011713     | 1/17/2013     | 45.65         | NE                          | <0.005                   | <0.005                 | <0.005                    | <0.0001              | 0.00032           | <0.005            | <0.0001              | <0.005                 | 0.0147   | 0.0131              | <0.01               | <0.01                     | <0.01                             | <0.005         | <0.005              | <0.005                 | <0.01                  | 0.0012             | 0.0014 J          | <0.0001          |                   |  |
|                         | P56-ROX-041213     | 4/12/2013     | 46.12         | NE                          | <0.0055                  | <0.0055                | <0.0055                   | <0.00011             | 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          | 40.82 - 65.82 | 43.25         | NE                          | <0.0055                  | <0.0055                | <0.0055                   | <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         |                   |  |
| P-57                    | P57-ROX-110811     | 11/8/2011     | 40.46 - 65.46 | 39.20                       | NE                       | <0.0054                | <0.0054                   | <0.0054              | <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                       | <0.0051                | <0.00046 U                | <0.0051              | <0.0001           | 0.00087           | <0.0051              | <0.0001                | <0.0051  |                     | 0.0403              | <0.01                     | <0.01                             | <0.01          | <0.0051             | <0.0051                | <0.0051                | <0.01              | 0.00051           | 0.297            | <0.0001           |  |
|                         | P57-ROX-050712     | 5/7/2012      |               | 42.92                       | NE                       | <0.0052                | <0.0052                   | <0.0052              | <0.0001           | 0.00045           | <0.0052              | <0.0001                | <0.0052  | 0.0169              | 0.0212              | <0.01                     | 0.0023 J                          | <0.01          | <0.0052             | <0.0052                | <0.0052                | <0.01              | 0.00035           | 0.141            | <0.0001           |  |
|                         | P57-ROX-080612     | 8/6/2012      |               | 43.53                       | NE                       | <0.005                 | <0.00087 U                | <0.005               | <0.0001           | 0.0006            | <0.005               | <0.0001                | <0.005   | 0.0244              | 0.0326              | <0.01                     | 0.0013 J                          | <0.01          | <0.005              | <0.005                 | <0.005                 | <0.01              | 0.00053           | 0.0697 J         | <0.0001           |  |
|                         | P57-ROX-080612-DUP | 8/6/2012      | 43.53         | NE                          | <0.005                   | <0.00089 U             | <0.005                    | <0.0001              | 0.00063           | <0.005            | <0.0001              | <0.005                 | 0.0242   | 0.0321              | <0.01               | 0.0013 J                  | <0.01                             | <0.005         | <0.005              | <0.005                 | <0.01                  | 0.00054            | 0.0921 J          | <0.0001          |                   |  |
|                         | P57-ROX-110512     | 11/5/2012     | 44.98         | NE                          | <0.005                   | <0.005                 | <0.005                    | <0.0001              | 0.00062           | <0.005            | 0.00005 J            | <0.005                 | 0.0249   | 0.0305              | <0.01               | <0.01                     | <0.01                             | <0.005         | <0.005              | <0.005                 | <0.01                  | 0.00048            | 0.0547 J          | <0.0001          |                   |  |
|                         | P57-ROX-012913     | 1/29/2013     | 45.92         | NE                          | <0.0059                  | <0.0059                | <0.0059                   | <0.00012             | 0.00094           | <0.0059           | <0.00012             | <0.0059                | 0.0369   | 0.0447              | <0.012              | <0.012                    | <0.012                            | <0.0059        | <0.0059             | <0.0059                | <0.012                 | 0.00074            | <0.0059 UJ        | <0.00012         |                   |  |
|                         | P57-ROX-041113     | 4/11/2013     | 46.29         | NE                          | <0.0051                  | <0.0051                | <0.0051                   | <0.0001              | 0.00076           | <0.0051           | <0.0001              | <0.0051                | 0.0348   | 0.0453              | <0.01               | <0.01                     | <0.01                             | <0.0051        | <0.0051             | <0.0051                | <0.01                  | 0.00074            | 0.146             | <0.0001          |                   |  |
| P57-ROX-071613          | 7/16/2013          | 40.46 - 65.46 | 43.38         | NE                          | <0.0056                  | <0.0056                | <0.0056                   | 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      |                   |  |
| P-58                    | P58-ROX-102811     | 10/28/2011    | 40.21 - 65.21 | 37.31                       | NE                       | <0.0049                | <0.0049                   | <0.0049              | <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                       | <0.0053                | <0.00057 U                | <0.0053              | 0.000047 J        | 0.0017            | <0.0053              | <0.00011               | <0.0053  | 0.0639              | 0.0904              | <0.011                    | 0.0171                            | <0.011 UJ      | <0.0053             | <0.0053                | <0.0053                | <0.011             | 0.00084           | 0.259            | 0.00012           |  |
|                         | P58-ROX-011912-D   | 1/19/2012     |               | 39.73                       | NE                       | <0.0053                | <0.00059 U                | <0.0053              | 0.000052 J        | 0.0018            | <0.0053              | <0.00011               | <0.0053  | 0.0588              | 0.0821              | <0.011                    | 0.0156                            | <0.011 UJ      | <0.0053             | <0.0053                | <0.0053                | <0.011             | 0.0008            | 0.225            | 0.00012           |  |
|                         | P58-ROX-050712     | 5/7/2012      |               | 40.90                       | NE                       | <0.0051                | <0.0051                   | <0.0051              | <0.0001           | 0.0009 J          | <0.0051              | <0.0001                | <0.0051  | 0.0351 J            | 0.0435 J            | <0.01                     | 0.0181                            | <0.01          | <0.0051             | <0.0051                | <0.0051                | <0.01              | 0.00056 J         | 0.161            | 0.0001            |  |
|                         | P58-ROX-050712-DUP | 5/7/2012      |               | 40.90                       | NE                       | <0.0052                | <0.0052                   | <0.0052              | <0.0001           | 0.00067 J         | <0.0052              | <0.0001                | <0.0052  | 0.0267 J            | 0.0338 J            | <0.01                     | 0.0122                            | <0.01          | <0.0052             | <0.0052                | <0.0052                | <0.01              | 0.00041 J         | 0.147            | 0.000076 J        |  |
|                         | P58-ROX-080612     | 8/6/2012      |               | 41.63                       | NE                       | <0.005                 | <0.00053 U                | <0.005               | 0.000068 J        | 0.0014            | <0.005               | <0.0001                | <0.005   | 0.0524              | 0.0691              | <0.01                     | 0.0146                            | <0.01          | <0.005              | <0.005                 | <0.005                 | <0.01              | 0.001             | 0.15             | <0.0001 UJ        |  |
|                         | P58-ROX-080612-DUP | 8/6/2012      |               | 41.63                       | NE                       | <0.005                 | <0.00063 U                | <0.005               | 0.000066 J        | 0.0015            | <0.005               | <0.0001                | <0.005   | 0.0596              | 0.079               | <0.01                     | 0.0195                            | <0.01          | <0.005              | <0.005                 | <0.005                 | <0.01              | 0.0011            | 0.19             | 0.00021 J         |  |
|                         | P58-ROX-110612     | 11/6/2012     |               | 43.09                       | NE                       |                        |                           |                      |                   |                   |                      |                        |  |                     |                     |                           |                                   |                |                     |                        |                        |                    |                   |                  |                   |  |
|                         | P58-ROX-121012     | 12/10/2012    |               | 43.09                       | NE                       | <0.0054 UJ             | <0.0054                   | <0.0054              | <0.00011          | 0.0014            | <0.0054              | <0.00011               | <0.0054  | 0.0616              | 0.0807              | <0.011                    | 0.0124                            | <0.011         | <0.0054             | <0.0054                | <0.0054                | <0.011             | 0.00085           | 0.178            | 0.00012           |  |
|                         | P58-ROX-012213     | 1/22/2013     |               | 44.21                       | NE                       | <0.0054                | <0.0054                   | <0.0054              | 0.00024           | 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                   | <0.005               |                   |                   |                      |                        |  |                     |                     |                           |                                   |                |                     |                        |                        |                    |                   |                  |                   |  |

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

| Location                | Sample ID          | Sample Date | Screened Interval (ft btoc) | Depth to Water (ft btoc) | Product Thickness (ft) | SVOCs                     |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |            |  |  |  |  |
|-------------------------|--------------------|-------------|-----------------------------|--------------------------|------------------------|---------------------------|----------------------|----------------------|-------------------|----------------------|----------------------|------------------------|--|---------------------|---------------------|---------------------------|-----------------------------------|---------------------|---------------------|------------------------|------------------------|-------------------|------------------|-------------------|------------|--|--|--|--|
|                         |                    |             |                             |                          |                        | Dimethyl phthalate        | Di-n-butyl phthalate | Di-n-octyl phthalate | Fluoranthene      | Fluorene             | Hexachlorobenzene    | Indene(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 <sup>2</sup>          | 0.14 <sup>2</sup>    | 0.28 <sup>2</sup>    | 0.28 <sup>2</sup> | 0.00006 <sup>2</sup> | 0.00043 <sup>2</sup> | 1.4 <sup>2</sup>       | 0.49 <sup>3</sup>                                | 0.028 <sup>4</sup>  | 0.35 <sup>2</sup>   | 0.35 <sup>3</sup>         |                                   | 0.0035 <sup>2</sup> | 0.0006 <sup>3</sup> | 0.0032 <sup>2</sup>    | 0.001 <sup>2</sup>     | 0.21 <sup>3</sup> | 0.1 <sup>1</sup> | 0.21 <sup>2</sup> |            |  |  |  |  |
|                         |                    |             |                             |                          |                        | Analytical Results (mg/L) |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |            |  |  |  |  |
| P-59                    | P59-ROX-102711     | 10/27/2011  | 47.91 - 72.91               | 41.06                    | NE                     | <0.0053                   | <0.0053              | <0.0053              | 0.00035           | 0.0012               | <0.0053              | <0.00011               | <0.0053  | 0.0121              | 0.0184              | <0.011                    | <0.011                            | <0.011              | <0.0053             | <0.0053                | <0.0053                | <0.011            | 0.002            | 0.0383            | 0.00057    |  |  |  |  |
|                         | P59-ROX-011912     | 1/19/2012   |                             | 42.88                    | NE                     | <0.0057                   | <0.0005 U            | <0.0057              | 0.000073 J        | 0.0008               | <0.0057              | <0.00011               | <0.0057  | 0.0175              | 0.0279              | 0.0045 J                  | 0.0092 J                          | <0.011 UJ           | <0.0057             | <0.0057                | 0.00079 J              | <0.011            | 0.00081          | 0.0906 J          | 0.00013    |  |  |  |  |
|                         | P59-ROX-011912-DUP | 1/19/2012   |                             | 42.88                    | NE                     | <0.0051                   | <0.00041 U           | <0.0051              | 0.000073 J        | 0.00063              | <0.0051              | <0.0001                | <0.0051  | 0.0178              | 0.029               | <0.01                     | 0.0076 J                          | <0.01 UJ            | <0.0051             | <0.0051                | 0.00087 J              | <0.01             | 0.00081          | 0.0646 J          | 0.00013    |  |  |  |  |
|                         | P59-ROX-050912     | 5/9/2012    |                             | 44.11                    | NE                     | <0.005                    | <0.005               | <0.005               | 0.000062 J        | 0.00034              | <0.005               | <0.0001                | <0.005   | 0.0117              | 0.018               | <0.01                     | 0.0062 J                          | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | 0.00053          | 0.0241            | 0.000092 J |  |  |  |  |
|                         | P59-ROX-080212     | 8/2/2012    |                             | 44.07                    | NE                     | <0.0053                   | <0.0053              | <0.0053              | 0.00015           | 0.00048              | <0.0053              | <0.00011               | <0.0053  | 0.0136              | 0.0207              | 0.0018 J                  | 0.0032 J                          | <0.011              | <0.0053             | <0.0053                | <0.0053                | <0.011            | 0.001            | 0.0419            | 0.00021    |  |  |  |  |
|                         | P59-ROX-110212     | 11/2/2012   |                             | 45.98                    | NE                     | <0.0053                   | <0.0053              | <0.0053              | 0.000063 J        | 0.0005               | <0.0053              | <0.00011               | <0.0053  | 0.0187              | 0.0282              | 0.0065 J                  | 0.0137                            | <0.011              | <0.0053             | <0.0053                | <0.0053                | <0.011            | 0.00075          | 0.0766 J          | 0.00009 J  |  |  |  |  |
|                         | P59-ROX-110212-DUP | 11/2/2012   |                             | 45.98                    | NE                     | <0.0052                   | <0.0052              | <0.0052              | 0.000066 J        | 0.00048              | <0.0052              | <0.0001                | <0.0052  | 0.0179              | 0.0268              | 0.0056 J                  | 0.0116                            | <0.01               | <0.0052             | <0.0052                | <0.0052                | <0.01             | 0.00073          | 0.0656 J          | 0.000093 J |  |  |  |  |
|                         | P59-ROX-013013     | 1/30/2013   |                             | 46.60                    | NE                     | <0.0052 UJ                | 0.0022 J             | <0.0052              | <0.000079 U       | 0.00069              | <0.0052              | <0.0001                | <0.0052  | 0.0222              | 0.0305              | 0.154                     | 0.107                             | <0.01 UJ            | <0.0052             | <0.0052 UJ             | <0.0052                | <0.01             | 0.001            | 0.141 J           | <0.00011 U |  |  |  |  |
|                         | P59-ROX-041213     | 4/12/2013   |                             | 46.95                    | NE                     | <0.0054                   | <0.0054              | <0.0054              | 0.000077 J        | 0.00064              | <0.0054              | <0.00011               | <0.0054  | 0.0247              | 0.0369              | 0.174                     | 0.0842                            | <0.011              | <0.0054             | <0.0054                | <0.0054                | <0.011            | 0.0012           | 0.119             | 0.000098 J |  |  |  |  |
|                         | P59-ROX-041213-DUP | 4/12/2013   |                             | 46.95                    | NE                     | <0.0053                   | <0.0053              | <0.0053              | 0.000078 J        | 0.00065              | <0.0053              | <0.00011               | <0.0053  | 0.0265              | 0.0383              | 0.154                     | 0.0794                            | <0.011              | <0.0053             | <0.0053                | <0.0053                | <0.011            | 0.0012           | 0.101             | 0.0001 J   |  |  |  |  |
| P59-ROX-071613          | 7/16/2013          | 44.13       | NE                          | <0.0054                  | <0.0054                | <0.0054                   | 0.000061 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      |                   |            |  |  |  |  |
| P-66                    | P66-ROX-110111     | 11/1/2011   | 34.72 - 59.72               | 28.92                    | NE                     | <0.005                    | <0.005               | <0.005               | 0.00017           | 0.003                | <0.005               | <0.0001                | <0.005   | 0.093               | 0.0295              | <0.01                     | <0.01                             | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | 0.0013           | <0.005            | 0.00029    |  |  |  |  |
|                         | P66-ROX-051012     | 5/10/2012   |                             | 32.48                    | NE                     | <0.005                    | 0.00054 J            | <0.005               | 0.000056 J        | 0.0015               | <0.005               | <0.0001                | <0.005   | 0.0647              | 0.025               | <0.01                     | <0.01                             | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | 0.00057          | <0.005            | 0.000082 J |  |  |  |  |
|                         | P66-ROX-080312     | 8/3/2012    |                             | 30.51                    | NE                     | <0.0053                   | <0.0053              | <0.0053              | 0.000082 J        | 0.0011               | <0.0053              | <0.00011               | <0.0053  | 0.0541              | 0.028               | <0.011                    | <0.011                            | <0.011              | <0.0053             | <0.0053                | <0.0053                | <0.011            | 0.00057          | <0.0053           | 0.00013    |  |  |  |  |
|                         | P66-ROX-103112     | 10/31/2012  |                             | 34.75                    | NE                     | <0.005                    | <0.005               | <0.005               | <0.000051 U       | 0.0017               | <0.005               | <0.0001                | <0.005   | 0.0689              | 0.0268              | <0.01                     | <0.01                             | <0.01               | <0.005              | <0.005 UJ              | <0.005                 | <0.01             | 0.00054          | <0.005 UJ         | <0.00007 U |  |  |  |  |
|                         | P66-ROX-011813     | 1/18/2013   |                             | 35.70                    | NE                     | <0.0053 UJ                | <0.0053              | <0.0053              | 0.000076 J        | 0.0019               | <0.0053              | <0.00011               | <0.0053  | 0.0655              | 0.0315              | <0.011                    | <0.011                            | <0.011              | <0.0053             | <0.0053                | <0.0053                | <0.011            | 0.00082          | 0.0019 J          | 0.00011    |  |  |  |  |
|                         | P66-ROX-041113     | 4/11/2013   |                             | 36.03                    | NE                     | <0.0053                   | <0.0053              | <0.0053              | 0.000072 J        | 0.0017               | <0.0053              | <0.00011               | <0.0053  | 0.0681              | 0.0131              | <0.011                    | <0.011                            | <0.011              | <0.0053             | <0.0053                | <0.0053                | <0.011            | 0.00091          | <0.0053           | 0.000087 J |  |  |  |  |
|                         | P66-ROX-071213     | 7/12/2013   |                             | 33.20                    | NE                     | <0.0056 UJ                | <0.0056              | <0.0056              | <0.00019 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  |  |  |  |  |
| P-74                    | P74-ROX-103111     | 10/31/2011  | 44.43 - 69.43               | 36.26                    | NE                     | <0.005                    | <0.005               | <0.005               | <0.0001           | 0.00044              | <0.005               | <0.0001                | <0.005   | 0.0177              | 0.0265              | <0.01                     | <0.01                             | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | 0.00025          | 0.0127            | <0.0001    |  |  |  |  |
|                         | P74-ROX-011912     | 1/19/2012   |                             | 38.77                    | NE                     | <0.0048                   | <0.0048              | <0.0048              | <0.000095         | <0.000095            | <0.0048              | <0.000095              | <0.0048  | <0.00019            | <0.00019            | <0.0095                   | <0.0095                           | <0.0095 UJ          | <0.0048             | <0.0048                | <0.0048                | <0.0095           | <0.000048        | 0.002 J           | <0.000095  |  |  |  |  |
|                         | P74-ROX-050712     | 5/7/2012    |                             | 39.92                    | NE                     | <0.0052                   | <0.0052              | <0.0052              | <0.0001           | <0.0001              | <0.0052              | <0.0001                | <0.0052  | 0.00016 J           | <0.00021            | <0.01                     | <0.01                             | <0.01               | <0.0052             | <0.0052                | <0.0052                | <0.01             | 0.000047 J       | 0.0089            | <0.0001    |  |  |  |  |
|                         | P74-ROX-080612     | 8/6/2012    |                             | 40.71                    | NE                     | <0.005                    | <0.00082 U           | <0.005               | <0.0001           | 0.00021              | <0.005               | <0.0001                | <0.005   | 0.009               | 0.0103              | 0.0014 J                  | 0.001 J                           | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | <0.00012 U       | 0.0158            | <0.0001    |  |  |  |  |
|                         | P74-ROX-110112     | 11/1/2012   |                             | 41.72                    | NE                     | <0.0052                   | <0.0052              | <0.0052              | <0.0001           | 0.0003               | <0.0052              | <0.0001                | <0.0052  | 0.0123              | 0.0136              | 0.0054 J                  | 0.002 J                           | <0.01               | <0.0052             | <0.0052 UJ             | <0.0052                | <0.01             | 0.00013          | 0.0307 J          | <0.0001    |  |  |  |  |
|                         | P74-ROX-011713     | 1/17/2013   |                             | 42.65                    | NE                     | <0.0051                   | <0.0051              | <0.0051              | 0.000038 J        | 0.00038              | <0.0051              | <0.0001                | <0.0051  | 0.0156              | 0.0198              | <0.01                     | 0.001 J                           | <0.01               | <0.0051             | <0.0051                | <0.0051                | <0.01             | 0.00023          | 0.0298            | 0.000048 J |  |  |  |  |
|                         | P74-ROX-041113     | 4/11/2013   |                             | 42.83                    | NE                     | <0.0052                   | <0.0052              | <0.0052              | <0.0001           | <0.0001              | <0.0052              | <0.0001                | <0.0052  | <0.00021            | <0.00021            | <0.01                     | <0.01                             | <0.01               | <0.0052             | <0.0052                | <0.0052                | <0.01             | <0.000052        | <0.0046 U         | <0.0001    |  |  |  |  |
| P74-ROX-071513          | 7/15/2013          | 40.11       | NE                          | <0.0054                  | <0.0054                | <0.0054                   | 0.00014              | 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       |                   |            |  |  |  |  |
| P-93A                   | P93A-102610        | 10/26/2010  | 48.17 - 63.17               | 40.75                    | NE                     | <0.009                    | <0.009               | <0.009               | <0.009            | <0.009               | <0.009               | <0.009                 |  | 0.023               | <0.009              | <0.009                    | <0.019                            | <0.009              |                     | <0.009                 | <0.009                 | <0.009            | 0.31 D J         | <0.009            |            |  |  |  |  |
|                         | P93A-ROX_012611    | 1/26/2011   |                             | 40.97                    | NE                     | <0.0049                   | <0.0049              | <0.0049              | <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                     | <0.005                    | <0.001 U             | <0.005               | 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                     | <0.005                    | <0.001 U             | <0.005               | <0.000033 U       | 0.00047              | <0.005               | <0.0001                | <0.005   | 0.0224              | 0.0302              | <0.01                     | 0.0093 J                          | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | 0.00043          | 0.183             | 0.000037 J |  |  |  |  |
|                         | P93A-ROX-102611    | 10/26/2011  |                             | 39.43                    | NE                     | <0.005                    | <0.005               | <0.005               | <0.0001           | 0.00033              | <0.005               | <0.0001                | <0.005   | 0.0162              | 0.0258              | <0.01                     | <0.01                             | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | 0.00032          | 0.193             | <0.0001    |  |  |  |  |
|                         | P93A-ROX-012012    | 1/20/2012   |                             | 41.66                    | NE                     | <0.0048                   | <0.00038 U           | <0.0048              | <0.000095         | <0.000095            | <0.0048              | <0.000095              | <0.0048  | 0.0133              | 0.0188              | <0.0095                   | 0.0029 J                          | <0.0095             | <0.0048             | <0.0048                | <0.0048                | <0.0095           | <0.00022 U       | 0.234             | <0.000095  |  |  |  |  |
|                         | P93A-ROX-050812    | 5/8/2012    |                             | 42.75                    | NE                     | <0.0051                   | <0.0051              | <0.0051              | <0.0001           | 0.00021              | <0.0051              | <0.0001                | <0.0051  | 0.0121              | 0.0151              | <0.01                     | 0.0014 J                          | <0.01               | <0.0051             | <0.0051                | <0.0051                | <0.01             | 0.00021          | <0.0051           | <0.0001    |  |  |  |  |
|                         | P93A-ROX-080912    | 8/9/2012    |                             | 43.66                    | NE                     | <0.0054                   | <0.0054              | <0.0054              | <0.00011          | 0.00021              | <0.0054              | <0.00011               | <0.0054  | 0.0097              | 0.013               | <0.011                    | 0.00096 J                         | <0.011              | <0.0054             | <0.0054                | <0.0054                | <0.011            | 0.00025          | 0.208             | <0.00011   |  |  |  |  |
|                         | P93A-ROX-110712    | 11/7/2012   |                             | 45.00                    | NE                     | <0.0052                   | <0.0052              | <0.0052              | <0.0001           | 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    |  |  |  |  |
|                         | P                  |             |                             |                          |                        |                           |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |            |  |  |  |  |

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

| Screening Values (mg/L) |                     |             |                             |                          |                        | SVOCs                     |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |            |
|-------------------------|---------------------|-------------|-----------------------------|--------------------------|------------------------|---------------------------|----------------------|----------------------|-------------------|----------------------|----------------------|------------------------|--|---------------------|---------------------|---------------------------|-----------------------------------|---------------------|---------------------|------------------------|------------------------|-------------------|------------------|-------------------|------------|
| Location                | Sample ID           | Sample Date | Screened Interval (ft btoc) | Depth to Water (ft btoc) | Product Thickness (ft) | Dimethyl phthalate        | Di-n-butyl phthalate | Di-n-octyl phthalate | Fluoranthene      | Fluorene             | Hexachlorobenzene    | Indene(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     |
|                         |                     |             |                             |                          |                        | 0.7 <sup>2</sup>          | 0.14 <sup>2</sup>    | 0.28 <sup>2</sup>    | 0.28 <sup>2</sup> | 0.00006 <sup>2</sup> | 0.00043 <sup>2</sup> | 1.4 <sup>2</sup>       | 0.49 <sup>3</sup>                                | 0.028 <sup>4</sup>  | 0.35 <sup>2</sup>   | 0.35 <sup>3</sup>         |                                   | 0.0035 <sup>2</sup> | 0.0006 <sup>3</sup> | 0.0032 <sup>2</sup>    | 0.001 <sup>2</sup>     | 0.21 <sup>3</sup> | 0.1 <sup>1</sup> | 0.21 <sup>2</sup> |            |
|                         |                     |             |                             |                          |                        | Analytical Results (mg/L) |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |            |
| P-93B                   | P93B-102610         | 10/26/2010  | 74.60 - 76.60               | 40.73                    | NE                     | <0.009                    | <0.009               | <0.009               | <0.009            | <0.009               | <0.009               | <0.009                 | <0.009   | <0.009              | <0.009              | <0.009                    | <0.009                            | <0.019              | <0.009              |                        | <0.009                 | <0.009            | <0.009           | 0.094             | <0.009     |
|                         | P93B-ROX_012611     | 1/26/2011   |                             | 41.03                    | NE                     | <0.0053                   | <0.0053              | <0.0053              | <0.0053           | <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                     | <0.005                    | <0.001 U             | <0.005               | <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                     | <0.0052                   | <0.00077 U           | <0.0052              | <0.0001           | <0.0001              | <0.0052              | <0.0001                | <0.0052  | <0.00021            | <0.00021            | <0.01                     | <0.01                             | <0.01               | <0.0052             | <0.0052                | <0.0052                | <0.01             | <0.000052        | 0.116             | <0.0001    |
|                         | P93B-ROX-102611     | 10/26/2011  |                             | 39.48                    | NE                     | <0.0052                   | <0.0052              | <0.0052              | <0.0001           | <0.0001              | <0.0052              | <0.0001                | <0.0052  | <0.00021            | <0.00021            | <0.01                     | <0.01                             | <0.01               | <0.0052             | <0.0052                | <0.0052                | <0.01             | <0.000052        | 0.122             | <0.0001    |
|                         | P93B-ROX-012012     | 1/20/2012   |                             | 41.72                    | NE                     | <0.0048                   | <0.0048              | <0.0048              | <0.000095         | <0.000095            | <0.0048              | <0.000095              | <0.0048  | <0.00019            | <0.00019            | <0.0095                   | <0.0095                           | <0.0095             | <0.0048             | <0.0048                | <0.0048                | <0.0095           | <0.000048        | 0.107             | <0.000095  |
|                         | P93B-ROX-050812     | 5/8/2012    |                             | 42.79                    | NE                     | <0.0051                   | <0.0051              | <0.0051              | <0.0001           | <0.0001              | <0.0051              | <0.0001                | <0.0051  | <0.0002             | <0.0002             | <0.01                     | <0.01                             | <0.01               | <0.0051             | <0.0051                | <0.0051                | <0.01             | <0.000051        | <0.0051           | <0.0001    |
|                         | P93B-ROX-080912     | 8/9/2012    |                             | 43.69                    | NE                     | <0.0054                   | <0.0054              | <0.0054              | <0.00011          | <0.00011             | <0.0054              | <0.00011               | <0.0054  | <0.00022            | <0.00022            | <0.011                    | <0.011                            | <0.011              | <0.0054             | <0.0054                | <0.0054                | <0.011            | <0.000054        | 0.178             | <0.00011   |
|                         | P93B-ROX-110712     | 11/7/2012   |                             | 45.05                    | NE                     | <0.0051                   | <0.0051              | <0.0051              | <0.0001           | <0.0001              | <0.0051              | <0.0001                | <0.0051  | 0.00026             | 0.00045 B           | <0.01                     | <0.01                             | <0.01               | <0.0051             | <0.0051                | <0.0051                | <0.01             | <0.000051        | 0.13              | <0.0001    |
|                         | P93B-ROX-110712-DUP | 11/7/2012   |                             | 45.05                    | NE                     | <0.005                    | <0.005               | <0.005               | <0.0001           | <0.0001              | <0.005               | <0.0001                | <0.005   | 0.0003              | 0.0005 B            | <0.01                     | <0.01                             | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | <0.00005         | 0.114             | <0.0001    |
|                         | P93B-ROX-012313     | 1/23/2013   |                             | 45.89                    | NE                     | 0.00024 J J               | 0.003 J              | <0.0053              | 0.00013           | 0.00012              | 0.00058 J            | 0.00012                | <0.0053  | <0.00021            | 0.00012 J           | <0.011                    | 0.0014 J                          | <0.011              | <0.0053             | <0.0053                | <0.0053                | <0.011            | 0.00016          | 0.176             | 0.00013    |
|                         | P93B-ROX-041113     | 4/11/2013   | 46.32                       | NE                       | <0.0051                | 0.0013 J                  | <0.0051              | <0.0001              | <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   | 74.60 - 76.60               | 43.30                    | NE                     | <0.0056                   | 0.0005 J             | <0.0056              | <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   |
| P-93C                   | P93C-102610         | 10/26/2010  | 94.26 - 96.26               | 40.69                    | NE                     | <0.009                    | <0.009               | <0.009               | <0.009            | <0.009               | <0.009               | <0.009                 | <0.009   | <0.009              | <0.009              | <0.009                    | <0.009                            | <0.019              | <0.009              |                        | <0.009                 | <0.009            | <0.009           | <0.009            |            |
|                         | P93C-ROX_012611     | 1/26/2011   |                             | 40.91                    | NE                     | <0.0051                   | <0.0051              | <0.0051              | <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                     | <0.005                    | <0.0011 U            | <0.005               | <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                     | <0.005                    | <0.00064 U           | <0.005               | <0.0001           | <0.0001              | <0.005               | <0.0001                | <0.005   | <0.0002             | <0.000033 U         | <0.01                     | <0.01                             | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | <0.00005         | 0.0046 J          | <0.0001    |
|                         | P93C-ROX-102611     | 10/26/2011  |                             | 39.36                    | NE                     | <0.0052                   | <0.0052              | <0.0052              | <0.0001           | <0.0001              | <0.0052              | <0.0001                | <0.0052  | <0.00021            | <0.00021            | <0.01                     | <0.01                             | <0.01               | <0.0052             | <0.0052                | <0.0052                | <0.01             | <0.000052        | <0.0052           | <0.0001    |
|                         | P93C-ROX-012012     | 1/20/2012   |                             | 41.57                    | NE                     | <0.0051                   | <0.0051              | <0.0051              | <0.0001           | <0.0001              | <0.0051              | <0.0001                | <0.0051  | <0.0002             | <0.0002             | <0.01                     | <0.01                             | <0.01               | <0.0051             | <0.0051                | <0.0051                | <0.01             | <0.000051        | <0.0051           | <0.0001    |
|                         | P93C-ROX-050812     | 5/8/2012    |                             | 42.68                    | NE                     | <0.0053                   | <0.0053              | <0.0053              | <0.00011          | <0.00011             | <0.0053              | <0.00011               | <0.0053  | <0.00021            | <0.00021            | <0.011                    | <0.011                            | <0.011              | <0.0053             | <0.0053                | <0.0053                | <0.011            | <0.000053        | <0.0053           | <0.00011   |
|                         | P93C-ROX-080912     | 8/9/2012    |                             | 43.57                    | NE                     | <0.0052                   | <0.0052              | <0.0052              | <0.0001           | <0.0001              | <0.0052              | <0.0001                | <0.0052  | <0.00021            | <0.00021            | <0.01                     | <0.01                             | <0.01               | <0.0052             | <0.0052                | <0.0052                | <0.01             | <0.000052        | <0.0052           | <0.0001    |
|                         | P93C-ROX-110812     | 11/8/2012   |                             | 45.12                    | NE                     | <0.005                    | <0.005               | <0.005               | <0.0001           | <0.0001              | <0.005               | <0.0001                | <0.005   | <0.0002             | <0.0002             | <0.01                     | <0.01                             | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | <0.00005         | <0.005            | <0.0001    |
|                         | P93C-ROX-012313     | 1/23/2013   |                             | 45.78                    | NE                     | <0.0055 UJ                | 0.0025 J             | <0.0055              | <0.00011          | <0.00011             | <0.0055              | <0.00011               | <0.0055  | <0.00022            | <0.00022            | <0.011                    | <0.011                            | <0.011              | <0.0055             | <0.0055                | <0.0055                | <0.011            | <0.000055        | <0.0055           | <0.00011   |
|                         | P93C-ROX-041213     | 4/12/2013   | 46.21                       | NE                       | <0.005 UJ              | <0.005                    | <0.005               | <0.0001              | <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   | 94.26 - 96.26               | 43.31                    | NE                     | <0.0056                   | <0.0056              | <0.0056              | <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                       |                        |                           |                      |                      |                   |                      |                      |                        |  |                     |                     |                           |                                   |                     |                     |                        |                        |                   |                  |                   |            |
| P-93D                   | P93D-102610         | 10/26/2010  | 125.44 - 127.44             | 40.59                    | NE                     | <0.01                     | <0.01                | <0.01                | <0.01             | <0.01                | <0.01                | <0.01                  | <0.01  | <0.01               | <0.01               | <0.01                     | <0.019                            | <0.01               |                     | <0.01                  | <0.01                  | <0.01             | <0.01            | <0.01             |            |
|                         | P93D-ROX-050511     | 5/5/2011    |                             | 41.96                    | NE                     | <0.005                    | <0.0011 U            | <0.005               | <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                     | <0.005                    | <0.0011 U            | <0.005               | <0.000023 U       | <0.0001              | <0.005               | <0.0001                | <0.005   | <0.0002             | <0.000042 U         | <0.01                     | <0.01                             | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | <0.00005         | <0.005            | 0.000021 J |
|                         | P93D-ROX-102711     | 10/27/2011  |                             | 39.59                    | NE                     | <0.005                    | <0.005               | <0.005               | <0.0001           | <0.0001              | <0.005               | <0.0001                | <0.005   | <0.0002             | <0.0002             | <0.01                     | <0.01                             | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | <0.00005         | <0.005            | <0.0001    |
|                         | P93D-ROX-012012     | 1/20/2012   |                             | 41.77                    | NE                     | <0.0054                   | <0.0054              | <0.0054              | <0.00011          | <0.00011             | <0.0054              | <0.00011               | <0.0054  | <0.00022            | <0.00006 U          | <0.011                    | <0.011                            | <0.011              | <0.0054             | <0.0054                | <0.0054                | <0.011            | <0.000054        | <0.0054           | <0.00011   |
|                         | P93D-ROX-050812     | 5/8/2012    |                             | 42.96                    | NE                     | <0.0051                   | <0.0051              | <0.0051              | <0.0001           | <0.0001              | <0.0051              | <0.0001                | <0.0051  | <0.0002             | <0.0002             | <0.01                     | <0.01                             | <0.01               | <0.0051             | <0.0051                | <0.0051                | <0.01             | <0.000051        | <0.0051           | <0.0001    |
|                         | P93D-ROX-080812     | 8/8/2012    |                             | 43.71                    | NE                     | <0.0052                   | <0.0052              | <0.0052              | <0.0001           | <0.0001              | <0.0052              | <0.0001                | <0.0052  | 0.0004              | <0.00042 U          | 0.00076 J                 | 0.0011 J                          | <0.01               | <0.0052             | <0.0052                | <0.0052                | <0.01             | 0.000054         | <0.0052           | <0.0001    |
|                         | P93D-ROX-110812     | 11/8/2012   |                             | NM                       | NE                     | <0.0055                   | <0.0055              | <0.0055              | <0.00011          | <0.00011             | <0.0055              | <0.00011               | <0.0055  | <0.00022            | <0.00022            | <0.011                    | <0.011                            | <0.011              | <0.0055             | <0.0055                | <0.0055                | <0.011            | <0.000055        | <0.0055           | <0.00011   |
|                         | P93D-ROX-012213     | 1/22/2013   |                             | 44.21                    | NE                     | <0.0053                   | <0.0053              | <0.0053              | <0.00011          | <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   |

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

|                         |                     |               |                                |                                |                              | SVOCs                     |                      |                      |                   |                      |                      |                        |   |                     |                     |                              |                                      |                     |                     |                        |                        |                   |                  |                   |             |
|-------------------------|---------------------|---------------|--------------------------------|--------------------------------|------------------------------|---------------------------|----------------------|----------------------|-------------------|----------------------|----------------------|------------------------|---|---------------------|---------------------|------------------------------|--------------------------------------|---------------------|---------------------|------------------------|------------------------|-------------------|------------------|-------------------|-------------|
|                         |                     |               |                                |                                |                              | Dimethyl phthalate        | Di-n-butyl phthalate | Di-n-octyl phthalate | Fluoranthene      | Fluorene             | Hexachlorobenzene    | Indene(1,2,3-cd)pyrene | Isophorone<br>(3,5,5-trimethyl-2-cyclohexene-1-one) | 1-Methylnaphthalene | 2-Methylnaphthalene | 2-Methylphenol<br>(o-Cresol) | 3 & 4-Methylphenol<br>(m & p-Cresol) | 3-Nitroaniline      | Nitrobenzene        | N-Nitrosodimethylamine | N-Nitrosodiphenylamine | Pentachlorophenol | Phenanthrene     | Phenol            | Pyrene      |
| Screening Values (mg/L) |                     |               |                                |                                |                              | 0.7 <sup>2</sup>          | 0.14 <sup>2</sup>    | 0.28 <sup>2</sup>    | 0.28 <sup>2</sup> | 0.00006 <sup>2</sup> | 0.00043 <sup>2</sup> | 1.4 <sup>2</sup>       | 0.49 <sup>3</sup>                                   | 0.028 <sup>4</sup>  | 0.35 <sup>2</sup>   | 0.35 <sup>3</sup>            |                                      | 0.0035 <sup>2</sup> | 0.0006 <sup>3</sup> | 0.0032 <sup>2</sup>    | 0.001 <sup>2</sup>     | 0.21 <sup>3</sup> | 0.1 <sup>1</sup> | 0.21 <sup>2</sup> |             |
| Location                | Sample ID           | Sample Date   | Screened Interval<br>(ft btoc) | Depth to<br>Water<br>(ft btoc) | Product<br>Thickness<br>(ft) | Analytical Results (mg/L) |                      |                      |                   |                      |                      |                        |   |                     |                     |                              |                                      |                     |                     |                        |                        |                   |                  |                   |             |
| P-114                   | P114-ROX-102811     | 10/28/2011    | 32.67 - 52.67                  | 24.73                          | NE                           | <0.0048                   | <0.0048              | <0.0048              | <0.000095         | <0.000095            | <0.0048              | <0.000095              | <0.0048   | <0.00019            | <0.00019            | <0.0095                      | <0.0095                              | <0.0095             | <0.0048             | <0.0048                | <0.0048                | <0.0095           | <0.000048        | <0.0048           | <0.000095   |
|                         | P114-ROX-012012     | 1/20/2012     |                                | 27.17                          | NE                           | <0.0051                   | <0.0051              | <0.0051              | <0.0001           | <0.0001              | <0.0051              | 0.000066 J             | <0.0051   | <0.0002             | <0.0002             | <0.01                        | <0.01                                | <0.01               | <0.0051             | <0.0051                | <0.0051                | <0.01             | <0.000051        | <0.0051           | <0.0001     |
|                         | P114-ROX-050912     | 5/9/2012      |                                | 28.09                          | NE                           | <0.0052                   | <0.0052              | <0.0052              | <0.0001           | <0.0001              | <0.0052              | <0.0001                | <0.0052   | <0.0002             | <0.0002             | <0.01                        | <0.01                                | <0.01               | <0.0052             | <0.0052                | <0.0052                | <0.01             | <0.00005         | <0.0052           | <0.0001     |
|                         | P114-ROX-080912     | 8/9/2012      |                                | 29.13                          | NE                           | <0.005                    | <0.005               | <0.005               | <0.0001           | <0.0001              | <0.005               | <0.0001                | <0.005  | <0.0002             | <0.0002             | <0.01                        | <0.01                                | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | <0.00005         | <0.005            | <0.0001     |
|                         | P114-ROX-110912     | 11/9/2012     |                                | 30.90                          | NE                           | <0.0052                   | <0.0052              | <0.0052              | <0.0001           | <0.0001              | <0.0052              | <0.0001                | <0.0052   | <0.00021            | <0.00021            | <0.01                        | <0.01                                | <0.01               | <0.0052             | <0.0052                | <0.0052                | <0.01             | <0.000052        | <0.0052           | <0.0001     |
|                         | P114-ROX-012313     | 1/23/2013     |                                | 30.22                          | NE                           | <0.0053 UJ                | 0.0024 J             | <0.0053              | <0.00011          | <0.00011             | <0.0053              | <0.00011               | <0.0053   | <0.00021            | <0.00021            | <0.011                       | <0.011                               | <0.011              | <0.0053             | <0.0053                | <0.0053                | <0.011            | <0.000053        | <0.0053           | <0.00011    |
|                         | P114-ROX-041513     | 4/15/2013     |                                | 31.80                          | NE                           | <0.0052                   | 0.00047 J            | <0.0052              | <0.0001           | <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     |
| P-114                   | P114-ROX-071813     | 7/18/2013     | 32.67 - 52.67                  | 27.22                          | NE                           | <0.0055                   | <0.0055              | <0.0055              | <0.00011          | <0.00011             | <0.0055              | 0.000071 J             | <0.0055   | <0.00022            | <0.00022            | <0.011                       | <0.011                               | <0.011              | <0.0055             | <0.0055                | <0.0055                | <0.011            | 0.000059         | <0.0055           | <0.00011    |
|                         | P114-ROX-071813-DUP | 7/18/2013     |                                | 27.22                          | NE                           | <0.0053                   | <0.0053              | <0.0053              | <0.00011          | <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    |
| ROST-3-PZ               | ROST3PZ-ROX-051412  | 5/14/2012     | 40.00 - 50.00                  | 38.82                          | NE                           | <0.0052                   | <0.00043 U           | <0.0052              | <0.0001           | <0.0001              | <0.0052              | <0.0001                | <0.0052   | 0.0002 J            | 0.00017 J           | <0.01                        | 0.0087 J                             | <0.01               | <0.0052             | <0.0052                | <0.0052                | <0.01             | 0.000043 J       | <0.0052           | <0.0001     |
|                         | ROST3PZ-ROX-080712  | 8/7/2012      |                                | 39.00                          | NE                           | <0.0054                   | 0.0049 J             | <0.0054              | <0.00011          | <0.00011             | <0.0054              | <0.00011               | <0.0054   | 0.00031             | 0.00038 J           | <0.011                       | 0.0056 J                             | <0.011              | <0.0054             | <0.0054                | <0.0054                | <0.011            | <0.000054        | <0.0054           | <0.00011    |
|                         | ROST3PZ-ROX-110112  | 11/1/2012     |                                | 40.82                          | NE                           | <0.0053                   | 0.0017 J             | <0.0053              | <0.00011          | <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     | 38.18 - 48.18                  | 41.50                          | NE                           | <0.005 UJ                 | <0.005               | <0.005               | <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      |                                | 42.24                          | NE                           | <0.0054                   | 0.00044 J            | <0.0054              | <0.00011          | 0.00017              | <0.0054              | <0.00011               | <0.0054   | 0.0029              | 0.0039              | <0.011                       | <0.011                               | <0.011              | <0.0054             | <0.0054 UJ             | <0.0054                | <0.011            | 0.00055          | <0.0054 UJ        | <0.00011    |
|                         | ROST3MW-ROX-071113  | 7/11/2013     |                                | 39.50                          | NE                           | <0.0054                   | <0.0054              | <0.0054              | <0.00011          | 0.00043              | <0.0054              | <0.00011               | <0.0054   | 0.0105 J            | 0.0142              | <0.011 UJ                    | <0.011 UJ                            | <0.011 UJ           | <0.0054             | <0.0054                | <0.0054                | <0.011 UJ         | 0.00073          | <0.0054 UJ        | <0.00044 U  |
| ROST-4-PZ(C)            | ROST4PZC-051412     | 5/14/2012     | 34.95 - 44.95                  | 39.04                          | NE                           | <0.005                    | <0.00058 U           | <0.005               | <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  |
|                         | ROST4PZC-ROX-072512 | 7/25/2012     |                                | 39.10                          | NE                           | <0.0053                   | 0.0015 J             | <0.0053              | <0.000041 U       | 0.00032 B            | <0.0053              | <0.00011               | <0.0053   | 0.0102              | 0.0136              | <0.011                       | 0.00098 J                            | <0.011              | <0.0053             | <0.0053                | <0.0053                | <0.011            | 0.0014           | 0.0023 J          | <0.000081 U |
|                         | ROST4PZC-ROX-102912 | 10/29/2012    |                                | 40.75                          | NE                           | <0.0052                   | 0.0018 J             | <0.0052              | <0.0001           | <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     |
|                         | ROST4PZC-ROX-011113 | 1/11/2013     |                                | 41.42                          | NE                           | <0.0053 UJ                | <0.0053              | <0.0053              | <0.00011          | <0.00011             | <0.0053              | <0.00011               | <0.0053   | <0.00021            | 0.000064 J          | <0.011                       | <0.011                               | <0.011              | <0.0053             | <0.0053                | <0.0053                | <0.011            | 0.00012          | <0.0053           | <0.00011    |
|                         | ROST4PZC-ROX-041013 | 4/10/2013     |                                | 42.27                          | NE                           | <0.0055                   | <0.0055              | <0.0055              | <0.00011          | 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    |
| T-12                    | ROST4PZC-ROX-071113 | 7/11/2013     | 34.95 - 44.95                  | 40.18                          | NE                           | <0.0054                   | <0.0054              | <0.0054              | 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  |
|                         | T12-ROX-102711      | 10/27/2011    | 46.72 - 72.72                  | 38.54                          | NE                           | <0.0051                   | <0.0051              | <0.0051              | <0.0001           | 0.0006               | <0.0051              | <0.0001                | <0.0051   | 0.0264              | 0.0415              | <0.01                        | <0.01                                | <0.01               | <0.0051             | <0.0051                | <0.0051                | <0.01             | 0.0015           | 0.0167            | 0.0001      |
|                         | T12-ROX-011912      | 1/19/2012     |                                | 41.0                           | NE                           | <0.0056                   | <0.00048 U           | <0.0056              | 0.000044 J        | 0.00043              | <0.0056              | 0.000061 J             | <0.0056   | 0.0158              | 0.0186              | 0.00091 J                    | <0.011                               | <0.011 UJ           | <0.0056             | <0.0056                | <0.0056                | <0.011            | 0.00054          | 0.0188            | 0.000067 J  |
|                         | T12-ROX-050912      | 5/9/2012      |                                | 42.62                          | NE                           | <0.005                    | <0.005               | <0.005               | <0.0001           | 0.00024              | <0.005               | <0.0001                | <0.005  | 0.0164              | 0.0254              | <0.01                        | 0.0026 J                             | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | 0.00062          | 0.0094            | 0.000039 J  |
|                         | T12-ROX-080212      | 8/2/2012      |                                | 41.92                          | NE                           | <0.0054                   | <0.0054              | <0.0054              | 0.000046 J        | 0.00029              | <0.0054              | <0.00011               | <0.0054   | 0.0199              | 0.0294              | 0.0021 J                     | 0.0027 J                             | <0.011              | <0.0054             | <0.0054                | <0.0054                | <0.011            | 0.00089          | 0.042             | 0.000062 J  |
|                         | T12-ROX-110512      | 11/5/2012     |                                | 43.91                          | NE                           | <0.005                    | <0.005               | <0.005               | <0.0001           | 0.00031              | <0.005               | <0.0001                | <0.005  | 0.0232              | 0.0354              | 0.00096 J                    | 0.0015 J                             | <0.01               | <0.005              | <0.005                 | <0.005                 | <0.01             | 0.00083          | <0.005 UJ         | 0.000048 J  |
|                         | T12-ROX-011813      | 1/18/2013     |                                | 44.50                          | NE                           | <0.0053 UJ                | <0.0053              | <0.0053              | <0.00011          | 0.00046              | <0.0053              | <0.00011               | <0.0053   | 0.0241              | 0.0322              | <0.011                       | <0.011                               | <0.011              | <0.0053             | <0.0053                | <0.0053                | <0.011            | 0.0011           | 0.0265            | 0.000067 J  |
| T12-ROX-041513          | 4/15/2013           | 44.99         |                                | NE                             | <0.0051                      | <0.0051                   | <0.0051              | <0.0001              | 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           | 46.72 - 72.72 | 42.33                          | NE                             | <0.0054                      | <0.0054                   | <0.0054              | 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        |             |

**Notes:**

- <sup>1</sup> Denotes screening criteria source from 35 I.A.C. 620, Subpart D.
- <sup>2</sup> Denotes screening criteria source from 35 I.A.C. 742 (TACO), Appendix B, Table E.
- <sup>3</sup> Denotes screening criteria source from IL EPA Toxicity Assessment Unit (Chemicals not in TACO, Tier I Tables).
- <sup>4</sup> Denotes screening criteria source R2008-018, Proposed Revisions to Groundwater Quality Standards, 35 I.A.C. 620.
- <sup>5</sup> Beginning in 4Q12, naphthalene was analyzed via 8260 VOC, and prior historic results were reported by PAH analysis.
- <sup>6</sup> Denotes wells not part of the Interim Groundwater Monitoring Program but split sampled with the IEPA during 2Q13

**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.

|  |
|--|
| Indicates a historical exceedance or screening criteria.   |
| Indicates a current exceedance or screening criteria.  |
| R Indicates current quarter analyte result was rejected.   |
| Empty cell without a value indicates previous quarter analyte result was rejected or the analyte was not part of method list when sampled. |

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VERIFICATION, TESTING AND CERTIFICATION COMPANY.



*e-Hardcopy 2.0*  
*Automated Report*

### Technical Report for

## Shell Oil

URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana,

SGS Accutest Job Number: MC22534

Sampling Date: 07/08/13

### Report to:

AECOM, INC.

Melissa.mansker@aecom.com

ATTN: Melissa Mansker

Total number of pages in report: 118



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.

H. (Brad) Madadian  
Lab Director

Client Service contact: Jeremy Vienneau 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO (MA00136) 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

November 1, 2016

AECOM  
1001 Highlands Plaza Drive West Suite 300  
St. Louis, MO 63110

RE: SGS Accutest Job # MC22534

Dear Elizabeth Kunkel

As you are aware, SGS Accutest Inc. - Marlborough has been conducting an extensive review of data associated with some historical Gas Chromatography-Mass Spectroscopy volatiles analyses. As a result of this review it was determined that some revisions of the original test report for this job were needed. These corrections have been incorporated into the revised report.

Please be assured that corrective actions have been put in place to address this matter and prevent a recurrence.

We apologize for any inconvenience that this issue may have caused. Please don't hesitate to contact us if we can be of further assistance.

Sincerely,

**H. (Brad) Madadian**

Regional Laboratory Director  
SGS Accutest Inc. - Marlborough

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## Sample Summary

Shell Oil

Job No: MC22534  
URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample Number | Collected Date | Time By | Received     | Matrix Code | Type               | Client Sample ID  |
|---------------|----------------|---------|--------------|-------------|--------------------|-------------------|
| MC22534-1     | 07/08/13       | 09:55   | LRDM07/09/13 | AQ          | Ground Water       | MW1-ROX-070813    |
| MC22534-2     | 07/08/13       | 10:10   | LRDM07/09/13 | AQ          | Equipment Blank    | MW9-ROX-070813-EB |
| MC22534-3     | 07/08/13       | 11:00   | LRDM07/09/13 | AQ          | Ground Water       | MW9-ROX-070813    |
| MC22534-4     | 07/08/13       | 13:35   | LRDM07/09/13 | AQ          | Ground Water       | MW10-ROX-070813   |
| MC22534-5     | 07/08/13       | 14:20   | LRDM07/09/13 | AQ          | Ground Water       | MW11-ROX-070813   |
| MC22534-6     | 07/08/13       | 15:40   | LRDM07/09/13 | AQ          | Ground Water       | MW16-ROX-070813   |
| MC22534-6D    | 07/08/13       | 15:40   | LRDM07/09/13 | AQ          | Water Dup/MSD      | MW16-ROX-070813   |
| MC22534-6S    | 07/08/13       | 15:40   | LRDM07/09/13 | AQ          | Water Matrix Spike | MW16-ROX-070813   |
| MC22534-7     | 07/08/13       | 00:00   | LRDM07/09/13 | AQ          | Trip Blank Water   | TB-ROX-070813-HCL |
| MC22534-8     | 07/08/13       | 00:00   | LRDM07/09/13 | AQ          | Trip Blank Water   | TB-ROX-0708136-ST |

# SAMPLE DELIVERY GROUP CASE NARRATIVE



**Client:** She O

**Job No** MC22534

**Site:** URSMOSTL:Roxana 3Q 3 GW/ 2 562850 03003 900 South Centra **Report Date** / /20 6 3: 6:09 PM

6 Sample(s), 2 Trip Blank(s) were collected on 07/08/2013 and were received at SGS Accutest New England on 07/09/2013 properly preserved, at 24 Deg C and intact. These Samples received a job number of MC22534. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. -Chlorohexane, Benzenethiol, Dibenz(a,h)anthracene, Indene, and Quinoline were searched in the library search and reported on if detections were found.

Except as noted below, all method specified calibration 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

|                   |                          |
|-------------------|--------------------------|
| <b>Matrix:</b> AQ | <b>Batch ID:</b> MSN2937 |
|-------------------|--------------------------|

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC22534-6MS, MC22534-6MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specification criteria.
- MSN2937-BS Recovery(s) for Acetone, Vinyl Acetate are out of control limits.
- MSN2937-BS Recovery(s) for Acroene are out of control limits.
- Matrix Spike Recovery(s) for 2-Butanone (MEK), 2-Hexanone, Acetone, Vinyl Acetate are out of control limits. Out of control limits due to possible matrix interference.
- Matrix Spike Duplicate Recovery(s) for Acetone, Acroene are out of control limits. Out of control limits due to possible matrix interference.

|                   |                          |
|-------------------|--------------------------|
| <b>Matrix:</b> AQ | <b>Batch ID:</b> MSN2939 |
|-------------------|--------------------------|

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC22559- MS, MC22559- MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specification criteria.
- MSN2939-BS/BSD Recovery(s) for Acroene are out of control limits.
- MC22559- MS/MSD Recovery(s) for 2-Butanone (MEK), Acetone, Acroene are out of control limits. Out of control limits due to possible matrix interference. Refer to Blank Spike.

### Extractables by GCMS By Method SW846 8270C

**Matrix:** AQ **Batch ID:** OP3394

- A samples were extracted within the recommended method holding time
- A samples were analyzed within the recommended method holding time
- Sample(s) MC22534-6MS, MC22534-6MSD were used as the QC samples indicated
- A method blanks for this batch meet method specification
- OP3394 -BS/MSD Recovery(s) for Hexachlorocyclopentadiene, Hexachloroethane are outside control limits
- Matrix Spike Recovery(s) for Hexachlorocyclopentadiene are outside control limits
- RPD(s) for MSD for Hexachloroethane are outside control limits for sample OP3394 -MSD
- MC22534-3 for 2,4,6-Tr bromopheno : Outside control limits Sample re-extracted/reanalyzed
- MC22534-3 for Pheno -d5: Outside control limits Sample re-extracted/reanalyzed
- MC22534-3 for 2-F uoropheno : Outside control limits Sample re-extracted/reanalyzed

**Matrix:** AQ **Batch ID:** OP34082

- A method blanks for this batch meet method specification
- Sample(s) MC22900-3MS, MC22900-3MSD were used as the QC samples indicated
- MC22534-3: Sample re-extracted beyond recommended holding time

### Extractables by GCMS By Method SW846 8270C BY SIM

**Matrix:** AQ **Batch ID:** OP33942

- A samples were extracted within the recommended method holding time
- A samples were analyzed within the recommended method holding time
- Sample(s) MC22534-6MS, MC22534-6MSD were used as the QC samples indicated
- Sample(s) MC22534- , MC22534-2, MC22534-3, MC22534-4, MC22534-6 have compound(s) reported with a "B" qualifier, indicating analytes found in the associated method blank

### Volatiles by GC By Method SW846 8011

**Matrix:** AQ **Batch ID:** OP3396

- A samples were extracted within the recommended method holding time
- A samples were analyzed within the recommended method holding time
- Sample(s) MC22534-6MS, MC22534-6MSD were used as the QC samples indicated
- A method blanks for this batch meet method specification

SGS Accutest New England certifies that all analyses were performed within method specification. It is further recommended that this report be used in its entirety. The Laboratory Director for SGS Accutest New England or assignee as verified by the signature on the cover page has authorized the release of this report (MC22534)

## Summary of Hits

Job Number: MC22534  
 Account: Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
 Collected: 07/08/13



| Lab Sample ID | Client Sample ID  | Result/<br>Analyte        | RL       | MDL   | Units | Method                  |
|---------------|-------------------|---------------------------|----------|-------|-------|-------------------------|
| MC22534-1     | MW1-ROX-070813    |                           |          |       |       |                         |
|               |                   | Methyl Tert Butyl Ether   | 4.9      | 1.0   | 0.43  | ug/l SW846 8260B        |
|               |                   | Methylene chloride        | 0.97 J   | 2.0   | 0.41  | ug/l SW846 8260B        |
|               |                   | bis(2-Ethylhexyl)phtalate | 2.4      | 2.0   | 0.50  | ug/l SW846 8270C        |
|               |                   | Acenaphthene              | 0.026 JB | 0.10  | 0.014 | ug/l SW846 8270C BY SIM |
|               |                   | Benzo(b)fluoranthene      | 0.027 J  | 0.051 | 0.024 | ug/l SW846 8270C BY SIM |
|               |                   | Fluoranthene              | 0.033 J  | 0.10  | 0.033 | ug/l SW846 8270C BY SIM |
|               |                   | Phenanthrene              | 0.043 JB | 0.051 | 0.013 | ug/l SW846 8270C BY SIM |
| MC22534-2     | MW9-ROX-070813-EB |                           |          |       |       |                         |
|               |                   | Benzene                   | 3.6      | 0.50  | 0.45  | ug/l SW846 8260B        |
|               |                   | bis(2-Ethylhexyl)phtalate | 2.4      | 2.1   | 0.51  | ug/l SW846 8270C        |
|               |                   | Phenanthrene              | 0.022 JB | 0.053 | 0.013 | ug/l SW846 8270C BY SIM |
| MC22534-3     | MW9-ROX-070813    |                           |          |       |       |                         |
|               |                   | Methylene chloride        | 1.5 J    | 2.0   | 0.41  | ug/l SW846 8260B        |
|               |                   | Benzo(b)fluoranthene      | 0.035 J  | 0.056 | 0.026 | ug/l SW846 8270C BY SIM |
|               |                   | Phenanthrene              | 0.028 JB | 0.056 | 0.014 | ug/l SW846 8270C BY SIM |
| MC22534-4     | MW10-ROX-070813   |                           |          |       |       |                         |
|               |                   | Methylene chloride        | 1.6 J    | 2.0   | 0.41  | ug/l SW846 8260B        |
|               |                   | Total TIC, Volatile       | 49 J     |       |       | ug/l                    |
|               |                   | bis(2-Ethylhexyl)phtalate | 2.7      | 2.2   | 0.54  | ug/l SW846 8270C        |
|               |                   | Phenanthrene              | 0.021 JB | 0.056 | 0.014 | ug/l SW846 8270C BY SIM |
| MC22534-5     | MW11-ROX-070813   |                           |          |       |       |                         |
|               |                   | Methylene chloride        | 1.0 J    | 2.0   | 0.41  | ug/l SW846 8260B        |
|               |                   | bis(2-Ethylhexyl)phtalate | 5.2      | 2.2   | 0.53  | ug/l SW846 8270C        |
| MC22534-6     | MW16-ROX-070813   |                           |          |       |       |                         |
|               |                   | Benzene                   | 0.62     | 0.50  | 0.45  | ug/l SW846 8260B        |
|               |                   | Phenanthrene              | 0.018 JB | 0.056 | 0.014 | ug/l SW846 8270C BY SIM |
| MC22534-7     | TB-ROX-070813-HCL |                           |          |       |       |                         |

No hits reported in this sample.

## Summary of Hits

Job Number: MC22534

Account: Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

Collected: 07/08/13



| Lab Sample ID | Client Sample ID | Result/<br>Analyte | Qual | RL | MDL | Units | Method |
|---------------|------------------|--------------------|------|----|-----|-------|--------|
|---------------|------------------|--------------------|------|----|-----|-------|--------|

MC22534-8 TB-ROX-0708136-ST

No hits reported in this sample.

Sample Results

---

Report of Analysis

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## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW1-ROX-070813  | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-1  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | N78303.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |
| Run #2 |          |    |          |    |           |            |                  |

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

## VOA Special List

| CAS No.  | Compound                  | Result | RL   | MDL  | Units | Q |
|----------|---------------------------|--------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND     | 10   | 2.8  | 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  | 1.1  | 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-070813    | Date Sampled:   | 07/08/13 |
| Lab Sample ID:    | MC22534-1         | Date Received:  | 07/09/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | ug/l  |   |
| 142-28-9   | 1,3-Dichloropropane         | ND     | 5.0  | 0.97 | ug/l  |   |
| 594-20-7   | 2,2-Dichloropropane         | ND     | 5.0  | 1.3  | ug/l  |   |
| 563-58-6   | 1,1-Dichloropropene         | ND     | 5.0  | 0.63 | ug/l  |   |
| 10061-01-5 | cis-1,3-Dichloropropene     | ND     | 0.50 | 0.22 | ug/l  |   |
| 10061-02-6 | trans-1,3-Dichloropropene   | ND     | 0.50 | 0.29 | ug/l  |   |
| 123-91-1   | 1,4-Dioxane                 | ND     | 25   | 16   | ug/l  |   |
| 97-63-2    | Ethyl methacrylate          | ND     | 5.0  | 0.81 | ug/l  |   |
| 100-41-4   | Ethylbenzene                | ND     | 1.0  | 0.38 | ug/l  |   |
| 87-68-3    | Hexachlorobutadiene         | ND     | 5.0  | 1.3  | ug/l  |   |
| 591-78-6   | 2-Hexanone                  | ND     | 5.0  | 2.3  | ug/l  |   |
| 98-82-8    | Isopropylbenzene            | ND     | 5.0  | 0.64 | ug/l  |   |
| 99-87-6    | p-Isopropyltoluene          | ND     | 5.0  | 0.55 | ug/l  |   |
| 1634-04-4  | Methyl Tert Butyl Ether     | 4.9    | 1.0  | 0.43 | ug/l  |   |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | ND     | 5.0  | 1.3  | ug/l  |   |
| 74-95-3    | Methylene bromide           | ND     | 5.0  | 0.43 | ug/l  |   |
| 75-09-2    | Methylene chloride          | 0.97   | 2.0  | 0.41 | ug/l  | J |
| 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> MW1-ROX-070813  |  | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-1  |  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 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  |   |

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW1-ROX-070813  | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-1  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | R32156.D | 1  | 07/12/13 | KR | 07/09/13  | OP33941    | MSR1173          |
| Run #2 |          |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 980 ml         | 1.0 ml       |
| Run #2 |                |              |

## ABN Special List

| CAS No.   | Compound                    | Result | RL  | MDL  | Units | Q |
|-----------|-----------------------------|--------|-----|------|-------|---|
| 65-85-0   | Benzoic Acid                | ND     | 10  | 1.3  | ug/l  |   |
| 95-57-8   | 2-Chlorophenol              | ND     | 5.1 | 0.39 | ug/l  |   |
| 59-50-7   | 4-Chloro-3-methyl phenol    | ND     | 10  | 0.50 | ug/l  |   |
| 120-83-2  | 2,4-Dichlorophenol          | ND     | 10  | 0.33 | ug/l  |   |
| 105-67-9  | 2,4-Dimethylphenol          | ND     | 10  | 1.2  | ug/l  |   |
| 51-28-5   | 2,4-Dinitrophenol           | ND     | 20  | 2.6  | ug/l  |   |
| 534-52-1  | 4,6-Dinitro-o-cresol        | ND     | 10  | 1.2  | ug/l  |   |
| 95-48-7   | 2-Methylphenol              | ND     | 10  | 1.3  | ug/l  |   |
|           | 3&4-Methylphenol            | ND     | 10  | 2.1  | ug/l  |   |
| 88-75-5   | 2-Nitrophenol               | ND     | 10  | 0.51 | ug/l  |   |
| 100-02-7  | 4-Nitrophenol               | ND     | 20  | 0.60 | ug/l  |   |
| 87-86-5   | Pentachlorophenol           | ND     | 10  | 1.3  | ug/l  |   |
| 108-95-2  | Phenol                      | ND     | 5.1 | 0.52 | ug/l  |   |
| 95-95-4   | 2,4,5-Trichlorophenol       | ND     | 10  | 0.58 | ug/l  |   |
| 88-06-2   | 2,4,6-Trichlorophenol       | ND     | 10  | 0.32 | ug/l  |   |
| 62-53-3   | Aniline                     | ND     | 10  | 0.65 | ug/l  |   |
| 101-55-3  | 4-Bromophenyl phenyl ether  | ND     | 5.1 | 0.21 | ug/l  |   |
| 85-68-7   | Butyl benzyl phthalate      | ND     | 5.1 | 0.87 | ug/l  |   |
| 100-51-6  | Benzyl Alcohol              | ND     | 10  | 0.59 | ug/l  |   |
| 91-58-7   | 2-Chloronaphthalene         | ND     | 5.1 | 0.94 | ug/l  |   |
| 106-47-8  | 4-Chloroaniline             | ND     | 10  | 0.26 | ug/l  |   |
| 111-91-1  | bis(2-Chloroethoxy)methane  | ND     | 5.1 | 0.21 | ug/l  |   |
| 111-44-4  | bis(2-Chloroethyl)ether     | ND     | 5.1 | 0.24 | ug/l  |   |
| 108-60-1  | bis(2-Chloroisopropyl)ether | ND     | 5.1 | 0.14 | ug/l  |   |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND     | 5.1 | 0.20 | ug/l  |   |
| 122-66-7  | 1,2-Diphenylhydrazine       | ND     | 5.1 | 0.67 | ug/l  |   |
| 121-14-2  | 2,4-Dinitrotoluene          | ND     | 10  | 0.69 | ug/l  |   |
| 606-20-2  | 2,6-Dinitrotoluene          | ND     | 10  | 0.65 | ug/l  |   |
| 91-94-1   | 3,3'-Dichlorobenzidine      | ND     | 5.1 | 0.51 | ug/l  |   |
| 132-64-9  | Dibenzofuran                | ND     | 2.0 | 0.16 | ug/l  |   |
| 84-74-2   | Di-n-butyl phthalate        | ND     | 5.1 | 0.40 | ug/l  |   |
| 117-84-0  | Di-n-octyl phthalate        | ND     | 5.1 | 0.44 | ug/l  |   |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

|   |  |                                |
|---|--|--------------------------------|
| <b>Client Sample ID:</b> MW1-ROX-070813   |  | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-1   |  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water  |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C  |  |                                |
| <b>Project:</b> URMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

**ABN Special List**

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.1 | 0.51 | ug/l  |   |
| 131-11-3 | Dimethyl phthalate         | ND     | 5.1 | 0.51 | ug/l  |   |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 2.4    | 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       | 41%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 33%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 82%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 80%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 85%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 89%    |        | 30-130% |

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

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

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## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW1-ROX-070813  | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-1  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | I84761A.D | 1  | 07/12/13 | WK | 07/09/13  | OP33942    | MSI3152          |
| Run #2 |           |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 980 ml         | 1.0 ml       |
| Run #2 |                |              |

## BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q  |
|----------|------------------------|--------|-------|-------|-------|----|
| 83-32-9  | Acenaphthene           | 0.026  | 0.10  | 0.014 | ug/l  | JB |
| 208-96-8 | Acenaphthylene         | ND     | 0.10  | 0.014 | ug/l  |    |
| 120-12-7 | Anthracene             | ND     | 0.10  | 0.018 | ug/l  |    |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.051 | 0.031 | ug/l  |    |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.10  | 0.018 | ug/l  |    |
| 205-99-2 | Benzo(b)fluoranthene   | 0.027  | 0.051 | 0.024 | ug/l  | J  |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.10  | 0.038 | ug/l  |    |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.10  | 0.060 | ug/l  |    |
| 218-01-9 | Chrysene               | ND     | 0.10  | 0.074 | ug/l  |    |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.10  | 0.043 | ug/l  |    |
| 206-44-0 | Fluoranthene           | 0.033  | 0.10  | 0.033 | ug/l  | J  |
| 86-73-7  | Fluorene               | ND     | 0.10  | 0.047 | ug/l  |    |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.10  | 0.047 | ug/l  |    |
| 90-12-0  | 1-Methylnaphthalene    | ND     | 0.20  | 0.14  | ug/l  |    |
| 91-57-6  | 2-Methylnaphthalene    | ND     | 0.20  | 0.053 | ug/l  |    |
| 85-01-8  | Phenanthrene           | 0.043  | 0.051 | 0.013 | ug/l  | JB |
| 129-00-0 | Pyrene                 | ND     | 0.10  | 0.036 | ug/l  |    |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 4165-60-0 | Nitrobenzene-d5      | 87%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 88%    |        | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW1-ROX-070813  | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-1  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK26675.D | 1  | 07/11/13 | NK | 07/11/13  | OP33961    | GBK917           |
| Run #2 |           |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 36.6 ml        | 2.0 ml       |
| Run #2 |                |              |

**VOA Special List**

| CAS No.  | Compound                    | Result | RL    | MDL    | Units | Q |
|----------|-----------------------------|--------|-------|--------|-------|---|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND     | 0.014 | 0.0043 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.014 | 0.0092 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 128%   |        | 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

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## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW9-ROX-070813-EB   | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-2  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Equipment Blank  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | N78256.D | 1  | 07/16/13 | JB | n/a       | n/a        | MSN2937          |
| Run #2 |          |    |          |    |           |            |                  |

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

## VOA Special List

| CAS No.  | Compound                  | Result | RL   | MDL  | Units | Q |
|----------|---------------------------|--------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND     | 10   | 2.8  | 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                   | 3.6    | 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-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  | 1.1  | 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-070813-EB    | Date Sampled:   | 07/08/13 |
| Lab Sample ID:    | MC22534-2            | Date Received:  | 07/09/13 |
| Matrix:           | AQ - Equipment Blank | Percent Solids:   | n/a      |
| Method:           | SW846 8260B          | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> MW9-ROX-070813-EB   |  | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-2  |  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Equipment Blank  |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

4.2  
4

**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 90%    |        | 70-130% |
| 2037-26-5 | Toluene-D8           | 102%   |        | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 98%    |        | 70-130% |

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

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



## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW9-ROX-070813-EB   | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-2  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Equipment Blank  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | R32157.D | 1  | 07/12/13 | KR | 07/09/13  | OP33941    | MSR1173          |
| Run #2 |          |    |          |    |           |            |                  |

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

## ABN Special List

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

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

|                          |                         |   |          |
|--------------------------|-------------------------|---|----------|
| <b>Client Sample ID:</b> | MW9-ROX-070813-EB       | <b>Date Sampled:</b>  | 07/08/13 |
| <b>Lab Sample ID:</b>    | MC22534-2               | <b>Date Received:</b>   | 07/09/13 |
| <b>Matrix:</b>           | AQ - Equipment Blank    | <b>Percent Solids:</b>  | n/a      |
| <b>Method:</b>           | SW846 8270C SW846 3510C | <b>Project:</b> URMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## ABN Special List

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.3 | 0.53 | ug/l  |   |
| 131-11-3 | Dimethyl phthalate         | ND     | 5.3 | 0.53 | ug/l  |   |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 2.4    | 2.1 | 0.51 | ug/l  |   |
| 118-74-1 | Hexachlorobenzene          | ND     | 5.3 | 0.31 | ug/l  |   |
| 77-47-4  | Hexachlorocyclopentadiene  | ND     | 11  | 2.6  | ug/l  |   |
| 67-72-1  | Hexachloroethane           | ND     | 5.3 | 0.46 | ug/l  |   |
| 78-59-1  | Isophorone                 | ND     | 5.3 | 0.21 | ug/l  |   |
| 88-74-4  | 2-Nitroaniline             | ND     | 11  | 0.29 | ug/l  |   |
| 99-09-2  | 3-Nitroaniline             | ND     | 11  | 0.53 | ug/l  |   |
| 100-01-6 | 4-Nitroaniline             | ND     | 11  | 4.6  | ug/l  |   |
| 98-95-3  | Nitrobenzene               | ND     | 5.3 | 0.26 | ug/l  |   |
| 62-75-9  | n-Nitrosodimethylamine     | ND     | 5.3 | 0.53 | ug/l  |   |
| 621-64-7 | N-Nitroso-di-n-propylamine | ND     | 5.3 | 0.85 | ug/l  |   |
| 86-30-6  | N-Nitrosodiphenylamine     | ND     | 5.3 | 0.57 | ug/l  |   |
| 110-86-1 | Pyridine                   | ND     | 11  | 0.54 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 367-12-4  | 2-Fluorophenol       | 45%    |        | 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      | 76%    |        | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW9-ROX-070813-EB   | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-2  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Equipment Blank  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | I84762A.D | 1  | 07/12/13 | WK | 07/09/13  | OP33942    | MSI3152          |
| Run #2 |           |    |          |    |           |            |                  |

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

## BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q  |
|----------|------------------------|--------|-------|-------|-------|----|
| 83-32-9  | Acenaphthene           | ND     | 0.11  | 0.014 | ug/l  |    |
| 208-96-8 | Acenaphthylene         | ND     | 0.11  | 0.014 | ug/l  |    |
| 120-12-7 | Anthracene             | ND     | 0.11  | 0.019 | ug/l  |    |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.053 | 0.032 | ug/l  |    |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.11  | 0.018 | ug/l  |    |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.053 | 0.025 | ug/l  |    |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.11  | 0.040 | ug/l  |    |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.062 | ug/l  |    |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.077 | ug/l  |    |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.11  | 0.044 | ug/l  |    |
| 206-44-0 | Fluoranthene           | ND     | 0.11  | 0.034 | ug/l  |    |
| 86-73-7  | Fluorene               | ND     | 0.11  | 0.049 | ug/l  |    |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.11  | 0.048 | ug/l  |    |
| 90-12-0  | 1-Methylnaphthalene    | ND     | 0.21  | 0.15  | ug/l  |    |
| 91-57-6  | 2-Methylnaphthalene    | ND     | 0.21  | 0.055 | ug/l  |    |
| 85-01-8  | Phenanthrene           | 0.022  | 0.053 | 0.013 | ug/l  | JB |
| 129-00-0 | Pyrene                 | ND     | 0.11  | 0.037 | ug/l  |    |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 4165-60-0 | Nitrobenzene-d5      | 85%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 80%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 106%   |        | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW9-ROX-070813-EB   | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-2  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Equipment Blank  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK26676.D | 1  | 07/11/13 | NK | 07/11/13  | OP33961    | GBK917           |
| Run #2 |           |    |          |    |           |            |                  |

| Run #  | 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 | 0.0045 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.015 | 0.0097 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 137%   |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 138%   |        | 36-173% |

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

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

4.2  
4

## Report of Analysis

|                   |                   |   |          |
|-------------------|-------------------|---|----------|
| Client Sample ID: | MW9-ROX-070813    | Date Sampled:   | 07/08/13 |
| Lab Sample ID:    | MC22534-3         | Date Received:  | 07/09/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | N78304.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |
| Run #2 |          |    |          |    |           |            |                  |

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

## VOA Special List

| CAS No.  | Compound                  | Result | RL   | MDL  | Units | Q |
|----------|---------------------------|--------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND     | 10   | 2.8  | 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  | 1.1  | 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-070813    | Date Sampled:   | 07/08/13 |
| Lab Sample ID:    | MC22534-3         | Date Received:  | 07/09/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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          | 1.5    | 2.0  | 0.41 | ug/l  | J |
| 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW9-ROX-070813  | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-3  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

4.3  
4

**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 | 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 | J = Indicates an estimated value                       |
| RL = Reporting Limit                          |                              | B = Indicates analyte found in associated method blank |
| E = Indicates value exceeds calibration range |                              | N = Indicates presumptive evidence of a compound       |

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW9-ROX-070813  | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-3  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #               | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---------------------|----------|----|----------|----|-----------|------------|------------------|
| Run #1              | R32159.D | 1  | 07/12/13 | KR | 07/09/13  | OP33941    | MSR1173          |
| Run #2 <sup>a</sup> | R32336.D | 1  | 07/23/13 | KR | 07/22/13  | OP34082    | MSR1179          |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 900 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 <sup>b</sup> | 11  | 1.4  | ug/l  |   |
| 95-57-8   | 2-Chlorophenol              | ND <sup>b</sup> | 5.4 | 0.42 | ug/l  |   |
| 59-50-7   | 4-Chloro-3-methyl phenol    | ND <sup>b</sup> | 11  | 0.53 | ug/l  |   |
| 120-83-2  | 2,4-Dichlorophenol          | ND <sup>b</sup> | 11  | 0.36 | ug/l  |   |
| 105-67-9  | 2,4-Dimethylphenol          | ND <sup>b</sup> | 11  | 1.2  | ug/l  |   |
| 51-28-5   | 2,4-Dinitrophenol           | ND <sup>b</sup> | 22  | 2.7  | ug/l  |   |
| 534-52-1  | 4,6-Dinitro-o-cresol        | ND <sup>b</sup> | 11  | 1.3  | ug/l  |   |
| 95-48-7   | 2-Methylphenol              | ND <sup>b</sup> | 11  | 1.4  | ug/l  |   |
|           | 3&4-Methylphenol            | ND <sup>b</sup> | 11  | 2.2  | ug/l  |   |
| 88-75-5   | 2-Nitrophenol               | ND <sup>b</sup> | 11  | 0.54 | ug/l  |   |
| 100-02-7  | 4-Nitrophenol               | ND <sup>b</sup> | 22  | 0.63 | ug/l  |   |
| 87-86-5   | Pentachlorophenol           | ND <sup>b</sup> | 11  | 1.4  | ug/l  |   |
| 108-95-2  | Phenol                      | ND <sup>b</sup> | 5.4 | 0.56 | ug/l  |   |
| 95-95-4   | 2,4,5-Trichlorophenol       | ND <sup>b</sup> | 11  | 0.62 | ug/l  |   |
| 88-06-2   | 2,4,6-Trichlorophenol       | ND <sup>b</sup> | 11  | 0.34 | ug/l  |   |
| 62-53-3   | Aniline                     | ND              | 11  | 0.71 | 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 | 0.95 | ug/l  |   |
| 100-51-6  | Benzyl Alcohol              | ND              | 11  | 0.64 | 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 | 0.23 | 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 | 0.72 | ug/l  |   |
| 121-14-2  | 2,4-Dinitrotoluene          | ND              | 11  | 0.75 | ug/l  |   |
| 606-20-2  | 2,6-Dinitrotoluene          | ND              | 11  | 0.71 | ug/l  |   |
| 91-94-1   | 3,3'-Dichlorobenzidine      | ND              | 5.6 | 0.56 | ug/l  |   |
| 132-64-9  | Dibenzofuran                | ND              | 2.2 | 0.17 | ug/l  |   |
| 84-74-2   | Di-n-butyl phthalate        | ND              | 5.6 | 0.43 | ug/l  |   |
| 117-84-0  | Di-n-octyl phthalate        | ND              | 5.6 | 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: | MW9-ROX-070813          | Date Sampled:  | 07/08/13 |
| Lab Sample ID:    | MC22534-3               | Date Received:   | 07/09/13 |
| Matrix:           | AQ - Ground Water       | Percent Solids:  | n/a      |
| Method:           | SW846 8270C SW846 3510C | Project: URMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## ABN Special List

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.6 | 0.56 | ug/l  |   |
| 131-11-3 | Dimethyl phthalate         | ND     | 5.6 | 0.56 | ug/l  |   |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | ND     | 2.2 | 0.54 | 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  | 4.8  | 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 | 0.90 | ug/l  |   |
| 86-30-6  | N-Nitrosodiphenylamine     | ND     | 5.6 | 0.60 | 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       | 2% <sup>c</sup> | 28%    | 15-110% |
| 4165-62-2 | Phenol-d5            | 1% <sup>c</sup> | 20%    | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 4% <sup>c</sup> | 48%    | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 85%             | 70%    | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 90%             | 85%    | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 103%            | 80%    | 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) 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: | MW9-ROX-070813                 | Date Sampled:   | 07/08/13 |
| Lab Sample ID:    | MC22534-3                      | Date Received:  | 07/09/13 |
| Matrix:           | AQ - Ground Water              | Percent Solids:   | n/a      |
| Method:           | SW846 8270C BY SIM SW846 3510C | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | I84763A.D | 1  | 07/12/13 | WK | 07/09/13  | OP33942    | MSI3152          |
| Run #2 |           |    |          |    |           |            |                  |

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

## BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q  |
|----------|------------------------|--------|-------|-------|-------|----|
| 83-32-9  | Acenaphthene           | ND     | 0.11  | 0.015 | ug/l  |    |
| 208-96-8 | Acenaphthylene         | ND     | 0.11  | 0.015 | ug/l  |    |
| 120-12-7 | Anthracene             | ND     | 0.11  | 0.020 | ug/l  |    |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.056 | 0.033 | ug/l  |    |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.11  | 0.019 | ug/l  |    |
| 205-99-2 | Benzo(b)fluoranthene   | 0.035  | 0.056 | 0.026 | ug/l  | J  |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.11  | 0.042 | ug/l  |    |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.065 | ug/l  |    |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.081 | ug/l  |    |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.11  | 0.046 | ug/l  |    |
| 206-44-0 | Fluoranthene           | ND     | 0.11  | 0.036 | ug/l  |    |
| 86-73-7  | Fluorene               | ND     | 0.11  | 0.051 | ug/l  |    |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.11  | 0.051 | ug/l  |    |
| 90-12-0  | 1-Methylnaphthalene    | ND     | 0.22  | 0.16  | ug/l  |    |
| 91-57-6  | 2-Methylnaphthalene    | ND     | 0.22  | 0.058 | ug/l  |    |
| 85-01-8  | Phenanthrene           | 0.028  | 0.056 | 0.014 | ug/l  | JB |
| 129-00-0 | Pyrene                 | ND     | 0.11  | 0.039 | ug/l  |    |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 4165-60-0 | Nitrobenzene-d5      | 96%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 92%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 111%   |        | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW9-ROX-070813  | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-3  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK26677.D | 1  | 07/11/13 | NK | 07/11/13  | OP33961    | GBK917           |
| Run #2 |           |    |          |    |           |            |                  |

|        | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 34.2 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 | 0.0046 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.015 | 0.0099 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 159%   |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 153%   |        | 36-173% |

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

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

4.3  
4

## Report of Analysis

|                   |                   |   |          |
|-------------------|-------------------|---|----------|
| Client Sample ID: | MW10-ROX-070813   | Date Sampled:   | 07/08/13 |
| Lab Sample ID:    | MC22534-4         | Date Received:  | 07/09/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | N78305.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |
| Run #2 |          |    |          |    |           |            |                  |

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

## VOA Special List

| CAS No.  | Compound                  | Result | RL   | MDL  | Units | Q |
|----------|---------------------------|--------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND     | 10   | 2.8  | 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  | 1.1  | 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-070813   | Date Sampled:   | 07/08/13 |
| Lab Sample ID:    | MC22534-4         | Date Received:  | 07/09/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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          | 1.6    | 2.0  | 0.41 | ug/l  | J |
| 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW10-ROX-070813   | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-4  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

4.4  
4

**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 93%    |        | 70-130% |
| 2037-26-5 | Toluene-D8           | 101%   |        | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 101%   |        | 70-130% |

| CAS No. | Tentatively Identified Compounds | R.T. | Est. Conc. | Units | Q  |
|---------|----------------------------------|------|------------|-------|----|
| 78-78-4 | Butane, 2-methyl-                | 5.82 | 49         | ug/l  | JN |
|         | Total TIC, Volatile              |      | 49         | ug/l  | J  |

---

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW10-ROX-070813   | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-4  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | R32160.D | 1  | 07/12/13 | KR | 07/09/13  | OP33941    | MSR1173          |
| Run #2 |          |    |          |    |           |            |                  |

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

## ABN Special List

| CAS No.   | Compound                    | Result | RL  | MDL  | Units | Q |
|-----------|-----------------------------|--------|-----|------|-------|---|
| 65-85-0   | Benzoic Acid                | ND     | 11  | 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  | 0.36 | 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  | 0.65 | ug/l  |   |
| 87-86-5   | Pentachlorophenol           | ND     | 11  | 1.4  | ug/l  |   |
| 108-95-2  | Phenol                      | ND     | 5.6 | 0.57 | ug/l  |   |
| 95-95-4   | 2,4,5-Trichlorophenol       | ND     | 11  | 0.64 | ug/l  |   |
| 88-06-2   | 2,4,6-Trichlorophenol       | ND     | 11  | 0.35 | ug/l  |   |
| 62-53-3   | Aniline                     | ND     | 11  | 0.71 | 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 | 0.95 | ug/l  |   |
| 100-51-6  | Benzyl Alcohol              | ND     | 11  | 0.64 | 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 | 0.23 | 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 | 0.72 | ug/l  |   |
| 121-14-2  | 2,4-Dinitrotoluene          | ND     | 11  | 0.75 | ug/l  |   |
| 606-20-2  | 2,6-Dinitrotoluene          | ND     | 11  | 0.71 | ug/l  |   |
| 91-94-1   | 3,3'-Dichlorobenzidine      | ND     | 5.6 | 0.56 | ug/l  |   |
| 132-64-9  | Dibenzofuran                | ND     | 2.2 | 0.17 | ug/l  |   |
| 84-74-2   | Di-n-butyl phthalate        | ND     | 5.6 | 0.43 | ug/l  |   |
| 117-84-0  | Di-n-octyl phthalate        | ND     | 5.6 | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> MW10-ROX-070813   |  | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-4  |  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

**ABN Special List**

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.6 | 0.56 | ug/l  |   |
| 131-11-3 | Dimethyl phthalate         | ND     | 5.6 | 0.56 | ug/l  |   |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 2.7    | 2.2 | 0.54 | 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  | 4.8  | 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 | 0.90 | ug/l  |   |
| 86-30-6  | N-Nitrosodiphenylamine     | ND     | 5.6 | 0.60 | ug/l  |   |
| 110-86-1 | Pyridine                   | ND     | 11  | 0.57 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 367-12-4  | 2-Fluorophenol       | 47%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 39%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 91%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 86%    |        | 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      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound





## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW10-ROX-070813   | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-4  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | I84764A.D | 1  | 07/12/13 | WK | 07/09/13  | OP33942    | MSI3152          |
| Run #2 |           |    |          |    |           |            |                  |

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

## BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q  |
|----------|------------------------|--------|-------|-------|-------|----|
| 83-32-9  | Acenaphthene           | ND     | 0.11  | 0.015 | ug/l  |    |
| 208-96-8 | Acenaphthylene         | ND     | 0.11  | 0.015 | ug/l  |    |
| 120-12-7 | Anthracene             | ND     | 0.11  | 0.020 | ug/l  |    |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.056 | 0.033 | ug/l  |    |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.11  | 0.019 | ug/l  |    |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.056 | 0.026 | ug/l  |    |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.11  | 0.042 | ug/l  |    |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.065 | ug/l  |    |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.081 | ug/l  |    |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.11  | 0.046 | ug/l  |    |
| 206-44-0 | Fluoranthene           | ND     | 0.11  | 0.036 | ug/l  |    |
| 86-73-7  | Fluorene               | ND     | 0.11  | 0.051 | ug/l  |    |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.11  | 0.051 | ug/l  |    |
| 90-12-0  | 1-Methylnaphthalene    | ND     | 0.22  | 0.16  | ug/l  |    |
| 91-57-6  | 2-Methylnaphthalene    | ND     | 0.22  | 0.058 | ug/l  |    |
| 85-01-8  | Phenanthrene           | 0.021  | 0.056 | 0.014 | ug/l  | JB |
| 129-00-0 | Pyrene                 | ND     | 0.11  | 0.039 | ug/l  |    |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 4165-60-0 | Nitrobenzene-d5      | 96%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 90%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 111%   |        | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW10-ROX-070813   | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-4  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK26678.D | 1  | 07/11/13 | NK | 07/11/13  | OP33961    | GBK917           |
| Run #2 |           |    |          |    |           |            |                  |

|        | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 33.4 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     | 0.016 | 0.0047 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.016 | 0.010  | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 155%   |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 155%   |        | 36-173% |

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

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

4.4  
4

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW11-ROX-070813   | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-5  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | N78306.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |
| Run #2 |          |    |          |    |           |            |                  |

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

## VOA Special List

| CAS No.  | Compound                  | Result | RL   | MDL  | Units | Q |
|----------|---------------------------|--------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND     | 10   | 2.8  | 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  | 1.1  | 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-070813   | Date Sampled:   | 07/08/13 |
| Lab Sample ID:    | MC22534-5         | Date Received:  | 07/09/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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          | 1.0    | 2.0  | 0.41 | ug/l  | J |
| 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> MW11-ROX-070813   |  | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-5  |  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 94%    |        | 70-130% |
| 2037-26-5 | Toluene-D8           | 102%   |        | 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 | J = Indicates an estimated value                       |
| RL = Reporting Limit                          |                              | B = Indicates analyte found in associated method blank |
| E = Indicates value exceeds calibration range |                              | N = Indicates presumptive evidence of a compound       |

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW11-ROX-070813   | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-5  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | R32162.D | 1  | 07/12/13 | KR | 07/09/13  | OP33941    | MSR1173          |
| Run #2 |          |    |          |    |           |            |                  |

| Run #  | 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: | MW11-ROX-070813         | Date Sampled:   | 07/08/13 |
| Lab Sample ID:    | MC22534-5               | Date Received:  | 07/09/13 |
| Matrix:           | AQ - Ground Water       | Percent Solids:   | n/a      |
| Method:           | SW846 8270C SW846 3510C | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## ABN Special List

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.4 | 0.54 | ug/l  |   |
| 131-11-3 | Dimethyl phthalate         | ND     | 5.4 | 0.54 | ug/l  |   |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 5.2    | 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       | 26%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 23%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 47%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 83%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 94%    |        | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW11-ROX-070813   | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-5  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | I84765A.D | 1  | 07/12/13 | WK | 07/09/13  | OP33942    | MSI3152          |
| Run #2 |           |    |          |    |           |            |                  |

| Run #  | 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  | 0.015 | ug/l  |   |
| 208-96-8 | Acenaphthylene         | ND     | 0.11  | 0.014 | ug/l  |   |
| 120-12-7 | Anthracene             | ND     | 0.11  | 0.019 | ug/l  |   |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.054 | 0.032 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.11  | 0.019 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.054 | 0.025 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.11  | 0.041 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.063 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.078 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.11  | 0.045 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.11  | 0.035 | ug/l  |   |
| 86-73-7  | Fluorene               | ND     | 0.11  | 0.050 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.11  | 0.049 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | ND     | 0.22  | 0.15  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | ND     | 0.22  | 0.056 | ug/l  |   |
| 85-01-8  | Phenanthrene           | ND     | 0.054 | 0.014 | ug/l  |   |
| 129-00-0 | Pyrene                 | ND     | 0.11  | 0.038 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 4165-60-0 | Nitrobenzene-d5      | 92%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 98%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 109%   |        | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW11-ROX-070813   | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-5  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK26679.D | 1  | 07/11/13 | NK | 07/11/13  | OP33961    | GBK917           |
| Run #2 |           |    |          |    |           |            |                  |

| Run #  | 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 | 0.0045 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.015 | 0.0096 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 135%   |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 133%   |        | 36-173% |

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

4.5  
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## Report of Analysis

|                   |                   |   |          |
|-------------------|-------------------|---|----------|
| Client Sample ID: | MW16-ROX-070813   | Date Sampled:   | 07/08/13 |
| Lab Sample ID:    | MC22534-6         | Date Received:  | 07/09/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | N78302.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2937          |
| Run #2 |          |    |          |    |           |            |                  |

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

## VOA Special List

| CAS No.  | Compound                  | Result | RL   | MDL  | Units | Q |
|----------|---------------------------|--------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND     | 10   | 2.8  | 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                   | 0.62   | 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  | 1.1  | 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-070813   | Date Sampled:   | 07/08/13 |
| Lab Sample ID:    | MC22534-6         | Date Received:  | 07/09/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> MW16-ROX-070813   |  | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-6  |  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 95%    |        | 70-130% |
| 2037-26-5 | Toluene-D8           | 101%   |        | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 105%   |        | 70-130% |

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

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW16-ROX-070813   | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-6  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | R32154.D | 1  | 07/12/13 | KR | 07/09/13  | OP33941    | MSR1173          |
| Run #2 |          |    |          |    |           |            |                  |

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

## ABN Special List

| CAS No.   | Compound                    | Result | RL  | MDL  | Units | Q |
|-----------|-----------------------------|--------|-----|------|-------|---|
| 65-85-0   | Benzoic Acid                | ND     | 11  | 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  | 0.36 | 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  | 0.65 | ug/l  |   |
| 87-86-5   | Pentachlorophenol           | ND     | 11  | 1.4  | ug/l  |   |
| 108-95-2  | Phenol                      | ND     | 5.6 | 0.57 | ug/l  |   |
| 95-95-4   | 2,4,5-Trichlorophenol       | ND     | 11  | 0.64 | ug/l  |   |
| 88-06-2   | 2,4,6-Trichlorophenol       | ND     | 11  | 0.35 | ug/l  |   |
| 62-53-3   | Aniline                     | ND     | 11  | 0.71 | 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 | 0.95 | ug/l  |   |
| 100-51-6  | Benzyl Alcohol              | ND     | 11  | 0.64 | 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 | 0.23 | 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 | 0.72 | ug/l  |   |
| 121-14-2  | 2,4-Dinitrotoluene          | ND     | 11  | 0.75 | ug/l  |   |
| 606-20-2  | 2,6-Dinitrotoluene          | ND     | 11  | 0.71 | ug/l  |   |
| 91-94-1   | 3,3'-Dichlorobenzidine      | ND     | 5.6 | 0.56 | ug/l  |   |
| 132-64-9  | Dibenzofuran                | ND     | 2.2 | 0.17 | ug/l  |   |
| 84-74-2   | Di-n-butyl phthalate        | ND     | 5.6 | 0.43 | ug/l  |   |
| 117-84-0  | Di-n-octyl phthalate        | ND     | 5.6 | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW16-ROX-070813   | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-6  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

## ABN Special List

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.6 | 0.56 | ug/l  |   |
| 131-11-3 | Dimethyl phthalate         | ND     | 5.6 | 0.56 | ug/l  |   |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | ND     | 2.2 | 0.54 | 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  | 4.8  | 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 | 0.90 | ug/l  |   |
| 86-30-6  | N-Nitrosodiphenylamine     | ND     | 5.6 | 0.60 | 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       | 54%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 49%    |        | 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     | 96%    |        | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW16-ROX-070813   | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-6  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | I84760A.D | 1  | 07/12/13 | WK | 07/09/13  | OP33942    | MSI3152          |
| Run #2 |           |    |          |    |           |            |                  |

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

### BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q  |
|----------|------------------------|--------|-------|-------|-------|----|
| 83-32-9  | Acenaphthene           | ND     | 0.11  | 0.015 | ug/l  |    |
| 208-96-8 | Acenaphthylene         | ND     | 0.11  | 0.015 | ug/l  |    |
| 120-12-7 | Anthracene             | ND     | 0.11  | 0.020 | ug/l  |    |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.056 | 0.033 | ug/l  |    |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.11  | 0.019 | ug/l  |    |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.056 | 0.026 | ug/l  |    |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.11  | 0.042 | ug/l  |    |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.065 | ug/l  |    |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.081 | ug/l  |    |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.11  | 0.046 | ug/l  |    |
| 206-44-0 | Fluoranthene           | ND     | 0.11  | 0.036 | ug/l  |    |
| 86-73-7  | Fluorene               | ND     | 0.11  | 0.051 | ug/l  |    |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.11  | 0.051 | ug/l  |    |
| 90-12-0  | 1-Methylnaphthalene    | ND     | 0.22  | 0.16  | ug/l  |    |
| 91-57-6  | 2-Methylnaphthalene    | ND     | 0.22  | 0.058 | ug/l  |    |
| 85-01-8  | Phenanthrene           | 0.018  | 0.056 | 0.014 | ug/l  | JB |
| 129-00-0 | Pyrene                 | ND     | 0.11  | 0.039 | ug/l  |    |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 4165-60-0 | Nitrobenzene-d5      | 93%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 98%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 104%   |        | 30-130% |

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

4.6  
4

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW16-ROX-070813   | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-6  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK26680.D | 1  | 07/11/13 | NK | 07/11/13  | OP33961    | GBK917           |
| Run #2 |           |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 34.3 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 | 0.0046 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.015 | 0.0099 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 171%   |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 166%   |        | 36-173% |

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

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

4.6  
4



## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> TB-ROX-070813-HCL   | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-7  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Trip Blank Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | N78255.D | 1  | 07/16/13 | JB | n/a       | n/a        | MSN2937          |
| Run #2 |          |    |          |    |           |            |                  |

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

## VOA Special List

| CAS No.  | Compound                  | Result | RL   | MDL  | Units | Q |
|----------|---------------------------|--------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND     | 10   | 2.8  | 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  | 1.1  | 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-070813-HCL     | Date Sampled:  | 07/08/13 |
| Lab Sample ID:    | MC22534-7             | Date Received:   | 07/09/13 |
| Matrix:           | AQ - Trip Blank Water | Percent Solids:  | n/a      |
| Method:           | SW846 8260B           | Project: URMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> TB-ROX-070813-HCL   |  | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-7  |  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Trip Blank Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

4.7  
4

**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 92%    |        | 70-130% |
| 2037-26-5 | Toluene-D8           | 102%   |        | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 97%    |        | 70-130% |

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

---

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> TB-ROX-0708136-ST   | <b>Date Sampled:</b> 07/08/13  |
| <b>Lab Sample ID:</b> MC22534-8  | <b>Date Received:</b> 07/09/13 |
| <b>Matrix:</b> AQ - Trip Blank Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK26682.D | 1  | 07/11/13 | NK | 07/11/13  | OP33961    | GBK917           |
| Run #2 |           |    |          |    |           |            |                  |

|        | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 33.9 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 | 0.0047 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.015 | 0.010  | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 161%   |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 148%   |        | 36-173% |

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

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

4.8  
4

## Misc. Forms

### Custody Documents and Other Forms

---

Includes the following where applicable:

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



# Shell Oil Products Chain Of Custody Record

**URS**

LAB (LOCATION)  
 XENCO  
 CALSCEM  
 OTHER (Marlborough, MA 01752 (508-481-6200))  
 SPL  
 Lab Vendor # \_\_\_\_\_

Please Check Appropriate Box:

|   |  |                                       |
|---|--|---------------------------------------|
| <input checked="" type="checkbox"/> ENV. SERVICES | <input type="checkbox"/> MOTIVA RETAIL | <input type="checkbox"/> SHELL RETAIL |
| <input type="checkbox"/> MOTIVA SOBCM             | <input type="checkbox"/> CONSULTANT    | <input type="checkbox"/> LUBES        |
| <input type="checkbox"/> SHELL PIPELINE           | <input type="checkbox"/> OTHER         |                                       |

Print Bill To Contact Name: Bob Billman  
 INCIDENT # (ENV SERVICES) 9 7 2 1 6 6 4 0  
 PO # \_\_\_\_\_ SAP # \_\_\_\_\_  
 CHECK IF NO INCIDENT # APPLIES  
 DATE: 7/8/13  
 PAGE: 1 of 1

SAMPLING COMPANY: URS CORPORATION  
 ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300; ST. LOUIS, MO 63110  
 PROJECT CONTACT (please copy 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  
 SITE ADDRESS: Street and City: 900 South Central Ave, ROXANA, IL  
 STATE: IL COUNTY: ROXANA CD NO. \_\_\_\_\_  
 ED DELIVERABLE TO (Name, Company, City, Location): \_\_\_\_\_ PHONE NO. \_\_\_\_\_ E-MAIL: \_\_\_\_\_  
 CONSULTANT PROJECT NO.: Roxana Quarterly GW / 21562850.03003  
 SAMPLER NAME(S) (show): L. Rathnow, S. Mattinelly  
 LAB USE ONLY: MC22534  
 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 LEGID DISK  
 REQUESTED ANALYSIS  
 FIELD NOTES:  
 TEMPERATURE ON RECEIPT C°  
 Container PID Readings or Laboratory Notes

| LAB USE ONLY    | Field Sample Identification | SAMPLING |       | MATRIX | PRESERVATIVE |      |       |       |       | NO. OF CONT. | VOC 8260B SL+TICS |   |   | SVOC 8270C SL+TICS |   |   | PAH 8270LL |   |   | PID (ppm) | FIELD NOTES |
|-----------------|-----------------------------|----------|-------|--------|--------------|------|-------|-------|-------|--------------|-------------------|---|---|--------------------|---|---|------------|---|---|-----------|-------------|
|                 |                             | DATE     | TIME  |        | HCL          | HN03 | HC004 | HC006 | OTHER |              |                   |   |   |                    |   |   |            |   |   |           |             |
| -1              | MW1-ROX-070813              | 7/8/13   | 07:55 | Water  | 2            |      |       |       | 2     | 2            | 6                 | X | X | X                  | X | X | X          | X | X |           |             |
| -2              | MW1-ROX-070813-EB           |          | 1010  |        | 2            |      |       |       | 2     | 2            | 6                 | X | X | X                  | X | X | X          | X | X |           |             |
| -3              | MW1-ROX-070813              |          | 1100  |        | 2            |      |       |       | 2     | 2            | 6                 | X | X | X                  | X | X | X          | X | X |           |             |
| -4              | MW10-ROX-070813             |          | 1335  |        | 2            |      |       |       | 2     | 2            | 6                 | X | X | X                  | X | X | X          | X | X |           |             |
| -5              | MW11-ROX-070813             |          | 1420  |        | 2            |      |       |       | 2     | 2            | 6                 | X | X | X                  | X | X | X          | X | X |           |             |
| -6              | MW16-ROX-070813             |          | 1540  |        | 2            |      |       |       | 2     | 2            | 6                 | X | X | X                  | X | X | X          | X | X |           |             |
| -6 <sup>S</sup> | MW16-ROX-070813-M5          |          | 1540  |        | 2            |      |       |       | 2     | 2            | 6                 | X | X | X                  | X | X | X          | X | X |           | 17C, 4K2    |
| -6 <sup>S</sup> | MW16-ROX-070813-M5          |          | 1540  |        | 2            |      |       |       | 2     | 2            | 6                 | X | X | X                  | X | X | X          | X | X |           |             |
| -7              | TB-ROX-070813-HCL           |          | 00:00 |        | 2            |      |       |       | 2     | 2            | X                 |   |   |                    |   |   |            |   |   |           |             |
| -8              | TB-ROX-070813-ST            | ✓        | 00:00 | ✓      |              |      |       |       | 2     | 2            | X                 |   |   |                    |   |   |            |   |   | ✓         | 2.4°, 1.1°  |

Requested by (Signature): *Elizabeth Kunkel* Received by (Signature): \_\_\_\_\_ Date: 7/8/13 Time: \_\_\_\_\_  
 Requested by (Signature): *Fedex* Received by (Signature): *Chad* Date: 7/9/13 Time: 9:00  
 Requested by (Signature): \_\_\_\_\_ Received by (Signature): \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

5.1  
5MC22534: Chain of Custody  
Page 1 of 2

## Accutest Laboratories Sample Receipt Summary

**Accutest Job Number:** MC22534      **Client:** URS      **Immediate Client Services Action Required:** No  
**Date / Time Received:** 7/9/2013      **Delivery Method:** \_\_\_\_\_      **Client Service Action Required at Login:** No  
**Project:** 900 SO CENTRAL      **No. Coolers:** 2      **Airbill #'s:** \_\_\_\_\_

**Cooler Security**      Y or N      Y or N  
 1. Custody Seals Present:        3. COC Present:    
 2. Custody Seals Intact:        4. Smpl Dates/Time OK:

**Cooler Temperature**      Y or N  
 1. Temp criteria achieved:    
 2. Cooler temp verification: Infrared gun  
 3. Cooler media: Ice (bag)

**Quality Control Preservation**      Y      or      N      N/A  
 1. Trip Blank present / cooler:     
 2. Trip Blank listed on COC:     
 3. Samples preserved properly:    
 4. VOCs headspace free:

**Sample Integrity - Documentation**      Y      or      N  
 1. Sample labels present on bottles:    
 2. Container labeling complete:    
 3. Sample container label / COC agree:

**Sample Integrity - Condition**      Y      or      N  
 1. Sample recvd within HT:    
 2. All containers accounted for:    
 3. Condition of sample: Intact

**Sample Integrity - Instructions**      Y      or      N      N/A  
 1. Analysis requested is clear:    
 2. Bottles received for unspecified tests:    
 3. Sufficient volume recvd for analysis:    
 4. Compositing instructions clear:     
 5. Filtering instructions clear:

Comments

5.1  
**5**

### Internal Sample Tracking Chronicle

Shell Oil

Job No: MC22534

URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

5.2  
5

| Sample Number   | Method             | Analyzed        | By | Prepped   | By | Test Codes |
|---|--------------------|-----------------|----|-----------|----|------------|
| MC22534-1 Collected: 08-JUL-13 09:55 By: LRDM Received: 09-JUL-13 By: MW1-ROX-070813    |                    |                 |    |           |    |            |
| MC22534-1   | SW846 8011         | 11-JUL-13 17:48 | NK | 11-JUL-13 | NK | V8011SL    |
| MC22534-1   | SW846 8270C        | 12-JUL-13 11:53 | KR | 09-JUL-13 | PA | AB8270SL + |
| MC22534-1   | SW846 8270C BY SIM | 12-JUL-13 13:21 | WK | 09-JUL-13 | PA | B8270SIMSL |
| MC22534-1   | SW846 8260B        | 17-JUL-13 12:30 | JB |           |    | V8260SL +  |
| MC22534-2 Collected: 08-JUL-13 10:10 By: LRDM Received: 09-JUL-13 By: MW9-ROX-070813-EB |                    |                 |    |           |    |            |
| MC22534-2   | SW846 8011         | 11-JUL-13 18:11 | NK | 11-JUL-13 | NK | V8011SL    |
| MC22534-2   | SW846 8270C        | 12-JUL-13 12:16 | KR | 09-JUL-13 | PA | AB8270SL + |
| MC22534-2   | SW846 8270C BY SIM | 12-JUL-13 16:29 | WK | 09-JUL-13 | PA | B8270SIMSL |
| MC22534-2   | SW846 8260B        | 16-JUL-13 10:04 | JB |           |    | V8260SL +  |
| MC22534-3 Collected: 08-JUL-13 11:00 By: LRDM Received: 09-JUL-13 By: MW9-ROX-070813    |                    |                 |    |           |    |            |
| MC22534-3   | SW846 8011         | 11-JUL-13 18:33 | NK | 11-JUL-13 | NK | V8011SL    |
| MC22534-3   | SW846 8270C        | 12-JUL-13 13:02 | KR | 09-JUL-13 | PA | AB8270SL + |
| MC22534-3   | SW846 8270C BY SIM | 12-JUL-13 16:51 | WK | 09-JUL-13 | PA | B8270SIMSL |
| MC22534-3   | SW846 8260B        | 17-JUL-13 12:58 | JB |           |    | V8260SL +  |
| MC22534-3   | SW846 8270C        | 23-JUL-13 16:42 | KR | 22-JUL-13 | PA | AB8270SL + |
| MC22534-4 Collected: 08-JUL-13 13:35 By: LRDM Received: 09-JUL-13 By: MW10-ROX-070813   |                    |                 |    |           |    |            |
| MC22534-4   | SW846 8011         | 11-JUL-13 18:56 | NK | 11-JUL-13 | NK | V8011SL    |
| MC22534-4   | SW846 8270C        | 12-JUL-13 13:25 | KR | 09-JUL-13 | PA | AB8270SL + |
| MC22534-4   | SW846 8270C BY SIM | 12-JUL-13 17:12 | WK | 09-JUL-13 | PA | B8270SIMSL |
| MC22534-4   | SW846 8260B        | 17-JUL-13 13:27 | JB |           |    | V8260SL +  |
| MC22534-5 Collected: 08-JUL-13 14:20 By: LRDM Received: 09-JUL-13 By: MW11-ROX-070813   |                    |                 |    |           |    |            |
| MC22534-5   | SW846 8011         | 11-JUL-13 19:19 | NK | 11-JUL-13 | NK | V8011SL    |
| MC22534-5   | SW846 8270C        | 12-JUL-13 14:11 | KR | 09-JUL-13 | PA | AB8270SL + |
| MC22534-5   | SW846 8270C BY SIM | 12-JUL-13 17:34 | WK | 09-JUL-13 | PA | B8270SIMSL |
| MC22534-5   | SW846 8260B        | 17-JUL-13 13:55 | JB |           |    | V8260SL +  |



### Internal Sample Tracking Chronicle

Shell Oil

Job No: MC22534

URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

5.2  
5

| Sample Number | Method | Analyzed | By | Prepped | By | Test Codes |
|---------------|--------|----------|----|---------|----|------------|
|---------------|--------|----------|----|---------|----|------------|

MC22534-6 Collected: 08-JUL-13 15:40 By: LRDM Received: 09-JUL-13 By: MW16-ROX-070813

|                              |  |                 |    |           |    |            |
|------------------------------|--|-----------------|----|-----------|----|------------|
| MC22534-6 SW846 8011         |  | 11-JUL-13 19:42 | NK | 11-JUL-13 | NK | V8011SL    |
| MC22534-6 SW846 8270C        |  | 12-JUL-13 11:07 | KR | 09-JUL-13 | PA | AB8270SL + |
| MC22534-6 SW846 8270C BY SIM |  | 12-JUL-13 13:00 | WK | 09-JUL-13 | PA | B8270SIMSL |
| MC22534-6 SW846 8260B        |  | 17-JUL-13 12:02 | JB |           |    | V8260SL +  |

MC22534-7 Collected: 08-JUL-13 00:00 By: LRDM Received: 09-JUL-13 By: TB-ROX-070813-HCL

|                       |  |                 |    |  |  |           |
|-----------------------|--|-----------------|----|--|--|-----------|
| MC22534-7 SW846 8260B |  | 16-JUL-13 09:36 | JB |  |  | V8260SL + |
|-----------------------|--|-----------------|----|--|--|-----------|

MC22534-8 Collected: 08-JUL-13 00:00 By: LRDM Received: 09-JUL-13 By: TB-ROX-0708136-ST

|                      |  |                 |    |           |    |         |
|----------------------|--|-----------------|----|-----------|----|---------|
| MC22534-8 SW846 8011 |  | 11-JUL-13 20:27 | NK | 11-JUL-13 | NK | V8011SL |
|----------------------|--|-----------------|----|-----------|----|---------|

# SGS Accutest Internal Chain of Custody

**Job Number:** MC22534  
**Account:** SHELLWIC Shell Oil  
**Project:** URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
**Received:** 07/09/13

| Sample.Bottle Number | Transfer FROM    | Transfer TO      | Date/Time      | Reason                 |
|----------------------|------------------|------------------|----------------|------------------------|
| MC22534-1.2          | Walk In Ref #22  | Bijan Jafari     | 07/09/13 13:11 | Retrieve from Storage  |
| MC22534-1.2          | Bijan Jafari     |                  | 07/11/13 10:33 | Depleted               |
| MC22534-1.3          | VOC Ref #4       | Jaclyn Bergeron  | 07/16/13 08:11 | Retrieve from Storage  |
| MC22534-1.3          | Jaclyn Bergeron  | GCMSN            | 07/16/13 08:11 | Load on Instrument     |
| MC22534-1.3          | GCMSN            | Jaclyn Bergeron  | 07/17/13 09:41 | Unload from Instrument |
| MC22534-1.3          | Jaclyn Bergeron  | VOC Ref #4       | 07/17/13 09:41 | Return to Storage      |
| MC22534-1.3          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22534-1.4          | VOC Ref #4       | Kerry Ryan       | 07/12/13 14:49 | Retrieve from Storage  |
| MC22534-1.4          | Kerry Ryan       | GCMSL            | 07/12/13 14:49 | Load on Instrument     |
| MC22534-1.4          | GCMSL            | Kerry Ryan       | 07/15/13 09:01 | Unload from Instrument |
| MC22534-1.4          | Kerry Ryan       | VOC Ref #4       | 07/15/13 09:01 | Return to Storage      |
| MC22534-1.4          | VOC Ref #4       | Jaclyn Bergeron  | 07/17/13 09:43 | Retrieve from Storage  |
| MC22534-1.4          | Jaclyn Bergeron  | GCMSN            | 07/17/13 09:43 | Load on Instrument     |
| MC22534-1.4          | GCMSN            | Jaclyn Bergeron  | 07/18/13 08:25 | Unload from Instrument |
| MC22534-1.4          | Jaclyn Bergeron  | VOC Ref #4       | 07/18/13 08:26 | Return to Storage      |
| MC22534-1.4          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22534-1.5          | VOC Ref #4       | Bijan Jafari     | 07/11/13 08:24 | Retrieve from Storage  |
| MC22534-1.5          | Bijan Jafari     |                  | 07/11/13 10:33 | Depleted               |
| MC22534-2.2          | Walk In Ref #22  | Bijan Jafari     | 07/09/13 13:11 | Retrieve from Storage  |
| MC22534-2.2          | Bijan Jafari     |                  | 07/11/13 10:33 | Depleted               |
| MC22534-2.4          | VOC Ref #4       | Jaclyn Bergeron  | 07/16/13 08:11 | Retrieve from Storage  |
| MC22534-2.4          | Jaclyn Bergeron  | GCMSN            | 07/16/13 08:11 | Load on Instrument     |
| MC22534-2.4          | GCMSN            | Jaclyn Bergeron  | 07/17/13 09:41 | Unload from Instrument |
| MC22534-2.4          | Jaclyn Bergeron  | VOC Ref #4       | 07/17/13 09:41 | Return to Storage      |
| MC22534-2.4          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22534-2.5          | VOC Ref #4       | Bijan Jafari     | 07/11/13 08:24 | Retrieve from Storage  |
| MC22534-2.5          | Bijan Jafari     |                  | 07/11/13 10:33 | Depleted               |
| MC22534-3.1          | Walk In Ref #22  | Bijan Jafari     | 07/09/13 13:11 | Retrieve from Storage  |
| MC22534-3.1          | Bijan Jafari     |                  | 07/11/13 10:33 | Depleted               |
| MC22534-3.2          | Walk In Ref #22  | Thomas Abruzzise | 07/22/13 15:39 | Retrieve from Storage  |
| MC22534-3.2          | Thomas Abruzzise |                  | 07/30/13 14:35 | Depleted               |
| MC22534-3.3          | VOC Ref #4       | Jaclyn Bergeron  | 07/16/13 08:11 | Retrieve from Storage  |
| MC22534-3.3          | Jaclyn Bergeron  | GCMSN            | 07/16/13 08:11 | Load on Instrument     |
| MC22534-3.3          | GCMSN            | Jaclyn Bergeron  | 07/17/13 09:41 | Unload from Instrument |
| MC22534-3.3          | Jaclyn Bergeron  | VOC Ref #4       | 07/17/13 09:41 | Return to Storage      |

5.3  
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# SGS Accutest Internal Chain of Custody

**Job Number:** MC22534  
**Account:** SHELLWIC Shell Oil  
**Project:** URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
**Received:** 07/09/13

| Sample.Bottle Number | Transfer FROM   | Transfer TO     | Date/Time      | Reason                 |
|----------------------|-----------------|-----------------|----------------|------------------------|
| MC22534-3.3          | Scott Parsick   |                 | 10/04/13 13:49 | Disposed               |
| MC22534-3.4          | VOC Ref #4      | Kerry Ryan      | 07/12/13 14:49 | Retrieve from Storage  |
| MC22534-3.4          | Kerry Ryan      | GCMSL           | 07/12/13 14:49 | Load on Instrument     |
| MC22534-3.4          | GCMSL           | Kerry Ryan      | 07/15/13 09:01 | Unload from Instrument |
| MC22534-3.4          | Kerry Ryan      | VOC Ref #4      | 07/15/13 09:01 | Return to Storage      |
| MC22534-3.4          | VOC Ref #4      | Jaclyn Bergeron | 07/17/13 09:43 | Retrieve from Storage  |
| MC22534-3.4          | Jaclyn Bergeron | GCMSN           | 07/17/13 09:43 | Load on Instrument     |
| MC22534-3.4          | GCMSN           | Jaclyn Bergeron | 07/18/13 08:25 | Unload from Instrument |
| MC22534-3.4          | Jaclyn Bergeron | VOC Ref #4      | 07/18/13 08:26 | Return to Storage      |
| MC22534-3.4          | Scott Parsick   |                 | 10/04/13 13:49 | Disposed               |
| MC22534-3.5          | VOC Ref #4      | Bijan Jafari    | 07/11/13 08:24 | Retrieve from Storage  |
| MC22534-3.5          | Bijan Jafari    |                 | 07/11/13 10:33 | Depleted               |
| MC22534-4.2          | Walk In Ref #22 | Bijan Jafari    | 07/09/13 13:11 | Retrieve from Storage  |
| MC22534-4.2          | Bijan Jafari    |                 | 07/11/13 10:33 | Depleted               |
| MC22534-4.3          | VOC Ref #4      | Jaclyn Bergeron | 07/16/13 08:11 | Retrieve from Storage  |
| MC22534-4.3          | Jaclyn Bergeron | GCMSN           | 07/16/13 08:11 | Load on Instrument     |
| MC22534-4.3          | GCMSN           | Jaclyn Bergeron | 07/17/13 09:41 | Unload from Instrument |
| MC22534-4.3          | Jaclyn Bergeron | VOC Ref #4      | 07/17/13 09:41 | Return to Storage      |
| MC22534-4.3          | Scott Parsick   |                 | 10/04/13 13:49 | Disposed               |
| MC22534-4.4          | VOC Ref #4      | Kerry Ryan      | 07/12/13 14:49 | Retrieve from Storage  |
| MC22534-4.4          | Kerry Ryan      | GCMSL           | 07/12/13 14:49 | Load on Instrument     |
| MC22534-4.4          | GCMSL           | Kerry Ryan      | 07/15/13 09:01 | Unload from Instrument |
| MC22534-4.4          | Kerry Ryan      | VOC Ref #4      | 07/15/13 09:01 | Return to Storage      |
| MC22534-4.4          | VOC Ref #4      | Jaclyn Bergeron | 07/17/13 11:26 | Retrieve from Storage  |
| MC22534-4.4          | Jaclyn Bergeron | GCMSN           | 07/17/13 11:26 | Load on Instrument     |
| MC22534-4.4          | GCMSN           | Jaclyn Bergeron | 07/18/13 08:25 | Unload from Instrument |
| MC22534-4.4          | Jaclyn Bergeron | VOC Ref #4      | 07/18/13 08:26 | Return to Storage      |
| MC22534-4.4          | Scott Parsick   |                 | 10/04/13 13:49 | Disposed               |
| MC22534-4.6          | VOC Ref #4      | Bijan Jafari    | 07/11/13 08:24 | Retrieve from Storage  |
| MC22534-4.6          | Bijan Jafari    |                 | 07/11/13 10:33 | Depleted               |
| MC22534-5.1          | Walk In Ref #22 | Bijan Jafari    | 07/09/13 13:11 | Retrieve from Storage  |
| MC22534-5.1          | Bijan Jafari    |                 | 07/11/13 10:33 | Depleted               |
| MC22534-5.3          | VOC Ref #4      | Kerry Ryan      | 07/12/13 14:49 | Retrieve from Storage  |
| MC22534-5.3          | Kerry Ryan      | GCMSL           | 07/12/13 14:49 | Load on Instrument     |
| MC22534-5.3          | GCMSL           | Kerry Ryan      | 07/15/13 09:01 | Unload from Instrument |
| MC22534-5.3          | Kerry Ryan      | VOC Ref #4      | 07/15/13 09:01 | Return to Storage      |

5.3  
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# SGS Accutest Internal Chain of Custody

**Job Number:** MC22534  
**Account:** SHELLWIC Shell Oil  
**Project:** URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
**Received:** 07/09/13

| Sample.Bottle Number | Transfer FROM   | Transfer TO     | Date/Time      | Reason                 |
|----------------------|-----------------|-----------------|----------------|------------------------|
| MC22534-5.3          | VOC Ref #4      | Jaclyn Bergeron | 07/17/13 09:43 | Retrieve from Storage  |
| MC22534-5.3          | Jaclyn Bergeron | GCMSN           | 07/17/13 09:43 | Load on Instrument     |
| MC22534-5.3          | GCMSN           | Jaclyn Bergeron | 07/18/13 08:25 | Unload from Instrument |
| MC22534-5.3          | Jaclyn Bergeron | VOC Ref #4      | 07/18/13 08:26 | Return to Storage      |
| MC22534-5.3          | Scott Parsick   |                 | 10/04/13 13:49 | Disposed               |
| MC22534-5.4          | VOC Ref #4      | Jaclyn Bergeron | 07/16/13 08:11 | Retrieve from Storage  |
| MC22534-5.4          | Jaclyn Bergeron | GCMSN           | 07/16/13 08:11 | Load on Instrument     |
| MC22534-5.4          | GCMSN           | Jaclyn Bergeron | 07/17/13 09:41 | Unload from Instrument |
| MC22534-5.4          | Jaclyn Bergeron | VOC Ref #4      | 07/17/13 09:41 | Return to Storage      |
| MC22534-5.4          | Scott Parsick   |                 | 10/04/13 13:49 | Disposed               |
| MC22534-5.5          | VOC Ref #4      | Bijan Jafari    | 07/11/13 08:24 | Retrieve from Storage  |
| MC22534-5.5          | Bijan Jafari    |                 | 07/11/13 10:33 | Depleted               |
| MC22534-6.1          | Walk In Ref #22 | Bijan Jafari    | 07/09/13 13:11 | Retrieve from Storage  |
| MC22534-6.1          | Bijan Jafari    |                 | 07/11/13 10:33 | Depleted               |
| MC22534-6.4          | Walk In Ref #22 | Bijan Jafari    | 07/09/13 13:11 | Retrieve from Storage  |
| MC22534-6.4          | Bijan Jafari    |                 | 07/11/13 10:33 | Depleted               |
| MC22534-6.5          | Walk In Ref #22 | Bijan Jafari    | 07/09/13 13:11 | Retrieve from Storage  |
| MC22534-6.5          | Bijan Jafari    |                 | 07/11/13 10:33 | Depleted               |
| MC22534-6.7          | VOC Ref #4      | Kerry Ryan      | 07/12/13 14:49 | Retrieve from Storage  |
| MC22534-6.7          | Kerry Ryan      | GCMSL           | 07/12/13 14:49 | Load on Instrument     |
| MC22534-6.7          | GCMSL           | Kerry Ryan      | 07/15/13 09:01 | Unload from Instrument |
| MC22534-6.7          | Kerry Ryan      | VOC Ref #4      | 07/15/13 09:01 | Return to Storage      |
| MC22534-6.7          | Scott Parsick   |                 | 10/04/13 13:49 | Disposed               |
| MC22534-6.8          | VOC Ref #4      | Jaclyn Bergeron | 07/16/13 08:11 | Retrieve from Storage  |
| MC22534-6.8          | Jaclyn Bergeron | GCMSN           | 07/16/13 08:11 | Load on Instrument     |
| MC22534-6.8          | GCMSN           | Jaclyn Bergeron | 07/17/13 09:41 | Unload from Instrument |
| MC22534-6.8          | Jaclyn Bergeron | VOC Ref #4      | 07/17/13 09:41 | Return to Storage      |
| MC22534-6.8          | Scott Parsick   |                 | 10/04/13 13:49 | Disposed               |
| MC22534-6.9          | VOC Ref #4      | Jaclyn Bergeron | 07/16/13 08:11 | Retrieve from Storage  |
| MC22534-6.9          | Jaclyn Bergeron | GCMSN           | 07/16/13 08:11 | Load on Instrument     |
| MC22534-6.9          | GCMSN           | Jaclyn Bergeron | 07/17/13 09:41 | Unload from Instrument |
| MC22534-6.9          | Jaclyn Bergeron | VOC Ref #4      | 07/17/13 09:41 | Return to Storage      |
| MC22534-6.9          | Scott Parsick   |                 | 10/04/13 13:49 | Disposed               |
| MC22534-6.10         | VOC Ref #4      | Jaclyn Bergeron | 07/17/13 09:43 | Retrieve from Storage  |
| MC22534-6.10         | Jaclyn Bergeron | GCMSN           | 07/17/13 09:43 | Load on Instrument     |

5.3  
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# SGS Accutest Internal Chain of Custody

**Job Number:** MC22534  
**Account:** SHELLWIC Shell Oil  
**Project:** URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
**Received:** 07/09/13

| Sample.Bottle Number | Transfer FROM   | Transfer TO     | Date/Time      | Reason                 |
|----------------------|-----------------|-----------------|----------------|------------------------|
| MC22534-6.10         | GCMSN           | Jaclyn Bergeron | 07/18/13 08:25 | Unload from Instrument |
| MC22534-6.10         | Jaclyn Bergeron | VOC Ref #4      | 07/18/13 08:26 | Return to Storage      |
| MC22534-6.10         | Scott Parsick   |                 | 10/04/13 13:49 | Disposed               |
| MC22534-6.11         | VOC Ref #4      | Jaclyn Bergeron | 07/16/13 08:11 | Retrieve from Storage  |
| MC22534-6.11         | Jaclyn Bergeron | GCMSN           | 07/16/13 08:11 | Load on Instrument     |
| MC22534-6.11         | GCMSN           | Jaclyn Bergeron | 07/17/13 09:41 | Unload from Instrument |
| MC22534-6.11         | Jaclyn Bergeron | VOC Ref #4      | 07/17/13 09:41 | Return to Storage      |
| MC22534-6.11         | Scott Parsick   |                 | 10/04/13 13:49 | Disposed               |
| MC22534-6.12         | VOC Ref #4      | Jaclyn Bergeron | 07/16/13 08:11 | Retrieve from Storage  |
| MC22534-6.12         | Jaclyn Bergeron | GCMSN           | 07/16/13 08:11 | Load on Instrument     |
| MC22534-6.12         | GCMSN           | Jaclyn Bergeron | 07/17/13 09:41 | Unload from Instrument |
| MC22534-6.12         | Jaclyn Bergeron | VOC Ref #4      | 07/17/13 09:41 | Return to Storage      |
| MC22534-6.12         | Scott Parsick   |                 | 10/04/13 13:49 | Disposed               |
| MC22534-6.14         | VOC Ref #4      | Bijan Jafari    | 07/11/13 08:24 | Retrieve from Storage  |
| MC22534-6.14         | Bijan Jafari    |                 | 07/11/13 10:33 | Depleted               |
| MC22534-6.15         | VOC Ref #4      | Bijan Jafari    | 07/11/13 08:24 | Retrieve from Storage  |
| MC22534-6.15         | Bijan Jafari    |                 | 07/11/13 10:33 | Depleted               |
| MC22534-6.17         | VOC Ref #4      | Bijan Jafari    | 07/11/13 08:24 | Retrieve from Storage  |
| MC22534-6.17         | Bijan Jafari    |                 | 07/11/13 10:33 | Depleted               |
| MC22534-7.2          | VOC Ref #4      | Jaclyn Bergeron | 07/16/13 08:11 | Retrieve from Storage  |
| MC22534-7.2          | Jaclyn Bergeron | GCMSN           | 07/16/13 08:11 | Load on Instrument     |
| MC22534-7.2          | GCMSN           | Jaclyn Bergeron | 07/17/13 09:41 | Unload from Instrument |
| MC22534-7.2          | Jaclyn Bergeron | VOC Ref #4      | 07/17/13 09:41 | Return to Storage      |
| MC22534-7.2          | Scott Parsick   |                 | 10/04/13 13:49 | Disposed               |
| MC22534-8.1          | VOC Ref #4      | Bijan Jafari    | 07/11/13 08:24 | Retrieve from Storage  |
| MC22534-8.1          | Bijan Jafari    |                 | 07/11/13 10:33 | Depleted               |

**GC/MS Volatiles**

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**QC Data Summaries**

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

# Method Blank Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2937-MB | N78247.D | 1  | 07/16/13 | JB | n/a       | n/a        | MSN2937          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-2, MC22534-7

| 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  | 1.1  | 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  
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# Method Blank Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2937-MB | N78247.D | 1  | 07/16/13 | JB | n/a       | n/a        | MSN2937          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-2, MC22534-7

| 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: MC22534  
Account: SHELLWIC Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2937-MB | N78247.D | 1  | 07/16/13 | JB | n/a       | n/a        | MSN2937          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-2, MC22534-7

| CAS No.   | Surrogate Recoveries | Limits |         |
|-----------|----------------------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 91%    | 70-130% |
| 2037-26-5 | Toluene-D8           | 101%   | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 95%    | 70-130% |

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

6.1.1  
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# Method Blank Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2939-MB | N78298.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-1, MC22534-3, MC22534-4, MC22534-5

| 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  | 1.1  | 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: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2939-MB | N78298.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-1, MC22534-3, MC22534-4, MC22534-5

| 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: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2939-MB | N78298.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-1, MC22534-3, MC22534-4, MC22534-5

| CAS No.   | Surrogate Recoveries | Limits       |
|-----------|----------------------|--------------|
| 1868-53-7 | Dibromofluoromethane | 94% 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  |   |

6.1.2  
6

# Method Blank Summary

Job Number: MC22534

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2937-MB1 | N78298.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2937          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-6

| 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  | 1.1  | 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: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2937-MB1 | N78298.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2937          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-6

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

# Method Blank Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2937-MB1 | N78298.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2937          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-6

| CAS No.   | Surrogate Recoveries | Limits       |
|-----------|----------------------|--------------|
| 1868-53-7 | Dibromofluoromethane | 94% 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  |   |

# Blank Spike Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2937-BS | N78244.D | 1  | 07/16/13 | JB | n/a       | n/a        | MSN2937          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-2, MC22534-7

| CAS No.  | Compound                  | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | Limits |
|----------|---------------------------|---------------|-------------|----------|--------|
| 67-64-1  | Acetone                   | 50            | 30.2        | 60* a    | 70-130 |
| 107-02-8 | Acrolein                  | 250           | 326         | 130      | 70-130 |
| 107-13-1 | Acrylonitrile             | 50            | 49.4        | 99       | 70-130 |
| 71-43-2  | Benzene                   | 50            | 52.0        | 104      | 70-130 |
| 108-86-1 | Bromobenzene              | 50            | 49.1        | 98       | 70-130 |
| 74-97-5  | Bromochloromethane        | 50            | 51.0        | 102      | 70-130 |
| 75-27-4  | Bromodichloromethane      | 50            | 55.6        | 111      | 70-130 |
| 75-25-2  | Bromoform                 | 50            | 46.6        | 93       | 70-130 |
| 74-83-9  | Bromomethane              | 50            | 42.9        | 86       | 70-130 |
| 78-93-3  | 2-Butanone (MEK)          | 50            | 35.9        | 72       | 70-130 |
| 104-51-8 | n-Butylbenzene            | 50            | 50.7        | 101      | 70-130 |
| 135-98-8 | sec-Butylbenzene          | 50            | 53.5        | 107      | 70-130 |
| 98-06-6  | tert-Butylbenzene         | 50            | 52.8        | 106      | 70-130 |
| 75-15-0  | Carbon disulfide          | 50            | 48.8        | 98       | 70-130 |
| 56-23-5  | Carbon tetrachloride      | 50            | 51.8        | 104      | 70-130 |
| 108-90-7 | Chlorobenzene             | 50            | 54.2        | 108      | 70-130 |
| 75-00-3  | Chloroethane              | 50            | 49.9        | 100      | 70-130 |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50            | 49.8        | 100      | 70-130 |
| 67-66-3  | Chloroform                | 50            | 51.9        | 104      | 70-130 |
| 74-87-3  | Chloromethane             | 50            | 54.4        | 109      | 70-130 |
| 95-49-8  | o-Chlorotoluene           | 50            | 50.2        | 100      | 70-130 |
| 106-43-4 | p-Chlorotoluene           | 50            | 53.3        | 107      | 70-130 |
| 124-48-1 | Dibromochloromethane      | 50            | 48.3        | 97       | 70-130 |
| 95-50-1  | 1,2-Dichlorobenzene       | 50            | 55.5        | 111      | 70-130 |
| 541-73-1 | 1,3-Dichlorobenzene       | 50            | 52.8        | 106      | 70-130 |
| 106-46-7 | 1,4-Dichlorobenzene       | 50            | 51.8        | 104      | 70-130 |
| 75-71-8  | Dichlorodifluoromethane   | 50            | 45.3        | 91       | 70-130 |
| 75-34-3  | 1,1-Dichloroethane        | 50            | 51.3        | 103      | 70-130 |
| 107-06-2 | 1,2-Dichloroethane        | 50            | 54.6        | 109      | 70-130 |
| 75-35-4  | 1,1-Dichloroethene        | 50            | 47.4        | 95       | 70-130 |
| 156-59-2 | cis-1,2-Dichloroethene    | 50            | 49.8        | 100      | 70-130 |
| 156-60-5 | trans-1,2-Dichloroethene  | 50            | 50.6        | 101      | 70-130 |
| 78-87-5  | 1,2-Dichloropropane       | 50            | 50.0        | 100      | 70-130 |
| 142-28-9 | 1,3-Dichloropropane       | 50            | 51.8        | 104      | 70-130 |
| 594-20-7 | 2,2-Dichloropropane       | 50            | 45.8        | 92       | 70-130 |
| 563-58-6 | 1,1-Dichloropropene       | 50            | 52.8        | 106      | 70-130 |

\* = Outside of Control Limits.



# Blank Spike Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2937-BS | N78244.D | 1  | 07/16/13 | JB | n/a       | n/a        | MSN2937          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-2, MC22534-7

| CAS No.    | Compound                    | Spike ug/l | BSP ug/l | BSP % | Limits |
|------------|-----------------------------|------------|----------|-------|--------|
| 10061-01-5 | cis-1,3-Dichloropropene     | 50         | 46.1     | 92    | 70-130 |
| 10061-02-6 | trans-1,3-Dichloropropene   | 50         | 48.5     | 97    | 70-130 |
| 123-91-1   | 1,4-Dioxane                 | 250        | 237      | 95    | 70-130 |
| 97-63-2    | Ethyl methacrylate          | 50         | 49.8     | 100   | 77-137 |
| 100-41-4   | Ethylbenzene                | 50         | 49.9     | 100   | 70-130 |
| 87-68-3    | Hexachlorobutadiene         | 50         | 51.6     | 103   | 70-130 |
| 591-78-6   | 2-Hexanone                  | 50         | 41.2     | 82    | 70-130 |
| 98-82-8    | Isopropylbenzene            | 50         | 51.8     | 104   | 70-130 |
| 99-87-6    | p-Isopropyltoluene          | 50         | 53.4     | 107   | 70-130 |
| 1634-04-4  | Methyl Tert Butyl Ether     | 50         | 48.3     | 97    | 70-130 |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | 50         | 48.5     | 97    | 70-130 |
| 74-95-3    | Methylene bromide           | 50         | 53.4     | 107   | 70-130 |
| 75-09-2    | Methylene chloride          | 50         | 49.1     | 98    | 70-130 |
| 91-20-3    | Naphthalene                 | 50         | 50.9     | 102   | 70-130 |
| 103-65-1   | n-Propylbenzene             | 50         | 51.1     | 102   | 70-130 |
| 100-42-5   | Styrene                     | 50         | 49.2     | 98    | 70-130 |
| 630-20-6   | 1,1,1,2-Tetrachloroethane   | 50         | 49.9     | 100   | 70-130 |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | 50         | 50.1     | 100   | 70-130 |
| 127-18-4   | Tetrachloroethene           | 50         | 51.1     | 102   | 70-130 |
| 108-88-3   | Toluene                     | 50         | 53.0     | 106   | 70-130 |
| 87-61-6    | 1,2,3-Trichlorobenzene      | 50         | 54.2     | 108   | 70-130 |
| 120-82-1   | 1,2,4-Trichlorobenzene      | 50         | 53.4     | 107   | 70-130 |
| 71-55-6    | 1,1,1-Trichloroethane       | 50         | 51.9     | 104   | 70-130 |
| 79-00-5    | 1,1,2-Trichloroethane       | 50         | 53.4     | 107   | 70-130 |
| 79-01-6    | Trichloroethene             | 50         | 51.5     | 103   | 70-130 |
| 75-69-4    | Trichlorofluoromethane      | 50         | 46.2     | 92    | 70-130 |
| 96-18-4    | 1,2,3-Trichloropropane      | 50         | 46.5     | 93    | 70-130 |
| 95-63-6    | 1,2,4-Trimethylbenzene      | 50         | 48.8     | 98    | 70-130 |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 50         | 47.3     | 95    | 70-130 |
| 108-05-4   | Vinyl Acetate               | 50         | 31.9     | 64* a | 70-130 |
| 75-01-4    | Vinyl chloride              | 50         | 38.0     | 76    | 70-130 |
|            | m,p-Xylene                  | 100        | 106      | 106   | 70-130 |
| 95-47-6    | o-Xylene                    | 50         | 56.6     | 113   | 70-130 |
| 1330-20-7  | Xylene (total)              | 150        | 163      | 109   | 70-130 |

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22534  
Account: SHELLWIC Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2937-BS | N78244.D | 1  | 07/16/13 | JB | n/a       | n/a        | MSN2937          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-2, MC22534-7

| CAS No.   | Surrogate Recoveries | BSP  | Limits  |
|-----------|----------------------|------|---------|
| 1868-53-7 | Dibromofluoromethane | 92%  | 70-130% |
| 2037-26-5 | Toluene-D8           | 101% | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 92%  | 70-130% |

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

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2937-BS1 | N78295.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2937          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-6

| CAS No.  | Compound                  | Spike ug/l | BSP ug/l | BSP %  | Limits |
|----------|---------------------------|------------|----------|--------|--------|
| 67-64-1  | Acetone                   | 50         | 42.2     | 84     | 70-130 |
| 107-02-8 | Acrolein                  | 250        | 378      | 151* a | 70-130 |
| 107-13-1 | Acrylonitrile             | 50         | 48.0     | 96     | 70-130 |
| 71-43-2  | Benzene                   | 50         | 53.4     | 107    | 70-130 |
| 108-86-1 | Bromobenzene              | 50         | 52.0     | 104    | 70-130 |
| 74-97-5  | Bromochloromethane        | 50         | 52.5     | 105    | 70-130 |
| 75-27-4  | Bromodichloromethane      | 50         | 56.2     | 112    | 70-130 |
| 75-25-2  | Bromoform                 | 50         | 42.9     | 86     | 70-130 |
| 74-83-9  | Bromomethane              | 50         | 51.6     | 103    | 70-130 |
| 78-93-3  | 2-Butanone (MEK)          | 50         | 43.1     | 86     | 70-130 |
| 104-51-8 | n-Butylbenzene            | 50         | 53.8     | 108    | 70-130 |
| 135-98-8 | sec-Butylbenzene          | 50         | 57.1     | 114    | 70-130 |
| 98-06-6  | tert-Butylbenzene         | 50         | 56.0     | 112    | 70-130 |
| 75-15-0  | Carbon disulfide          | 50         | 51.4     | 103    | 70-130 |
| 56-23-5  | Carbon tetrachloride      | 50         | 49.8     | 100    | 70-130 |
| 108-90-7 | Chlorobenzene             | 50         | 53.3     | 107    | 70-130 |
| 75-00-3  | Chloroethane              | 50         | 52.1     | 104    | 70-130 |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50         | 52.7     | 105    | 70-130 |
| 67-66-3  | Chloroform                | 50         | 53.4     | 107    | 70-130 |
| 74-87-3  | Chloromethane             | 50         | 54.4     | 109    | 70-130 |
| 95-49-8  | o-Chlorotoluene           | 50         | 54.0     | 108    | 70-130 |
| 106-43-4 | p-Chlorotoluene           | 50         | 56.9     | 114    | 70-130 |
| 124-48-1 | Dibromochloromethane      | 50         | 46.3     | 93     | 70-130 |
| 95-50-1  | 1,2-Dichlorobenzene       | 50         | 57.6     | 115    | 70-130 |
| 541-73-1 | 1,3-Dichlorobenzene       | 50         | 54.3     | 109    | 70-130 |
| 106-46-7 | 1,4-Dichlorobenzene       | 50         | 54.6     | 109    | 70-130 |
| 75-71-8  | Dichlorodifluoromethane   | 50         | 49.7     | 99     | 70-130 |
| 75-34-3  | 1,1-Dichloroethane        | 50         | 53.7     | 107    | 70-130 |
| 107-06-2 | 1,2-Dichloroethane        | 50         | 55.9     | 112    | 70-130 |
| 75-35-4  | 1,1-Dichloroethene        | 50         | 53.5     | 107    | 70-130 |
| 156-59-2 | cis-1,2-Dichloroethene    | 50         | 50.4     | 101    | 70-130 |
| 156-60-5 | trans-1,2-Dichloroethene  | 50         | 52.3     | 105    | 70-130 |
| 78-87-5  | 1,2-Dichloropropane       | 50         | 52.8     | 106    | 70-130 |
| 142-28-9 | 1,3-Dichloropropane       | 50         | 50.0     | 100    | 70-130 |
| 594-20-7 | 2,2-Dichloropropane       | 50         | 47.3     | 95     | 70-130 |
| 563-58-6 | 1,1-Dichloropropene       | 50         | 56.0     | 112    | 70-130 |

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2937-BS1 | N78295.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2937          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-6

| CAS No.    | Compound                    | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | Limits |
|------------|-----------------------------|---------------|-------------|----------|--------|
| 10061-01-5 | cis-1,3-Dichloropropene     | 50            | 43.7        | 87       | 70-130 |
| 10061-02-6 | trans-1,3-Dichloropropene   | 50            | 43.8        | 88       | 70-130 |
| 123-91-1   | 1,4-Dioxane                 | 250           | 226         | 90       | 70-130 |
| 97-63-2    | Ethyl methacrylate          | 50            | 48.0        | 96       | 77-137 |
| 100-41-4   | Ethylbenzene                | 50            | 50.9        | 102      | 70-130 |
| 87-68-3    | Hexachlorobutadiene         | 50            | 52.2        | 104      | 70-130 |
| 591-78-6   | 2-Hexanone                  | 50            | 43.9        | 88       | 70-130 |
| 98-82-8    | Isopropylbenzene            | 50            | 55.3        | 111      | 70-130 |
| 99-87-6    | p-Isopropyltoluene          | 50            | 56.5        | 113      | 70-130 |
| 1634-04-4  | Methyl Tert Butyl Ether     | 50            | 41.2        | 82       | 70-130 |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | 50            | 48.5        | 97       | 70-130 |
| 74-95-3    | Methylene bromide           | 50            | 53.4        | 107      | 70-130 |
| 75-09-2    | Methylene chloride          | 50            | 50.1        | 100      | 70-130 |
| 91-20-3    | Naphthalene                 | 50            | 42.6        | 85       | 70-130 |
| 103-65-1   | n-Propylbenzene             | 50            | 55.0        | 110      | 70-130 |
| 100-42-5   | Styrene                     | 50            | 47.8        | 96       | 70-130 |
| 630-20-6   | 1,1,1,2-Tetrachloroethane   | 50            | 48.3        | 97       | 70-130 |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | 50            | 50.1        | 100      | 70-130 |
| 127-18-4   | Tetrachloroethene           | 50            | 53.1        | 106      | 70-130 |
| 108-88-3   | Toluene                     | 50            | 54.1        | 108      | 70-130 |
| 87-61-6    | 1,2,3-Trichlorobenzene      | 50            | 50.1        | 100      | 70-130 |
| 120-82-1   | 1,2,4-Trichlorobenzene      | 50            | 50.3        | 101      | 70-130 |
| 71-55-6    | 1,1,1-Trichloroethane       | 50            | 52.4        | 105      | 70-130 |
| 79-00-5    | 1,1,2-Trichloroethane       | 50            | 53.2        | 106      | 70-130 |
| 79-01-6    | Trichloroethene             | 50            | 55.2        | 110      | 70-130 |
| 75-69-4    | Trichlorofluoromethane      | 50            | 53.5        | 107      | 70-130 |
| 96-18-4    | 1,2,3-Trichloropropane      | 50            | 44.2        | 88       | 70-130 |
| 95-63-6    | 1,2,4-Trimethylbenzene      | 50            | 51.4        | 103      | 70-130 |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 50            | 50.8        | 102      | 70-130 |
| 108-05-4   | Vinyl Acetate               | 50            | 39.9        | 80       | 70-130 |
| 75-01-4    | Vinyl chloride              | 50            | 41.1        | 82       | 70-130 |
|            | m,p-Xylene                  | 100           | 105         | 105      | 70-130 |
| 95-47-6    | o-Xylene                    | 50            | 56.8        | 114      | 70-130 |
| 1330-20-7  | Xylene (total)              | 150           | 162         | 108      | 70-130 |

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22534  
Account: SHELLWIC Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2937-BS1 | N78295.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2937          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-6

| CAS No.   | Surrogate Recoveries | BSP  | Limits  |
|-----------|----------------------|------|---------|
| 1868-53-7 | Dibromofluoromethane | 94%  | 70-130% |
| 2037-26-5 | Toluene-D8           | 103% | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 92%  | 70-130% |

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

\* = Outside of Control Limits.

# Blank Spike/Blank Spike Duplicate Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2939-BS  | N78295.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |
| MSN2939-BSD | N78296.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-1, MC22534-3, MC22534-4, MC22534-5

| CAS No.  | Compound                  | Spike ug/l | BSP ug/l | BSP %  | BSD ug/l | BSD %  | RPD | Limits Rec/RPD |
|----------|---------------------------|------------|----------|--------|----------|--------|-----|----------------|
| 67-64-1  | Acetone                   | 50         | 42.2     | 84     | 49.4     | 99     | 16  | 70-130/25      |
| 107-02-8 | Acrolein                  | 250        | 378      | 151* a | 388      | 155* a | 3   | 70-130/25      |
| 107-13-1 | Acrylonitrile             | 50         | 48.0     | 96     | 48.5     | 97     | 1   | 70-130/25      |
| 71-43-2  | Benzene                   | 50         | 53.4     | 107    | 52.6     | 105    | 2   | 70-130/25      |
| 108-86-1 | Bromobenzene              | 50         | 52.0     | 104    | 51.5     | 103    | 1   | 70-130/25      |
| 74-97-5  | Bromochloromethane        | 50         | 52.5     | 105    | 52.0     | 104    | 1   | 70-130/25      |
| 75-27-4  | Bromodichloromethane      | 50         | 56.2     | 112    | 55.5     | 111    | 1   | 70-130/25      |
| 75-25-2  | Bromoform                 | 50         | 42.9     | 86     | 44.0     | 88     | 3   | 70-130/25      |
| 74-83-9  | Bromomethane              | 50         | 51.6     | 103    | 54.0     | 108    | 5   | 70-130/25      |
| 78-93-3  | 2-Butanone (MEK)          | 50         | 43.1     | 86     | 49.2     | 98     | 13  | 70-130/25      |
| 104-51-8 | n-Butylbenzene            | 50         | 53.8     | 108    | 51.9     | 104    | 4   | 70-130/25      |
| 135-98-8 | sec-Butylbenzene          | 50         | 57.1     | 114    | 55.9     | 112    | 2   | 70-130/25      |
| 98-06-6  | tert-Butylbenzene         | 50         | 56.0     | 112    | 54.2     | 108    | 3   | 70-130/25      |
| 75-15-0  | Carbon disulfide          | 50         | 51.4     | 103    | 51.0     | 102    | 1   | 70-130/25      |
| 56-23-5  | Carbon tetrachloride      | 50         | 49.8     | 100    | 49.5     | 99     | 1   | 70-130/25      |
| 108-90-7 | Chlorobenzene             | 50         | 53.3     | 107    | 53.7     | 107    | 1   | 70-130/25      |
| 75-00-3  | Chloroethane              | 50         | 52.1     | 104    | 51.6     | 103    | 1   | 70-130/25      |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50         | 52.7     | 105    | 50.3     | 101    | 5   | 70-130/25      |
| 67-66-3  | Chloroform                | 50         | 53.4     | 107    | 53.3     | 107    | 0   | 70-130/25      |
| 74-87-3  | Chloromethane             | 50         | 54.4     | 109    | 55.5     | 111    | 2   | 70-130/25      |
| 95-49-8  | o-Chlorotoluene           | 50         | 54.0     | 108    | 53.0     | 106    | 2   | 70-130/25      |
| 106-43-4 | p-Chlorotoluene           | 50         | 56.9     | 114    | 55.3     | 111    | 3   | 70-130/25      |
| 124-48-1 | Dibromochloromethane      | 50         | 46.3     | 93     | 46.4     | 93     | 0   | 70-130/25      |
| 95-50-1  | 1,2-Dichlorobenzene       | 50         | 57.6     | 115    | 55.5     | 111    | 4   | 70-130/25      |
| 541-73-1 | 1,3-Dichlorobenzene       | 50         | 54.3     | 109    | 52.6     | 105    | 3   | 70-130/25      |
| 106-46-7 | 1,4-Dichlorobenzene       | 50         | 54.6     | 109    | 52.5     | 105    | 4   | 70-130/25      |
| 75-71-8  | Dichlorodifluoromethane   | 50         | 49.7     | 99     | 48.1     | 96     | 3   | 70-130/25      |
| 75-34-3  | 1,1-Dichloroethane        | 50         | 53.7     | 107    | 53.1     | 106    | 1   | 70-130/25      |
| 107-06-2 | 1,2-Dichloroethane        | 50         | 55.9     | 112    | 54.4     | 109    | 3   | 70-130/25      |
| 75-35-4  | 1,1-Dichloroethene        | 50         | 53.5     | 107    | 52.7     | 105    | 2   | 70-130/25      |
| 156-59-2 | cis-1,2-Dichloroethene    | 50         | 50.4     | 101    | 49.9     | 100    | 1   | 70-130/25      |
| 156-60-5 | trans-1,2-Dichloroethene  | 50         | 52.3     | 105    | 52.1     | 104    | 0   | 70-130/25      |
| 78-87-5  | 1,2-Dichloropropane       | 50         | 52.8     | 106    | 50.5     | 101    | 4   | 70-130/25      |
| 142-28-9 | 1,3-Dichloropropane       | 50         | 50.0     | 100    | 50.1     | 100    | 0   | 70-130/25      |
| 594-20-7 | 2,2-Dichloropropane       | 50         | 47.3     | 95     | 45.6     | 91     | 4   | 70-130/25      |
| 563-58-6 | 1,1-Dichloropropene       | 50         | 56.0     | 112    | 56.0     | 112    | 0   | 70-130/25      |

\* = Outside of Control Limits.

# Blank Spike/Blank Spike Duplicate Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2939-BS  | N78295.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |
| MSN2939-BSD | N78296.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-1, MC22534-3, MC22534-4, MC22534-5

| CAS No.    | Compound                    | Spike ug/l | BSP ug/l | BSP % | BSD ug/l | BSD % | RPD | Limits Rec/RPD |
|------------|-----------------------------|------------|----------|-------|----------|-------|-----|----------------|
| 10061-01-5 | cis-1,3-Dichloropropene     | 50         | 43.7     | 87    | 42.9     | 86    | 2   | 70-130/25      |
| 10061-02-6 | trans-1,3-Dichloropropene   | 50         | 43.8     | 88    | 43.2     | 86    | 1   | 70-130/25      |
| 123-91-1   | 1,4-Dioxane                 | 250        | 226      | 90    | 225      | 90    | 0   | 70-130/25      |
| 97-63-2    | Ethyl methacrylate          | 50         | 48.0     | 96    | 47.3     | 95    | 1   | 77-137/25      |
| 100-41-4   | Ethylbenzene                | 50         | 50.9     | 102   | 50.6     | 101   | 1   | 70-130/25      |
| 87-68-3    | Hexachlorobutadiene         | 50         | 52.2     | 104   | 51.4     | 103   | 2   | 70-130/25      |
| 591-78-6   | 2-Hexanone                  | 50         | 43.9     | 88    | 45.9     | 92    | 4   | 70-130/25      |
| 98-82-8    | Isopropylbenzene            | 50         | 55.3     | 111   | 55.1     | 110   | 0   | 70-130/25      |
| 99-87-6    | p-Isopropyltoluene          | 50         | 56.5     | 113   | 54.7     | 109   | 3   | 70-130/25      |
| 1634-04-4  | Methyl Tert Butyl Ether     | 50         | 41.2     | 82    | 43.5     | 87    | 5   | 70-130/25      |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | 50         | 48.5     | 97    | 47.0     | 94    | 3   | 70-130/25      |
| 74-95-3    | Methylene bromide           | 50         | 53.4     | 107   | 53.4     | 107   | 0   | 70-130/25      |
| 75-09-2    | Methylene chloride          | 50         | 50.1     | 100   | 50.4     | 101   | 1   | 70-130/25      |
| 91-20-3    | Naphthalene                 | 50         | 42.6     | 85    | 43.1     | 86    | 1   | 70-130/25      |
| 103-65-1   | n-Propylbenzene             | 50         | 55.0     | 110   | 54.6     | 109   | 1   | 70-130/25      |
| 100-42-5   | Styrene                     | 50         | 47.8     | 96    | 47.9     | 96    | 0   | 70-130/25      |
| 630-20-6   | 1,1,1,2-Tetrachloroethane   | 50         | 48.3     | 97    | 48.4     | 97    | 0   | 70-130/25      |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | 50         | 50.1     | 100   | 50.9     | 102   | 2   | 70-130/25      |
| 127-18-4   | Tetrachloroethene           | 50         | 53.1     | 106   | 53.8     | 108   | 1   | 70-130/25      |
| 108-88-3   | Toluene                     | 50         | 54.1     | 108   | 54.0     | 108   | 0   | 70-130/25      |
| 87-61-6    | 1,2,3-Trichlorobenzene      | 50         | 50.1     | 100   | 49.3     | 99    | 2   | 70-130/25      |
| 120-82-1   | 1,2,4-Trichlorobenzene      | 50         | 50.3     | 101   | 51.9     | 104   | 3   | 70-130/25      |
| 71-55-6    | 1,1,1-Trichloroethane       | 50         | 52.4     | 105   | 51.8     | 104   | 1   | 70-130/25      |
| 79-00-5    | 1,1,2-Trichloroethane       | 50         | 53.2     | 106   | 53.3     | 107   | 0   | 70-130/25      |
| 79-01-6    | Trichloroethene             | 50         | 55.2     | 110   | 53.3     | 107   | 4   | 70-130/25      |
| 75-69-4    | Trichlorofluoromethane      | 50         | 53.5     | 107   | 51.4     | 103   | 4   | 70-130/25      |
| 96-18-4    | 1,2,3-Trichloropropane      | 50         | 44.2     | 88    | 45.3     | 91    | 2   | 70-130/25      |
| 95-63-6    | 1,2,4-Trimethylbenzene      | 50         | 51.4     | 103   | 50.6     | 101   | 2   | 70-130/25      |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 50         | 50.8     | 102   | 50.1     | 100   | 1   | 70-130/25      |
| 108-05-4   | Vinyl Acetate               | 50         | 39.9     | 80    | 39.7     | 79    | 1   | 70-130/25      |
| 75-01-4    | Vinyl chloride              | 50         | 41.1     | 82    | 41.3     | 83    | 0   | 70-130/25      |
|            | m,p-Xylene                  | 100        | 105      | 105   | 106      | 106   | 1   | 70-130/25      |
| 95-47-6    | o-Xylene                    | 50         | 56.8     | 114   | 56.2     | 112   | 1   | 70-130/25      |
| 1330-20-7  | Xylene (total)              | 150        | 162      | 108   | 162      | 108   | 0   | 70-130/25      |

\* = Outside of Control Limits.

# Blank Spike/Blank Spike Duplicate Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2939-BS  | N78295.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |
| MSN2939-BSD | N78296.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-1, MC22534-3, MC22534-4, MC22534-5

| CAS No.   | Surrogate Recoveries | BSP  | BSD  | Limits  |
|-----------|----------------------|------|------|---------|
| 1868-53-7 | Dibromofluoromethane | 94%  | 94%  | 70-130% |
| 2037-26-5 | Toluene-D8           | 103% | 101% | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 92%  | 94%  | 70-130% |

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

\* = Outside of Control Limits.



# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22534

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|----|-----------|------------|------------------|
| MC22534-6MS  | N78265.D | 1  | 07/16/13 | JB | n/a       | n/a        | MSN2937          |
| MC22534-6MSD | N78266.D | 1  | 07/16/13 | JB | n/a       | n/a        | MSN2937          |
| MC22534-6    | N78302.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2937          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-2, MC22534-6, MC22534-7

| CAS No.  | Compound                  | MC22534-6<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|----------|---------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 67-64-1  | Acetone                   | ND                | 50         | 22.8       | 46* a   | 50            | 25.0        | 50* a    | 9   | 70-130/30         |
| 107-02-8 | Acrolein                  | ND                | 250        | 322        | 129     | 250           | 329         | 132* a   | 2   | 70-130/30         |
| 107-13-1 | Acrylonitrile             | ND                | 50         | 41.8       | 84      | 50            | 44.4        | 89       | 6   | 70-130/30         |
| 71-43-2  | Benzene                   | 0.62              | 50         | 50.2       | 99      | 50            | 50.0        | 99       | 0   | 70-130/30         |
| 108-86-1 | Bromobenzene              | ND                | 50         | 49.1       | 98      | 50            | 49.3        | 99       | 0   | 70-130/30         |
| 74-97-5  | Bromochloromethane        | ND                | 50         | 49.0       | 98      | 50            | 50.9        | 102      | 4   | 70-130/30         |
| 75-27-4  | Bromodichloromethane      | ND                | 50         | 49.3       | 99      | 50            | 50.5        | 101      | 2   | 70-130/30         |
| 75-25-2  | Bromoform                 | ND                | 50         | 40.8       | 82      | 50            | 42.7        | 85       | 5   | 70-130/30         |
| 74-83-9  | Bromomethane              | ND                | 50         | 35.3       | 71      | 50            | 47.6        | 95       | 30  | 70-130/30         |
| 78-93-3  | 2-Butanone (MEK)          | ND                | 50         | 31.6       | 63* a   | 50            | 35.1        | 70       | 10  | 70-130/30         |
| 104-51-8 | n-Butylbenzene            | ND                | 50         | 50.0       | 100     | 50            | 50.2        | 100      | 0   | 70-130/30         |
| 135-98-8 | sec-Butylbenzene          | ND                | 50         | 52.6       | 105     | 50            | 53.2        | 106      | 1   | 70-130/30         |
| 98-06-6  | tert-Butylbenzene         | ND                | 50         | 51.0       | 102     | 50            | 51.0        | 102      | 0   | 70-130/30         |
| 75-15-0  | Carbon disulfide          | ND                | 50         | 47.0       | 94      | 50            | 48.1        | 96       | 2   | 70-130/30         |
| 56-23-5  | Carbon tetrachloride      | ND                | 50         | 48.6       | 97      | 50            | 47.8        | 96       | 2   | 70-130/30         |
| 108-90-7 | Chlorobenzene             | ND                | 50         | 50.6       | 101     | 50            | 51.0        | 102      | 1   | 70-130/30         |
| 75-00-3  | Chloroethane              | ND                | 50         | 48.5       | 97      | 50            | 50.0        | 100      | 3   | 70-130/30         |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND                | 50         | 47.3       | 95      | 50            | 47.5        | 95       | 0   | 70-130/30         |
| 67-66-3  | Chloroform                | ND                | 50         | 47.8       | 96      | 50            | 48.7        | 97       | 2   | 70-130/30         |
| 74-87-3  | Chloromethane             | ND                | 50         | 44.4       | 89      | 50            | 46.8        | 94       | 5   | 70-130/30         |
| 95-49-8  | o-Chlorotoluene           | ND                | 50         | 50.0       | 100     | 50            | 50.6        | 101      | 1   | 70-130/30         |
| 106-43-4 | p-Chlorotoluene           | ND                | 50         | 52.0       | 104     | 50            | 52.4        | 105      | 1   | 70-130/30         |
| 124-48-1 | Dibromochloromethane      | ND                | 50         | 42.9       | 86      | 50            | 44.8        | 90       | 4   | 70-130/30         |
| 95-50-1  | 1,2-Dichlorobenzene       | ND                | 50         | 52.3       | 105     | 50            | 54.1        | 108      | 3   | 70-130/30         |
| 541-73-1 | 1,3-Dichlorobenzene       | ND                | 50         | 50.5       | 101     | 50            | 51.1        | 102      | 1   | 70-130/30         |
| 106-46-7 | 1,4-Dichlorobenzene       | ND                | 50         | 49.1       | 98      | 50            | 49.9        | 100      | 2   | 70-130/30         |
| 75-71-8  | Dichlorodifluoromethane   | ND                | 50         | 43.6       | 87      | 50            | 44.4        | 89       | 2   | 70-130/30         |
| 75-34-3  | 1,1-Dichloroethane        | ND                | 50         | 48.9       | 98      | 50            | 49.6        | 99       | 1   | 70-130/30         |
| 107-06-2 | 1,2-Dichloroethane        | ND                | 50         | 47.7       | 95      | 50            | 48.2        | 96       | 1   | 70-130/30         |
| 75-35-4  | 1,1-Dichloroethene        | ND                | 50         | 49.0       | 98      | 50            | 49.2        | 98       | 0   | 70-130/30         |
| 156-59-2 | cis-1,2-Dichloroethene    | ND                | 50         | 47.4       | 95      | 50            | 47.7        | 95       | 1   | 70-130/30         |
| 156-60-5 | trans-1,2-Dichloroethene  | ND                | 50         | 49.2       | 98      | 50            | 49.8        | 100      | 1   | 70-130/30         |
| 78-87-5  | 1,2-Dichloropropane       | ND                | 50         | 47.5       | 95      | 50            | 47.7        | 95       | 0   | 70-130/30         |
| 142-28-9 | 1,3-Dichloropropane       | ND                | 50         | 46.7       | 93      | 50            | 47.8        | 96       | 2   | 70-130/30         |
| 594-20-7 | 2,2-Dichloropropane       | ND                | 50         | 49.9       | 100     | 50            | 50.1        | 100      | 0   | 70-130/30         |
| 563-58-6 | 1,1-Dichloropropene       | ND                | 50         | 52.0       | 104     | 50            | 51.5        | 103      | 1   | 70-130/30         |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|----|-----------|------------|------------------|
| MC22534-6MS  | N78265.D | 1  | 07/16/13 | JB | n/a       | n/a        | MSN2937          |
| MC22534-6MSD | N78266.D | 1  | 07/16/13 | JB | n/a       | n/a        | MSN2937          |
| MC22534-6    | N78302.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2937          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-2, MC22534-6, MC22534-7

| CAS No.    | Compound                    | MC22534-6<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|------------|-----------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 10061-01-5 | cis-1,3-Dichloropropene     | ND                | 50         | 43.8       | 88      | 50            | 43.8        | 88       | 0   | 70-130/30         |
| 10061-02-6 | trans-1,3-Dichloropropene   | ND                | 50         | 44.9       | 90      | 50            | 45.9        | 92       | 2   | 70-130/30         |
| 123-91-1   | 1,4-Dioxane                 | ND                | 250        | 196        | 78      | 250           | 223         | 89       | 13  | 70-130/30         |
| 97-63-2    | Ethyl methacrylate          | ND                | 50         | 45.9       | 92      | 50            | 48.2        | 96       | 5   | 72-139/30         |
| 100-41-4   | Ethylbenzene                | ND                | 50         | 47.3       | 95      | 50            | 48.0        | 96       | 1   | 70-130/30         |
| 87-68-3    | Hexachlorobutadiene         | ND                | 50         | 45.2       | 90      | 50            | 45.9        | 92       | 2   | 70-130/30         |
| 591-78-6   | 2-Hexanone                  | ND                | 50         | 33.9       | 68* a   | 50            | 37.1        | 74       | 9   | 70-130/30         |
| 98-82-8    | Isopropylbenzene            | ND                | 50         | 52.4       | 105     | 50            | 52.1        | 104      | 1   | 70-130/30         |
| 99-87-6    | p-Isopropyltoluene          | ND                | 50         | 51.3       | 103     | 50            | 52.1        | 104      | 2   | 70-130/30         |
| 1634-04-4  | Methyl Tert Butyl Ether     | ND                | 50         | 43.3       | 87      | 50            | 45.4        | 91       | 5   | 70-130/30         |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | ND                | 50         | 40.3       | 81      | 50            | 42.9        | 86       | 6   | 70-130/30         |
| 74-95-3    | Methylene bromide           | ND                | 50         | 46.6       | 93      | 50            | 47.3        | 95       | 1   | 70-130/30         |
| 75-09-2    | Methylene chloride          | ND                | 50         | 46.8       | 94      | 50            | 48.3        | 97       | 3   | 70-130/30         |
| 91-20-3    | Naphthalene                 | ND                | 50         | 43.7       | 87      | 50            | 47.8        | 96       | 9   | 70-130/30         |
| 103-65-1   | n-Propylbenzene             | ND                | 50         | 51.6       | 103     | 50            | 52.2        | 104      | 1   | 70-130/30         |
| 100-42-5   | Styrene                     | ND                | 50         | 45.2       | 90      | 50            | 46.2        | 92       | 2   | 70-130/30         |
| 630-20-6   | 1,1,1,2-Tetrachloroethane   | ND                | 50         | 44.8       | 90      | 50            | 46.6        | 93       | 4   | 70-130/30         |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | ND                | 50         | 46.9       | 94      | 50            | 48.7        | 97       | 4   | 70-130/30         |
| 127-18-4   | Tetrachloroethene           | ND                | 50         | 50.3       | 101     | 50            | 51.1        | 102      | 2   | 70-130/30         |
| 108-88-3   | Toluene                     | ND                | 50         | 49.4       | 99      | 50            | 49.6        | 99       | 0   | 70-130/30         |
| 87-61-6    | 1,2,3-Trichlorobenzene      | ND                | 50         | 47.3       | 95      | 50            | 49.9        | 100      | 5   | 70-130/30         |
| 120-82-1   | 1,2,4-Trichlorobenzene      | ND                | 50         | 48.6       | 97      | 50            | 51.2        | 102      | 5   | 70-130/30         |
| 71-55-6    | 1,1,1-Trichloroethane       | ND                | 50         | 47.6       | 95      | 50            | 48.2        | 96       | 1   | 70-130/30         |
| 79-00-5    | 1,1,2-Trichloroethane       | ND                | 50         | 48.2       | 96      | 50            | 49.8        | 100      | 3   | 70-130/30         |
| 79-01-6    | Trichloroethene             | ND                | 50         | 47.8       | 96      | 50            | 48.4        | 97       | 1   | 70-130/30         |
| 75-69-4    | Trichlorofluoromethane      | ND                | 50         | 45.5       | 91      | 50            | 46.1        | 92       | 1   | 70-130/30         |
| 96-18-4    | 1,2,3-Trichloropropane      | ND                | 50         | 44.4       | 89      | 50            | 46.7        | 93       | 5   | 70-130/30         |
| 95-63-6    | 1,2,4-Trimethylbenzene      | ND                | 50         | 47.2       | 94      | 50            | 48.0        | 96       | 2   | 70-130/30         |
| 108-67-8   | 1,3,5-Trimethylbenzene      | ND                | 50         | 47.1       | 94      | 50            | 47.2        | 94       | 0   | 70-130/30         |
| 108-05-4   | Vinyl Acetate               | ND                | 50         | 33.9       | 68* a   | 50            | 35.3        | 71       | 4   | 70-130/30         |
| 75-01-4    | Vinyl chloride              | ND                | 50         | 38.2       | 76      | 50            | 39.5        | 79       | 3   | 70-130/30         |
|            | m,p-Xylene                  | ND                | 100        | 100        | 100     | 100           | 101         | 101      | 1   | 70-130/30         |
| 95-47-6    | o-Xylene                    | ND                | 50         | 53.3       | 107     | 50            | 53.4        | 107      | 0   | 70-130/30         |
| 1330-20-7  | Xylene (total)              | ND                | 150        | 153        | 102     | 150           | 155         | 103      | 1   | 70-130/30         |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|----|-----------|------------|------------------|
| MC22534-6MS  | N78265.D | 1  | 07/16/13 | JB | n/a       | n/a        | MSN2937          |
| MC22534-6MSD | N78266.D | 1  | 07/16/13 | JB | n/a       | n/a        | MSN2937          |
| MC22534-6    | N78302.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2937          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-2, MC22534-6, MC22534-7

| CAS No.   | Surrogate Recoveries | MS   | MSD | MC22534-6 | Limits  |
|-----------|----------------------|------|-----|-----------|---------|
| 1868-53-7 | Dibromofluoromethane | 91%  | 91% | 95%       | 70-130% |
| 2037-26-5 | Toluene-D8           | 100% | 99% | 101%      | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 94%  | 94% | 105%      | 70-130% |

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

\* = Outside of Control Limits.

6.4.1  
6

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|----|-----------|------------|------------------|
| MC22559-1MS  | N78318.D | 5  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |
| MC22559-1MSD | N78319.D | 5  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |
| MC22559-1    | N78301.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-1, MC22534-3, MC22534-4, MC22534-5

| CAS No.  | Compound                  | MC22559-1<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|----------|---------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 67-64-1  | Acetone                   | ND                | 250        | 144        | 58* a   | 250           | 140         | 56* a    | 3   | 70-130/30         |
| 107-02-8 | Acrolein                  | ND                | 1250       | 1770       | 142* a  | 1250          | 1710        | 137* a   | 3   | 70-130/30         |
| 107-13-1 | Acrylonitrile             | ND                | 250        | 246        | 98      | 250           | 243         | 97       | 1   | 70-130/30         |
| 71-43-2  | Benzene                   | ND                | 250        | 262        | 105     | 250           | 262         | 105      | 0   | 70-130/30         |
| 108-86-1 | Bromobenzene              | ND                | 250        | 255        | 102     | 250           | 254         | 102      | 0   | 70-130/30         |
| 74-97-5  | Bromochloromethane        | ND                | 250        | 261        | 104     | 250           | 260         | 104      | 0   | 70-130/30         |
| 75-27-4  | Bromodichloromethane      | ND                | 250        | 280        | 112     | 250           | 282         | 113      | 1   | 70-130/30         |
| 75-25-2  | Bromoform                 | ND                | 250        | 214        | 86      | 250           | 216         | 86       | 1   | 70-130/30         |
| 74-83-9  | Bromomethane              | ND                | 250        | 277        | 111     | 250           | 304         | 122      | 9   | 70-130/30         |
| 78-93-3  | 2-Butanone (MEK)          | ND                | 250        | 163        | 65* a   | 250           | 172         | 69* a    | 5   | 70-130/30         |
| 104-51-8 | n-Butylbenzene            | ND                | 250        | 238        | 95      | 250           | 241         | 96       | 1   | 70-130/30         |
| 135-98-8 | sec-Butylbenzene          | ND                | 250        | 279        | 112     | 250           | 277         | 111      | 1   | 70-130/30         |
| 98-06-6  | tert-Butylbenzene         | ND                | 250        | 277        | 111     | 250           | 274         | 110      | 1   | 70-130/30         |
| 75-15-0  | Carbon disulfide          | ND                | 250        | 247        | 99      | 250           | 241         | 96       | 2   | 70-130/30         |
| 56-23-5  | Carbon tetrachloride      | ND                | 250        | 253        | 101     | 250           | 263         | 105      | 4   | 70-130/30         |
| 108-90-7 | Chlorobenzene             | ND                | 250        | 265        | 106     | 250           | 262         | 105      | 1   | 70-130/30         |
| 75-00-3  | Chloroethane              | ND                | 250        | 248        | 99      | 250           | 241         | 96       | 3   | 70-130/30         |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND                | 250        | 254        | 102     | 250           | 254         | 102      | 0   | 70-130/30         |
| 67-66-3  | Chloroform                | 9.1               | 250        | 281        | 109     | 250           | 273         | 106      | 3   | 70-130/30         |
| 74-87-3  | Chloromethane             | ND                | 250        | 263        | 105     | 250           | 273         | 109      | 4   | 70-130/30         |
| 95-49-8  | o-Chlorotoluene           | ND                | 250        | 264        | 106     | 250           | 262         | 105      | 1   | 70-130/30         |
| 106-43-4 | p-Chlorotoluene           | ND                | 250        | 277        | 111     | 250           | 276         | 110      | 0   | 70-130/30         |
| 124-48-1 | Dibromochloromethane      | ND                | 250        | 227        | 91      | 250           | 226         | 90       | 0   | 70-130/30         |
| 95-50-1  | 1,2-Dichlorobenzene       | ND                | 250        | 273        | 109     | 250           | 274         | 110      | 0   | 70-130/30         |
| 541-73-1 | 1,3-Dichlorobenzene       | ND                | 250        | 261        | 104     | 250           | 264         | 106      | 1   | 70-130/30         |
| 106-46-7 | 1,4-Dichlorobenzene       | ND                | 250        | 256        | 102     | 250           | 255         | 102      | 0   | 70-130/30         |
| 75-71-8  | Dichlorodifluoromethane   | ND                | 250        | 230        | 92      | 250           | 221         | 88       | 4   | 70-130/30         |
| 75-34-3  | 1,1-Dichloroethane        | ND                | 250        | 269        | 108     | 250           | 264         | 106      | 2   | 70-130/30         |
| 107-06-2 | 1,2-Dichloroethane        | ND                | 250        | 281        | 112     | 250           | 274         | 110      | 3   | 70-130/30         |
| 75-35-4  | 1,1-Dichloroethene        | ND                | 250        | 264        | 106     | 250           | 252         | 101      | 5   | 70-130/30         |
| 156-59-2 | cis-1,2-Dichloroethene    | ND                | 250        | 253        | 101     | 250           | 248         | 99       | 2   | 70-130/30         |
| 156-60-5 | trans-1,2-Dichloroethene  | ND                | 250        | 265        | 106     | 250           | 258         | 103      | 3   | 70-130/30         |
| 78-87-5  | 1,2-Dichloropropane       | ND                | 250        | 254        | 102     | 250           | 255         | 102      | 0   | 70-130/30         |
| 142-28-9 | 1,3-Dichloropropane       | ND                | 250        | 245        | 98      | 250           | 246         | 98       | 0   | 70-130/30         |
| 594-20-7 | 2,2-Dichloropropane       | ND                | 250        | 202        | 81      | 250           | 212         | 85       | 5   | 70-130/30         |
| 563-58-6 | 1,1-Dichloropropene       | ND                | 250        | 280        | 112     | 250           | 276         | 110      | 1   | 70-130/30         |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|----|-----------|------------|------------------|
| MC22559-1MS  | N78318.D | 5  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |
| MC22559-1MSD | N78319.D | 5  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |
| MC22559-1    | N78301.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-1, MC22534-3, MC22534-4, MC22534-5

| CAS No.    | Compound                    | MC22559-1<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|------------|-----------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 10061-01-5 | cis-1,3-Dichloropropene     | ND                | 250        | 203        | 81      | 250           | 208         | 83       | 2   | 70-130/30         |
| 10061-02-6 | trans-1,3-Dichloropropene   | ND                | 250        | 204        | 82      | 250           | 208         | 83       | 2   | 70-130/30         |
| 123-91-1   | 1,4-Dioxane                 | ND                | 1250       | 1060       | 85      | 1250          | 1050        | 84       | 1   | 70-130/30         |
| 97-63-2    | Ethyl methacrylate          | ND                | 250        | 222        | 89      | 250           | 224         | 90       | 1   | 72-139/30         |
| 100-41-4   | Ethylbenzene                | ND                | 250        | 252        | 101     | 250           | 248         | 99       | 2   | 70-130/30         |
| 87-68-3    | Hexachlorobutadiene         | ND                | 250        | 238        | 95      | 250           | 248         | 99       | 4   | 70-130/30         |
| 591-78-6   | 2-Hexanone                  | ND                | 250        | 180        | 72      | 250           | 183         | 73       | 2   | 70-130/30         |
| 98-82-8    | Isopropylbenzene            | ND                | 250        | 277        | 111     | 250           | 273         | 109      | 1   | 70-130/30         |
| 99-87-6    | p-Isopropyltoluene          | ND                | 250        | 269        | 108     | 250           | 266         | 106      | 1   | 70-130/30         |
| 1634-04-4  | Methyl Tert Butyl Ether     | ND                | 250        | 215        | 86      | 250           | 222         | 89       | 3   | 70-130/30         |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | ND                | 250        | 231        | 92      | 250           | 233         | 93       | 1   | 70-130/30         |
| 74-95-3    | Methylene bromide           | ND                | 250        | 261        | 104     | 250           | 264         | 106      | 1   | 70-130/30         |
| 75-09-2    | Methylene chloride          | ND                | 250        | 256        | 102     | 250           | 250         | 100      | 2   | 70-130/30         |
| 91-20-3    | Naphthalene                 | ND                | 250        | 174        | 70      | 250           | 191         | 76       | 9   | 70-130/30         |
| 103-65-1   | n-Propylbenzene             | ND                | 250        | 273        | 109     | 250           | 267         | 107      | 2   | 70-130/30         |
| 100-42-5   | Styrene                     | ND                | 250        | 234        | 94      | 250           | 231         | 92       | 1   | 70-130/30         |
| 630-20-6   | 1,1,1,2-Tetrachloroethane   | ND                | 250        | 242        | 97      | 250           | 239         | 96       | 1   | 70-130/30         |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | ND                | 250        | 248        | 99      | 250           | 242         | 97       | 2   | 70-130/30         |
| 127-18-4   | Tetrachloroethene           | ND                | 250        | 267        | 107     | 250           | 260         | 104      | 3   | 70-130/30         |
| 108-88-3   | Toluene                     | ND                | 250        | 284        | 114     | 250           | 284         | 114      | 0   | 70-130/30         |
| 87-61-6    | 1,2,3-Trichlorobenzene      | ND                | 250        | 211        | 84      | 250           | 230         | 92       | 9   | 70-130/30         |
| 120-82-1   | 1,2,4-Trichlorobenzene      | ND                | 250        | 220        | 88      | 250           | 228         | 91       | 4   | 70-130/30         |
| 71-55-6    | 1,1,1-Trichloroethane       | ND                | 250        | 258        | 103     | 250           | 263         | 105      | 2   | 70-130/30         |
| 79-00-5    | 1,1,2-Trichloroethane       | ND                | 250        | 260        | 104     | 250           | 258         | 103      | 1   | 70-130/30         |
| 79-01-6    | Trichloroethene             | ND                | 250        | 264        | 106     | 250           | 265         | 106      | 0   | 70-130/30         |
| 75-69-4    | Trichlorofluoromethane      | ND                | 250        | 259        | 104     | 250           | 253         | 101      | 2   | 70-130/30         |
| 96-18-4    | 1,2,3-Trichloropropane      | ND                | 250        | 217        | 87      | 250           | 211         | 84       | 3   | 70-130/30         |
| 95-63-6    | 1,2,4-Trimethylbenzene      | ND                | 250        | 249        | 100     | 250           | 248         | 99       | 0   | 70-130/30         |
| 108-67-8   | 1,3,5-Trimethylbenzene      | ND                | 250        | 251        | 100     | 250           | 247         | 99       | 2   | 70-130/30         |
| 108-05-4   | Vinyl Acetate               | ND                | 250        | 197        | 79      | 250           | 188         | 75       | 5   | 70-130/30         |
| 75-01-4    | Vinyl chloride              | ND                | 250        | 200        | 80      | 250           | 195         | 78       | 3   | 70-130/30         |
|            | m,p-Xylene                  | ND                | 500        | 524        | 105     | 500           | 527         | 105      | 1   | 70-130/30         |
| 95-47-6    | o-Xylene                    | ND                | 250        | 279        | 112     | 250           | 276         | 110      | 1   | 70-130/30         |
| 1330-20-7  | Xylene (total)              | ND                | 750        | 803        | 107     | 750           | 803         | 107      | 0   | 70-130/30         |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|----|-----------|------------|------------------|
| MC22559-1MS  | N78318.D | 5  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |
| MC22559-1MSD | N78319.D | 5  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |
| MC22559-1    | N78301.D | 1  | 07/17/13 | JB | n/a       | n/a        | MSN2939          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22534-1, MC22534-3, MC22534-4, MC22534-5

6.4.2  
6

| CAS No.   | Surrogate Recoveries | MS   | MSD  | MC22559-1 | Limits  |
|-----------|----------------------|------|------|-----------|---------|
| 1868-53-7 | Dibromofluoromethane | 95%  | 93%  | 96%       | 70-130% |
| 2037-26-5 | Toluene-D8           | 102% | 101% | 99%       | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 96%  | 94%  | 103%      | 70-130% |

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

\* = Outside of Control Limits.

# Volatile Internal Standard Area Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSN2937-CC2927 | Injection Date: | 07/16/13    |
| Lab File ID:   | N78243.D       | Injection Time: | 03:58       |
| Instrument ID: | GCMSN          | Method:         | SW846 8260B |

|                          | IS 1   | IS 2 | IS 3   | IS 4  | IS 5   |       |        |       |        |      |
|--------------------------|--------|------|--------|-------|--------|-------|--------|-------|--------|------|
|                          | AREA   | RT   | AREA   | RT    | AREA   | RT    | AREA   | RT    | AREA   | RT   |
| Check Std                | 176762 | 9.01 | 278666 | 9.88  | 149277 | 13.13 | 135227 | 15.69 | 70792  | 6.56 |
| Upper Limit <sup>a</sup> | 353524 | 9.51 | 557332 | 10.38 | 298554 | 13.63 | 270454 | 16.19 | 141584 | 7.06 |
| Lower Limit <sup>b</sup> | 88381  | 8.51 | 139333 | 9.38  | 74639  | 12.63 | 67614  | 15.19 | 35396  | 6.06 |

| Lab          | IS 1   | IS 2 | IS 3   | IS 4 | IS 5   |       |        |       |       |      |
|--------------|--------|------|--------|------|--------|-------|--------|-------|-------|------|
| Sample ID    | AREA   | RT   | AREA   | RT   | AREA   | RT    | AREA   | RT    | AREA  | RT   |
| MSN2937-BS   | 177347 | 9.01 | 272845 | 9.87 | 145758 | 13.13 | 135569 | 15.69 | 68526 | 6.57 |
| MSN2937-MB   | 187441 | 9.01 | 280929 | 9.88 | 142350 | 13.13 | 122082 | 15.69 | 71806 | 6.58 |
| ZZZZZZ       | 178484 | 9.01 | 277711 | 9.87 | 140119 | 13.13 | 122929 | 15.69 | 67591 | 6.57 |
| ZZZZZZ       | 178730 | 9.01 | 279365 | 9.88 | 139796 | 13.13 | 119026 | 15.69 | 67258 | 6.57 |
| ZZZZZZ       | 177578 | 9.01 | 272821 | 9.88 | 139608 | 13.13 | 116507 | 15.69 | 71673 | 6.57 |
| ZZZZZZ       | 181156 | 9.01 | 279952 | 9.88 | 143535 | 13.13 | 119088 | 15.69 | 71518 | 6.57 |
| ZZZZZZ       | 178088 | 9.01 | 272065 | 9.88 | 138239 | 13.13 | 116196 | 15.69 | 68294 | 6.58 |
| ZZZZZZ       | 175160 | 9.01 | 272604 | 9.88 | 139499 | 13.13 | 116943 | 15.69 | 66184 | 6.58 |
| ZZZZZZ       | 175413 | 9.01 | 264509 | 9.88 | 137043 | 13.13 | 114226 | 15.69 | 65714 | 6.58 |
| MC22534-7    | 173972 | 9.01 | 267936 | 9.87 | 135385 | 13.13 | 114522 | 15.69 | 63482 | 6.58 |
| MC22534-2    | 177988 | 9.01 | 271492 | 9.88 | 138954 | 13.13 | 115737 | 15.69 | 67015 | 6.58 |
| ZZZZZZ       | 176750 | 9.01 | 270113 | 9.88 | 138031 | 13.13 | 113912 | 15.69 | 66779 | 6.57 |
| ZZZZZZ       | 173501 | 9.01 | 266651 | 9.88 | 151324 | 13.13 | 139653 | 15.69 | 85801 | 6.56 |
| ZZZZZZ       | 215334 | 9.01 | 327559 | 9.87 | 166069 | 13.13 | 168815 | 15.69 | 95444 | 6.56 |
| MC22534-6MS  | 222326 | 9.01 | 344582 | 9.88 | 182382 | 13.13 | 157042 | 15.69 | 77294 | 6.57 |
| MC22534-6MSD | 216725 | 9.01 | 342118 | 9.87 | 179107 | 13.13 | 156004 | 15.69 | 88224 | 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 Internal Standard Area Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSN2939-CC2927 | Injection Date: | 07/17/13    |
| Lab File ID:   | N78294.D       | Injection Time: | 08:17       |
| Instrument ID: | GCMSN          | Method:         | SW846 8260B |

|                          | IS 1   | RT   | IS 2   | RT    | IS 3   | RT    | IS 4   | RT    | IS 5   | RT   |
|--------------------------|--------|------|--------|-------|--------|-------|--------|-------|--------|------|
|                          | AREA   |      | AREA   |       | AREA   |       | AREA   |       | AREA   |      |
| Check Std                | 145057 | 9.01 | 228316 | 9.88  | 124617 | 13.13 | 108642 | 15.69 | 68668  | 6.56 |
| Upper Limit <sup>a</sup> | 290114 | 9.51 | 456632 | 10.38 | 249234 | 13.63 | 217284 | 16.19 | 137336 | 7.06 |
| Lower Limit <sup>b</sup> | 72529  | 8.51 | 114158 | 9.38  | 62309  | 12.63 | 54321  | 15.19 | 34334  | 6.06 |

| Lab          | IS 1   | RT   | IS 2   | RT   | IS 3   | RT    | IS 4   | RT    | IS 5  | RT   |
|--------------|--------|------|--------|------|--------|-------|--------|-------|-------|------|
| Sample ID    | AREA   |      | AREA   |      | AREA   |       | AREA   |       | AREA  |      |
| MSN2937-BS1  | 174076 | 9.01 | 266327 | 9.88 | 146503 | 13.13 | 127714 | 15.69 | 70275 | 6.57 |
| MSN2939-BS   | 174076 | 9.01 | 266327 | 9.88 | 146503 | 13.13 | 127714 | 15.69 | 70275 | 6.57 |
| MSN2939-BSD  | 182577 | 9.01 | 284110 | 9.87 | 152743 | 13.13 | 132142 | 15.69 | 74802 | 6.57 |
| MSN2937-MB1  | 162220 | 9.01 | 254521 | 9.88 | 127646 | 13.13 | 99734  | 15.69 | 62973 | 6.58 |
| MSN2939-MB   | 162220 | 9.01 | 254521 | 9.88 | 127646 | 13.13 | 99734  | 15.69 | 62973 | 6.58 |
| ZZZZZZ       | 173587 | 9.01 | 266472 | 9.88 | 136158 | 13.13 | 112836 | 15.69 | 62564 | 6.58 |
| ZZZZZZ       | 180942 | 9.01 | 271354 | 9.88 | 137014 | 13.13 | 111260 | 15.69 | 71713 | 6.58 |
| MC22559-1    | 169389 | 9.01 | 267462 | 9.88 | 137067 | 13.13 | 109657 | 15.69 | 69290 | 6.58 |
| MC22534-6    | 151773 | 9.01 | 232478 | 9.88 | 117960 | 13.13 | 92592  | 15.69 | 64349 | 6.58 |
| MC22534-1    | 171908 | 9.01 | 267874 | 9.88 | 136528 | 13.13 | 108624 | 15.69 | 66583 | 6.57 |
| MC22534-3    | 168247 | 9.01 | 257796 | 9.88 | 127761 | 13.13 | 103688 | 15.69 | 65739 | 6.58 |
| MC22534-4    | 169469 | 9.01 | 256044 | 9.88 | 131275 | 13.13 | 105961 | 15.69 | 65244 | 6.58 |
| MC22534-5    | 165683 | 9.01 | 252866 | 9.88 | 130880 | 13.13 | 103583 | 15.69 | 65531 | 6.58 |
| ZZZZZZ       | 169885 | 9.01 | 261944 | 9.87 | 133060 | 13.13 | 108399 | 15.69 | 66594 | 6.58 |
| ZZZZZZ       | 164255 | 9.01 | 253282 | 9.88 | 130708 | 13.13 | 105979 | 15.69 | 64027 | 6.57 |
| ZZZZZZ       | 169296 | 9.01 | 258112 | 9.88 | 132598 | 13.13 | 100533 | 15.69 | 68087 | 6.58 |
| ZZZZZZ       | 145000 | 9.01 | 221376 | 9.88 | 115016 | 13.13 | 87805  | 15.69 | 61278 | 6.59 |
| ZZZZZZ       | 168124 | 9.01 | 257100 | 9.88 | 129421 | 13.13 | 100582 | 15.69 | 60490 | 6.59 |
| ZZZZZZ       | 165941 | 9.01 | 254996 | 9.88 | 127686 | 13.13 | 100903 | 15.69 | 57137 | 6.58 |
| ZZZZZZ       | 164210 | 9.01 | 257299 | 9.88 | 129905 | 13.13 | 99449  | 15.69 | 65859 | 6.58 |
| ZZZZZZ       | 144863 | 9.01 | 224823 | 9.87 | 114460 | 13.13 | 90889  | 15.69 | 57253 | 6.58 |
| ZZZZZZ       | 164818 | 9.01 | 253305 | 9.88 | 129671 | 13.13 | 98754  | 15.69 | 64615 | 6.59 |
| ZZZZZZ       | 160500 | 9.01 | 249776 | 9.88 | 128150 | 13.13 | 96304  | 15.69 | 65587 | 6.58 |
| ZZZZZZ       | 159965 | 9.01 | 246780 | 9.87 | 127554 | 13.13 | 109602 | 15.69 | 69234 | 6.57 |
| MC22559-1MS  | 165242 | 9.01 | 259384 | 9.88 | 141937 | 13.13 | 121819 | 15.69 | 68958 | 6.57 |
| MC22559-1MSD | 171746 | 9.01 | 265180 | 9.88 | 143819 | 13.13 | 124629 | 15.69 | 67315 | 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.

6.5.2  
6



# Volatile Surrogate Recovery Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 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  |
|---------------|-------------|----|-----|-----|
| MC22534-1     | N78303.D    | 93 | 99  | 101 |
| MC22534-2     | N78256.D    | 90 | 102 | 98  |
| MC22534-3     | N78304.D    | 93 | 99  | 102 |
| MC22534-4     | N78305.D    | 93 | 101 | 101 |
| MC22534-5     | N78306.D    | 94 | 102 | 104 |
| MC22534-6     | N78302.D    | 95 | 101 | 105 |
| MC22534-7     | N78255.D    | 92 | 102 | 97  |
| MC22534-6MS   | N78265.D    | 91 | 100 | 94  |
| MC22534-6MSD  | N78266.D    | 91 | 99  | 94  |
| MC22559-1MS   | N78318.D    | 95 | 102 | 96  |
| MC22559-1MSD  | N78319.D    | 93 | 101 | 94  |
| MSN2937-BS    | N78244.D    | 92 | 101 | 92  |
| MSN2937-BS1   | N78295.D    | 94 | 103 | 92  |
| MSN2937-MB    | N78247.D    | 91 | 101 | 95  |
| MSN2937-MB1   | N78298.D    | 94 | 99  | 101 |
| MSN2939-BS    | N78295.D    | 94 | 103 | 92  |
| MSN2939-BSD   | N78296.D    | 94 | 101 | 94  |
| MSN2939-MB    | N78298.D    | 94 | 99  | 101 |

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

6.6.1  
6

## GC/MS Semi-volatiles

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### QC Data Summaries

7

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

# Method Blank Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP33941-MB | R32146.D | 1  | 07/12/13 | KR | 07/09/13  | OP33941    | MSR1173          |

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

MC22534-1, MC22534-2, MC22534-3, MC22534-4, MC22534-5, MC22534-6

| 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  | 2.4    | 2.0 | 0.49 | ug/l  |   |
| 118-74-1  | Hexachlorobenzene           | ND     | 5.0 | 0.30 | ug/l  |   |

7.1.1  
7

# Method Blank Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP33941-MB | R32146.D | 1  | 07/12/13 | KR | 07/09/13  | OP33941    | MSR1173          |

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

MC22534-1, MC22534-2, MC22534-3, MC22534-4, MC22534-5, MC22534-6

| 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       | 49% 15-110% |
| 4165-62-2 | Phenol-d5            | 32% 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 91% 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 81% 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 85% 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  |   |

7.1.1  
7

# Method Blank Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34082-MB | R32331.D | 1  | 07/23/13 | KR | 07/22/13  | OP34082    | MSR1179          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22534-3

| 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  |   |

| CAS No.   | Surrogate Recoveries | Limits |         |
|-----------|----------------------|--------|---------|
| 367-12-4  | 2-Fluorophenol       | 48%    | 15-110% |
| 4165-62-2 | Phenol-d5            | 18%    | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 73%    | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 67%    | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 77%    | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 77%    | 30-130% |

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

7.1.2  
7

# Method Blank Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| OP33942-MB | I84754A.D | 1  | 07/12/13 | WK | 07/09/13  | OP33942    | MSI3152          |

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

MC22534-1, MC22534-2, MC22534-3, MC22534-4, MC22534-5, MC22534-6

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | 0.065  | 0.10  | 0.014 | ug/l  | J |
| 208-96-8 | Acenaphthylene         | 0.026  | 0.10  | 0.013 | ug/l  | J |
| 120-12-7 | Anthracene             | ND     | 0.10  | 0.018 | ug/l  |   |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.050 | 0.030 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.10  | 0.017 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.050 | 0.024 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.10  | 0.038 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.10  | 0.059 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.10  | 0.073 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.10  | 0.042 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.10  | 0.033 | ug/l  |   |
| 86-73-7  | Fluorene               | 0.50   | 0.10  | 0.046 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.10  | 0.046 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | ND     | 0.20  | 0.14  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | 0.087  | 0.20  | 0.052 | ug/l  | J |
| 85-01-8  | Phenanthrene           | 0.027  | 0.050 | 0.013 | ug/l  | J |
| 129-00-0 | Pyrene                 | ND     | 0.10  | 0.036 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Limits |         |
|-----------|----------------------|--------|---------|
| 367-12-4  | 2-Fluorophenol       | 51%    | 15-110% |
| 4165-62-2 | Phenol-d5            | 33%    | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 86%    | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 89%    | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 89%    | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 105%   | 30-130% |

7.1.3  
7

# Blank Spike Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP33941-BS | R32147.D | 1  | 07/12/13 | KR | 07/09/13  | OP33941    | MSR1173          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22534-1, MC22534-2, MC22534-3, MC22534-4, MC22534-5, MC22534-6

| CAS No.   | Compound                    | Spike ug/l | BSP ug/l | BSP % | Limits |
|-----------|-----------------------------|------------|----------|-------|--------|
| 65-85-0   | Benzoic Acid                | 50         | 21.8     | 44    | 30-130 |
| 95-57-8   | 2-Chlorophenol              | 50         | 41.1     | 82    | 30-130 |
| 59-50-7   | 4-Chloro-3-methyl phenol    | 50         | 44.4     | 89    | 30-130 |
| 120-83-2  | 2,4-Dichlorophenol          | 50         | 47.5     | 95    | 30-130 |
| 105-67-9  | 2,4-Dimethylphenol          | 50         | 42.3     | 85    | 30-130 |
| 51-28-5   | 2,4-Dinitrophenol           | 50         | 48.0     | 96    | 30-130 |
| 534-52-1  | 4,6-Dinitro-o-cresol        | 50         | 49.9     | 100   | 30-130 |
| 95-48-7   | 2-Methylphenol              | 50         | 36.8     | 74    | 30-130 |
|           | 3&4-Methylphenol            | 100        | 67.4     | 67    | 30-130 |
| 88-75-5   | 2-Nitrophenol               | 50         | 48.7     | 97    | 30-130 |
| 100-02-7  | 4-Nitrophenol               | 50         | 18.2     | 36    | 30-130 |
| 87-86-5   | Pentachlorophenol           | 50         | 46.8     | 94    | 30-130 |
| 108-95-2  | Phenol                      | 50         | 18.9     | 38    | 30-130 |
| 95-95-4   | 2,4,5-Trichlorophenol       | 50         | 50.9     | 102   | 30-130 |
| 88-06-2   | 2,4,6-Trichlorophenol       | 50         | 49.6     | 99    | 30-130 |
| 62-53-3   | Aniline                     | 50         | 36.0     | 72    | 40-140 |
| 101-55-3  | 4-Bromophenyl phenyl ether  | 50         | 51.4     | 103   | 40-140 |
| 85-68-7   | Butyl benzyl phthalate      | 50         | 52.0     | 104   | 40-140 |
| 100-51-6  | Benzyl Alcohol              | 50         | 37.2     | 74    | 40-140 |
| 91-58-7   | 2-Chloronaphthalene         | 50         | 43.2     | 86    | 40-140 |
| 106-47-8  | 4-Chloroaniline             | 50         | 46.4     | 93    | 40-140 |
| 111-91-1  | bis(2-Chloroethoxy)methane  | 50         | 48.2     | 96    | 40-140 |
| 111-44-4  | bis(2-Chloroethyl)ether     | 50         | 44.8     | 90    | 40-140 |
| 108-60-1  | bis(2-Chloroisopropyl)ether | 50         | 47.4     | 95    | 40-140 |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | 50         | 51.9     | 104   | 40-140 |
| 122-66-7  | 1,2-Diphenylhydrazine       | 50         | 46.2     | 92    | 40-140 |
| 121-14-2  | 2,4-Dinitrotoluene          | 50         | 56.2     | 112   | 40-140 |
| 606-20-2  | 2,6-Dinitrotoluene          | 50         | 53.8     | 108   | 40-140 |
| 91-94-1   | 3,3'-Dichlorobenzidine      | 50         | 45.9     | 92    | 40-140 |
| 132-64-9  | Dibenzofuran                | 50         | 48.3     | 97    | 40-140 |
| 84-74-2   | Di-n-butyl phthalate        | 50         | 51.5     | 103   | 40-140 |
| 117-84-0  | Di-n-octyl phthalate        | 50         | 56.8     | 114   | 40-140 |
| 84-66-2   | Diethyl phthalate           | 50         | 43.9     | 88    | 40-140 |
| 131-11-3  | Dimethyl phthalate          | 50         | 25.9     | 52    | 40-140 |
| 117-81-7  | bis(2-Ethylhexyl)phthalate  | 50         | 52.1     | 104   | 40-140 |
| 118-74-1  | Hexachlorobenzene           | 50         | 51.2     | 102   | 40-140 |

\* = Outside of Control Limits.

7.2.1  
7

# Blank Spike Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP33941-BS | R32147.D | 1  | 07/12/13 | KR | 07/09/13  | OP33941    | MSR1173          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22534-1, MC22534-2, MC22534-3, MC22534-4, MC22534-5, MC22534-6

| CAS No.  | Compound                   | Spike ug/l | BSP ug/l | BSP % | Limits |
|----------|----------------------------|------------|----------|-------|--------|
| 77-47-4  | Hexachlorocyclopentadiene  | 50         | 13.4     | 27* a | 40-140 |
| 67-72-1  | Hexachloroethane           | 50         | 19.7     | 39* a | 40-140 |
| 78-59-1  | Isophorone                 | 50         | 47.0     | 94    | 40-140 |
| 88-74-4  | 2-Nitroaniline             | 50         | 58.2     | 116   | 40-140 |
| 99-09-2  | 3-Nitroaniline             | 50         | 52.9     | 106   | 40-140 |
| 100-01-6 | 4-Nitroaniline             | 50         | 55.3     | 111   | 40-140 |
| 98-95-3  | Nitrobenzene               | 50         | 43.8     | 88    | 40-140 |
| 62-75-9  | n-Nitrosodimethylamine     | 50         | 26.4     | 53    | 40-140 |
| 621-64-7 | N-Nitroso-di-n-propylamine | 50         | 46.6     | 93    | 40-140 |
| 86-30-6  | N-Nitrosodiphenylamine     | 50         | 50.1     | 100   | 40-140 |
| 110-86-1 | Pyridine                   | 50         | 22.6     | 45    | 40-140 |

| CAS No.   | Surrogate Recoveries | BSP  | Limits  |
|-----------|----------------------|------|---------|
| 367-12-4  | 2-Fluorophenol       | 53%  | 15-110% |
| 4165-62-2 | Phenol-d5            | 35%  | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 99%  | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 90%  | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 96%  | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 104% | 30-130% |

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

\* = Outside of Control Limits.



# Blank Spike Summary

Job Number: MC22534

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34082-BS | R32332.D | 1  | 07/23/13 | KR | 07/22/13  | OP34082    | MSR1179          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22534-3

| CAS No.  | Compound                 | Spike ug/l | BSP ug/l | BSP % | Limits |
|----------|--------------------------|------------|----------|-------|--------|
| 65-85-0  | Benzoic Acid             | 50         | 20.7     | 41    | 30-130 |
| 95-57-8  | 2-Chlorophenol           | 50         | 42.4     | 85    | 30-130 |
| 59-50-7  | 4-Chloro-3-methyl phenol | 50         | 43.2     | 86    | 30-130 |
| 120-83-2 | 2,4-Dichlorophenol       | 50         | 42.4     | 85    | 30-130 |
| 105-67-9 | 2,4-Dimethylphenol       | 50         | 39.3     | 79    | 30-130 |
| 51-28-5  | 2,4-Dinitrophenol        | 50         | 41.1     | 82    | 30-130 |
| 534-52-1 | 4,6-Dinitro-o-cresol     | 50         | 45.1     | 90    | 30-130 |
| 95-48-7  | 2-Methylphenol           | 50         | 39.3     | 79    | 30-130 |
|          | 3&4-Methylphenol         | 100        | 72.2     | 72    | 30-130 |
| 88-75-5  | 2-Nitrophenol            | 50         | 44.1     | 88    | 30-130 |
| 100-02-7 | 4-Nitrophenol            | 50         | 18.0     | 36    | 30-130 |
| 87-86-5  | Pentachlorophenol        | 50         | 43.7     | 87    | 30-130 |
| 108-95-2 | Phenol                   | 50         | 19.6     | 39    | 30-130 |
| 95-95-4  | 2,4,5-Trichlorophenol    | 50         | 46.9     | 94    | 30-130 |
| 88-06-2  | 2,4,6-Trichlorophenol    | 50         | 45.7     | 91    | 30-130 |

| CAS No.   | Surrogate Recoveries | BSP | Limits  |
|-----------|----------------------|-----|---------|
| 367-12-4  | 2-Fluorophenol       | 57% | 15-110% |
| 4165-62-2 | Phenol-d5            | 21% | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 93% | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 76% | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 87% | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 80% | 30-130% |

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| OP33942-BS | I84755A.D | 1  | 07/12/13 | WK | 07/09/13  | OP33942    | MSI3152          |

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

MC22534-1, MC22534-2, MC22534-3, MC22534-4, MC22534-5, MC22534-6

| CAS No.  | Compound               | Spike ug/l | BSP ug/l | BSP % | Limits |
|----------|------------------------|------------|----------|-------|--------|
| 83-32-9  | Acenaphthene           | 50         | 48.9     | 98    | 40-140 |
| 208-96-8 | Acenaphthylene         | 50         | 41.1     | 82    | 40-140 |
| 120-12-7 | Anthracene             | 50         | 50.0     | 100   | 40-140 |
| 56-55-3  | Benzo(a)anthracene     | 50         | 63.9     | 128   | 40-140 |
| 50-32-8  | Benzo(a)pyrene         | 50         | 52.1     | 104   | 40-140 |
| 205-99-2 | Benzo(b)fluoranthene   | 50         | 56.0     | 112   | 40-140 |
| 191-24-2 | Benzo(g,h,i)perylene   | 50         | 54.4     | 109   | 40-140 |
| 207-08-9 | Benzo(k)fluoranthene   | 50         | 58.4     | 117   | 40-140 |
| 218-01-9 | Chrysene               | 50         | 59.3     | 119   | 40-140 |
| 53-70-3  | Dibenzo(a,h)anthracene | 50         | 57.7     | 115   | 40-140 |
| 206-44-0 | Fluoranthene           | 50         | 57.6     | 115   | 40-140 |
| 86-73-7  | Fluorene               | 50         | 52.8     | 106   | 40-140 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 50         | 56.9     | 114   | 40-140 |
| 90-12-0  | 1-Methylnaphthalene    | 50         | 42.3     | 85    | 40-140 |
| 91-57-6  | 2-Methylnaphthalene    | 50         | 57.2     | 114   | 40-140 |
| 85-01-8  | Phenanthrene           | 50         | 53.5     | 107   | 40-140 |
| 129-00-0 | Pyrene                 | 50         | 55.3     | 111   | 40-140 |

| CAS No.   | Surrogate Recoveries | BSP  | Limits  |
|-----------|----------------------|------|---------|
| 367-12-4  | 2-Fluorophenol       | 58%  | 15-110% |
| 4165-62-2 | Phenol-d5            | 35%  | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 97%  | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 99%  | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 96%  | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 111% | 30-130% |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| OP33941-MS  | R32152.D | 1  | 07/12/13 | KR | 07/09/13  | OP33941    | MSR1173          |
| OP33941-MSD | R32153.D | 1  | 07/12/13 | KR | 07/09/13  | OP33941    | MSR1173          |
| MC22534-6   | R32154.D | 1  | 07/12/13 | KR | 07/09/13  | OP33941    | MSR1173          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22534-1, MC22534-2, MC22534-3, MC22534-4, MC22534-5, MC22534-6

| CAS No.   | Compound                    | MC22534-6<br>ug/l | Spike<br>Q<br>ug/l | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|-----------|-----------------------------|-------------------|--------------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 65-85-0   | Benzoic Acid                | ND                | 55.6               | 24.8       | 45      | 55.6          | 24.5        | 44       | 1   | 30-130/20         |
| 95-57-8   | 2-Chlorophenol              | ND                | 55.6               | 45.4       | 82      | 55.6          | 43.5        | 78       | 4   | 30-130/20         |
| 59-50-7   | 4-Chloro-3-methyl phenol    | ND                | 55.6               | 48.1       | 87      | 55.6          | 48.0        | 86       | 0   | 30-130/20         |
| 120-83-2  | 2,4-Dichlorophenol          | ND                | 55.6               | 49.7       | 89      | 55.6          | 48.3        | 87       | 3   | 30-130/20         |
| 105-67-9  | 2,4-Dimethylphenol          | ND                | 55.6               | 44.4       | 80      | 55.6          | 45.7        | 82       | 3   | 30-130/20         |
| 51-28-5   | 2,4-Dinitrophenol           | ND                | 55.6               | 52.0       | 94      | 55.6          | 54.4        | 98       | 5   | 30-130/20         |
| 534-52-1  | 4,6-Dinitro-o-cresol        | ND                | 55.6               | 53.4       | 96      | 55.6          | 53.9        | 97       | 1   | 30-130/20         |
| 95-48-7   | 2-Methylphenol              | ND                | 55.6               | 42.3       | 76      | 55.6          | 43.4        | 78       | 3   | 30-130/20         |
|           | 3&4-Methylphenol            | ND                | 111                | 79.1       | 71      | 111           | 77.3        | 70       | 2   | 30-130/20         |
| 88-75-5   | 2-Nitrophenol               | ND                | 55.6               | 51.8       | 93      | 55.6          | 50.9        | 92       | 2   | 30-130/20         |
| 100-02-7  | 4-Nitrophenol               | ND                | 55.6               | 21.1       | 38      | 55.6          | 21.9        | 39       | 4   | 30-130/20         |
| 87-86-5   | Pentachlorophenol           | ND                | 55.6               | 51.9       | 93      | 55.6          | 52.2        | 94       | 1   | 30-130/20         |
| 108-95-2  | Phenol                      | ND                | 55.6               | 21.8       | 39      | 55.6          | 22.1        | 40       | 1   | 30-130/20         |
| 95-95-4   | 2,4,5-Trichlorophenol       | ND                | 55.6               | 54.6       | 98      | 55.6          | 55.1        | 99       | 1   | 30-130/20         |
| 88-06-2   | 2,4,6-Trichlorophenol       | ND                | 55.6               | 51.7       | 93      | 55.6          | 53.5        | 96       | 3   | 30-130/20         |
| 62-53-3   | Aniline                     | ND                | 55.6               | 36.8       | 66      | 55.6          | 37.1        | 67       | 1   | 40-140/20         |
| 101-55-3  | 4-Bromophenyl phenyl ether  | ND                | 55.6               | 55.1       | 99      | 55.6          | 57.6        | 104      | 4   | 40-140/20         |
| 85-68-7   | Butyl benzyl phthalate      | ND                | 55.6               | 56.7       | 102     | 55.6          | 57.8        | 104      | 2   | 40-140/20         |
| 100-51-6  | Benzyl Alcohol              | ND                | 55.6               | 36.5       | 66      | 55.6          | 35.7        | 64       | 2   | 40-140/20         |
| 91-58-7   | 2-Chloronaphthalene         | ND                | 55.6               | 50.3       | 91      | 55.6          | 50.1        | 90       | 0   | 40-140/20         |
| 106-47-8  | 4-Chloroaniline             | ND                | 55.6               | 46.7       | 84      | 55.6          | 47.4        | 85       | 1   | 40-140/20         |
| 111-91-1  | bis(2-Chloroethoxy)methane  | ND                | 55.6               | 49.8       | 90      | 55.6          | 50.1        | 90       | 1   | 40-140/20         |
| 111-44-4  | bis(2-Chloroethyl)ether     | ND                | 55.6               | 47.5       | 86      | 55.6          | 47.0        | 85       | 1   | 40-140/20         |
| 108-60-1  | bis(2-Chloroisopropyl)ether | ND                | 55.6               | 50.8       | 91      | 55.6          | 49.1        | 88       | 3   | 40-140/20         |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND                | 55.6               | 57.1       | 103     | 55.6          | 59.2        | 107      | 4   | 40-140/20         |
| 122-66-7  | 1,2-Diphenylhydrazine       | ND                | 55.6               | 49.4       | 89      | 55.6          | 50.5        | 91       | 2   | 40-140/20         |
| 121-14-2  | 2,4-Dinitrotoluene          | ND                | 55.6               | 57.6       | 104     | 55.6          | 61.0        | 110      | 6   | 40-140/20         |
| 606-20-2  | 2,6-Dinitrotoluene          | ND                | 55.6               | 56.8       | 102     | 55.6          | 59.6        | 107      | 5   | 40-140/20         |
| 91-94-1   | 3,3'-Dichlorobenzidine      | ND                | 55.6               | 45.8       | 82      | 55.6          | 47.9        | 86       | 4   | 40-140/20         |
| 132-64-9  | Dibenzofuran                | ND                | 55.6               | 52.9       | 95      | 55.6          | 54.0        | 97       | 2   | 40-140/20         |
| 84-74-2   | Di-n-butyl phthalate        | ND                | 55.6               | 55.8       | 100     | 55.6          | 57.2        | 103      | 2   | 40-140/20         |
| 117-84-0  | Di-n-octyl phthalate        | ND                | 55.6               | 59.5       | 107     | 55.6          | 61.7        | 111      | 4   | 40-140/20         |
| 84-66-2   | Diethyl phthalate           | ND                | 55.6               | 56.4       | 102     | 55.6          | 59.4        | 107      | 5   | 40-140/20         |
| 131-11-3  | Dimethyl phthalate          | ND                | 55.6               | 55.6       | 100     | 55.6          | 57.6        | 104      | 4   | 40-140/20         |
| 117-81-7  | bis(2-Ethylhexyl)phthalate  | ND                | 55.6               | 55.2       | 99      | 55.6          | 57.3        | 103      | 4   | 40-140/20         |
| 118-74-1  | Hexachlorobenzene           | ND                | 55.6               | 54.7       | 98      | 55.6          | 55.6        | 100      | 2   | 40-140/20         |

\* = Outside of Control Limits.

7.3.1  
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# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| OP33941-MS  | R32152.D | 1  | 07/12/13 | KR | 07/09/13  | OP33941    | MSR1173          |
| OP33941-MSD | R32153.D | 1  | 07/12/13 | KR | 07/09/13  | OP33941    | MSR1173          |
| MC22534-6   | R32154.D | 1  | 07/12/13 | KR | 07/09/13  | OP33941    | MSR1173          |

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

MC22534-1, MC22534-2, MC22534-3, MC22534-4, MC22534-5, MC22534-6

7.3.1  
7

| CAS No.  | Compound                   | MC22534-6<br>ug/l | Spike<br>Q<br>ug/l | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD   | Limits<br>Rec/RPD |
|----------|----------------------------|-------------------|--------------------|------------|---------|---------------|-------------|----------|-------|-------------------|
| 77-47-4  | Hexachlorocyclopentadiene  | ND                | 55.6               | 20.6       | 37* a   | 55.6          | 19.1        | 34* a    | 8     | 40-140/20         |
| 67-72-1  | Hexachloroethane           | ND                | 55.6               | 27.3       | 49      | 55.6          | 21.5        | 39* a    | 24* a | 40-140/20         |
| 78-59-1  | Isophorone                 | ND                | 55.6               | 48.9       | 88      | 55.6          | 48.8        | 88       | 0     | 40-140/20         |
| 88-74-4  | 2-Nitroaniline             | ND                | 55.6               | 61.2       | 110     | 55.6          | 64.6        | 116      | 5     | 40-140/20         |
| 99-09-2  | 3-Nitroaniline             | ND                | 55.6               | 53.1       | 96      | 55.6          | 56.6        | 102      | 6     | 40-140/20         |
| 100-01-6 | 4-Nitroaniline             | ND                | 55.6               | 57.2       | 103     | 55.6          | 60.5        | 109      | 6     | 40-140/20         |
| 98-95-3  | Nitrobenzene               | ND                | 55.6               | 45.9       | 83      | 55.6          | 45.6        | 82       | 1     | 40-140/20         |
| 62-75-9  | n-Nitrosodimethylamine     | ND                | 55.6               | 28.9       | 52      | 55.6          | 29.5        | 53       | 2     | 40-140/20         |
| 621-64-7 | N-Nitroso-di-n-propylamine | ND                | 55.6               | 48.1       | 87      | 55.6          | 47.6        | 86       | 1     | 40-140/20         |
| 86-30-6  | N-Nitrosodiphenylamine     | ND                | 55.6               | 52.8       | 95      | 55.6          | 54.8        | 99       | 4     | 40-140/20         |
| 110-86-1 | Pyridine                   | ND                | 55.6               | 22.9       | 41      | 55.6          | 23.3        | 42       | 2     | 40-140/20         |

| CAS No.   | Surrogate Recoveries | MS  | MSD  | MC22534-6 | Limits  |
|-----------|----------------------|-----|------|-----------|---------|
| 367-12-4  | 2-Fluorophenol       | 52% | 52%  | 54%       | 15-110% |
| 4165-62-2 | Phenol-d5            | 39% | 38%  | 49%       | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 96% | 95%  | 93%       | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 84% | 85%  | 83%       | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 92% | 94%  | 96%       | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 98% | 101% | 98%       | 30-130% |

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

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| OP34082-MS  | R32333.D | 1  | 07/23/13 | KR | 07/22/13  | OP34082    | MSR1179          |
| OP34082-MSD | R32334.D | 1  | 07/23/13 | KR | 07/22/13  | OP34082    | MSR1179          |
| MC22900-3   | R32335.D | 1  | 07/23/13 | KR | 07/22/13  | OP34082    | MSR1179          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22534-3

| CAS No.  | Compound                 | MC22900-3<br>ug/l | Spike<br>Q<br>ug/l | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|----------|--------------------------|-------------------|--------------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 65-85-0  | Benzoic Acid             | ND                | 50                 | 22.6       | 45      | 50            | 21.9        | 44       | 3   | 30-130/20         |
| 95-57-8  | 2-Chlorophenol           | ND                | 50                 | 43.8       | 88      | 50            | 41.4        | 83       | 6   | 30-130/20         |
| 59-50-7  | 4-Chloro-3-methyl phenol | ND                | 50                 | 45.7       | 91      | 50            | 43.7        | 87       | 4   | 30-130/20         |
| 120-83-2 | 2,4-Dichlorophenol       | ND                | 50                 | 45.6       | 91      | 50            | 43.8        | 88       | 4   | 30-130/20         |
| 105-67-9 | 2,4-Dimethylphenol       | ND                | 50                 | 41.5       | 83      | 50            | 39.1        | 78       | 6   | 30-130/20         |
| 51-28-5  | 2,4-Dinitrophenol        | ND                | 50                 | 44.6       | 89      | 50            | 43.4        | 87       | 3   | 30-130/20         |
| 534-52-1 | 4,6-Dinitro-o-cresol     | ND                | 50                 | 46.9       | 94      | 50            | 45.8        | 92       | 2   | 30-130/20         |
| 95-48-7  | 2-Methylphenol           | ND                | 50                 | 40.3       | 81      | 50            | 39.1        | 78       | 3   | 30-130/20         |
|          | 3&4-Methylphenol         | ND                | 100                | 74.8       | 75      | 100           | 73.0        | 73       | 2   | 30-130/20         |
| 88-75-5  | 2-Nitrophenol            | ND                | 50                 | 46.2       | 92      | 50            | 44.3        | 89       | 4   | 30-130/20         |
| 100-02-7 | 4-Nitrophenol            | ND                | 50                 | 20.0       | 40      | 50            | 19.0        | 38       | 5   | 30-130/20         |
| 87-86-5  | Pentachlorophenol        | ND                | 50                 | 46.7       | 93      | 50            | 43.9        | 88       | 6   | 30-130/20         |
| 108-95-2 | Phenol                   | ND                | 50                 | 20.2       | 40      | 50            | 19.3        | 39       | 5   | 30-130/20         |
| 95-95-4  | 2,4,5-Trichlorophenol    | ND                | 50                 | 49.8       | 100     | 50            | 48.4        | 97       | 3   | 30-130/20         |
| 88-06-2  | 2,4,6-Trichlorophenol    | ND                | 50                 | 48.2       | 96      | 50            | 46.7        | 93       | 3   | 30-130/20         |

| CAS No.   | Surrogate Recoveries | MS  | MSD | MC22900-3 | Limits  |
|-----------|----------------------|-----|-----|-----------|---------|
| 367-12-4  | 2-Fluorophenol       | 57% | 54% | 55%       | 15-110% |
| 4165-62-2 | Phenol-d5            | 21% | 21% | 20%       | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 92% | 89% | 83%       | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 80% | 79% | 74%       | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 91% | 92% | 87%       | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 81% | 82% | 85%       | 30-130% |

\* = Outside of Control Limits.

7.3.2  
7

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|-----------|----|----------|----|-----------|------------|------------------|
| OP33942-MS  | I84758A.D | 1  | 07/12/13 | WK | 07/09/13  | OP33942    | MSI3152          |
| OP33942-MSD | I84759A.D | 1  | 07/12/13 | WK | 07/09/13  | OP33942    | MSI3152          |
| MC22534-6   | I84760A.D | 1  | 07/12/13 | WK | 07/09/13  | OP33942    | MSI3152          |

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

MC22534-1, MC22534-2, MC22534-3, MC22534-4, MC22534-5, MC22534-6

7.3.3  
7

| CAS No.  | Compound               | MC22534-6<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |           |
|----------|------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|-----------|
| 83-32-9  | Acenaphthene           | ND                |            | 55.6       | 53.3    | 96            | 55.6        | 53.3     | 96  | 0                 | 40-140/20 |
| 208-96-8 | Acenaphthylene         | ND                |            | 55.6       | 44.4    | 80            | 55.6        | 44.0     | 79  | 1                 | 40-140/20 |
| 120-12-7 | Anthracene             | ND                |            | 55.6       | 53.3    | 96            | 55.6        | 55.2     | 99  | 4                 | 40-140/20 |
| 56-55-3  | Benzo(a)anthracene     | ND                |            | 55.6       | 67.2    | 121           | 55.6        | 70.7     | 127 | 5                 | 40-140/20 |
| 50-32-8  | Benzo(a)pyrene         | ND                |            | 55.6       | 53.8    | 97            | 55.6        | 56.7     | 102 | 5                 | 40-140/20 |
| 205-99-2 | Benzo(b)fluoranthene   | ND                |            | 55.6       | 60.4    | 109           | 55.6        | 65.8     | 118 | 9                 | 40-140/20 |
| 191-24-2 | Benzo(g,h,i)perylene   | ND                |            | 55.6       | 55.8    | 100           | 55.6        | 59.0     | 106 | 6                 | 40-140/20 |
| 207-08-9 | Benzo(k)fluoranthene   | ND                |            | 55.6       | 59.9    | 108           | 55.6        | 60.4     | 109 | 1                 | 40-140/20 |
| 218-01-9 | Chrysene               | ND                |            | 55.6       | 62.5    | 112           | 55.6        | 66.0     | 119 | 5                 | 40-140/20 |
| 53-70-3  | Dibenzo(a,h)anthracene | ND                |            | 55.6       | 59.1    | 106           | 55.6        | 62.0     | 112 | 5                 | 40-140/20 |
| 206-44-0 | Fluoranthene           | ND                |            | 55.6       | 60.3    | 109           | 55.6        | 62.9     | 113 | 4                 | 40-140/20 |
| 86-73-7  | Fluorene               | ND                |            | 55.6       | 57.1    | 103           | 55.6        | 58.1     | 105 | 2                 | 40-140/20 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND                |            | 55.6       | 57.9    | 104           | 55.6        | 61.3     | 110 | 6                 | 40-140/20 |
| 90-12-0  | 1-Methylnaphthalene    | ND                |            | 55.6       | 48.0    | 86            | 55.6        | 46.0     | 83  | 4                 | 40-140/20 |
| 91-57-6  | 2-Methylnaphthalene    | ND                |            | 55.6       | 64.4    | 116           | 55.6        | 62.4     | 112 | 3                 | 40-140/20 |
| 85-01-8  | Phenanthrene           | 0.018             | JB         | 55.6       | 55.5    | 100           | 55.6        | 56.7     | 102 | 2                 | 40-140/20 |
| 129-00-0 | Pyrene                 | ND                |            | 55.6       | 57.9    | 104           | 55.6        | 60.3     | 109 | 4                 | 40-140/20 |

| CAS No.   | Surrogate Recoveries | MS   | MSD  | MC22534-6 | Limits  |
|-----------|----------------------|------|------|-----------|---------|
| 367-12-4  | 2-Fluorophenol       | 55%  | 56%  |           | 15-110% |
| 4165-62-2 | Phenol-d5            | 37%  | 37%  |           | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 91%  | 92%  |           | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 93%  | 95%  | 93%       | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 94%  | 92%  | 98%       | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 106% | 112% | 104%      | 30-130% |

\* = Outside of Control Limits.

# Semivolatile Internal Standard Area Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |                    |
|----------------|----------------|-----------------|--------------------|
| Check Std:     | MSI3152-CC3096 | Injection Date: | 07/12/13           |
| Lab File ID:   | I84747.D       | Injection Time: | 08:19              |
| 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                | 160769 | 2.95 | 404065 | 3.92 | 236061 | 5.30 | 433349 | 6.49 | 388210 | 9.13 | 705621  | 10.53 |
| Upper Limit <sup>a</sup> | 321538 | 3.45 | 808130 | 4.42 | 472122 | 5.80 | 866698 | 6.99 | 776420 | 9.63 | 1411242 | 11.03 |
| Lower Limit <sup>b</sup> | 80385  | 2.45 | 202033 | 3.42 | 118031 | 4.80 | 216675 | 5.99 | 194105 | 8.63 | 352811  | 10.03 |

| 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    |
| OP33953-MB    | 138804 | 2.96 | 353617 | 3.92 | 201736 | 5.30 | 370160 | 6.49 | 325578 | 9.13 | 600801 | 10.52 |
| ZZZZZZ        | 159571 | 2.96 | 410358 | 3.92 | 230671 | 5.30 | 411664 | 6.48 | 371136 | 9.13 | 672284 | 10.52 |
| ZZZZZZ        | 137024 | 2.96 | 348303 | 3.92 | 202069 | 5.30 | 367414 | 6.49 | 328450 | 9.12 | 594616 | 10.52 |
| ZZZZZZ        | 148945 | 2.96 | 378162 | 3.92 | 215816 | 5.30 | 391578 | 6.49 | 349653 | 9.13 | 639204 | 10.52 |
| ZZZZZZ        | 145564 | 2.96 | 367860 | 3.92 | 214103 | 5.30 | 383227 | 6.49 | 348792 | 9.12 | 628856 | 10.52 |
| ZZZZZZ        | 137936 | 2.96 | 354284 | 3.92 | 203012 | 5.30 | 365674 | 6.49 | 326953 | 9.13 | 601372 | 10.52 |
| OP33942-MB    | 150294 | 2.95 | 382046 | 3.92 | 217857 | 5.30 | 391488 | 6.49 | 354336 | 9.13 | 661162 | 10.52 |
| OP33942-BS    | 141570 | 2.95 | 363614 | 3.92 | 211098 | 5.30 | 380950 | 6.49 | 343335 | 9.13 | 629719 | 10.53 |
| ZZZZZZ        | 130135 | 2.95 | 334762 | 3.92 | 192292 | 5.30 | 352422 | 6.49 | 317818 | 9.12 | 585137 | 10.52 |
| ZZZZZZ        | 123163 | 2.95 | 315839 | 3.92 | 181251 | 5.30 | 330480 | 6.49 | 304537 | 9.12 | 561813 | 10.52 |
| OP33942-MS    | 131484 | 2.95 | 336330 | 3.92 | 191583 | 5.30 | 347163 | 6.49 | 313207 | 9.13 | 564843 | 10.52 |
| OP33942-MSD   | 136279 | 2.95 | 349284 | 3.92 | 199925 | 5.30 | 365662 | 6.49 | 335217 | 9.13 | 602715 | 10.53 |
| MC22534-6     | 136666 | 2.95 | 349978 | 3.92 | 197343 | 5.30 | 355355 | 6.49 | 317991 | 9.13 | 594323 | 10.52 |
| MC22534-1     | 161737 | 2.95 | 413063 | 3.92 | 237904 | 5.30 | 428486 | 6.49 | 386742 | 9.13 | 703148 | 10.53 |
| MC22534-2     | 135553 | 2.95 | 339947 | 3.92 | 191149 | 5.30 | 337515 | 6.49 | 311390 | 9.13 | 569434 | 10.52 |
| MC22534-3     | 141246 | 2.95 | 360945 | 3.92 | 206460 | 5.30 | 374025 | 6.48 | 340479 | 9.12 | 622997 | 10.52 |
| MC22534-4     | 140394 | 2.95 | 359377 | 3.92 | 208373 | 5.30 | 372219 | 6.48 | 336344 | 9.13 | 614506 | 10.52 |
| MC22534-5     | 133602 | 2.95 | 342866 | 3.92 | 196776 | 5.30 | 363090 | 6.49 | 327081 | 9.13 | 597009 | 10.52 |
| ZZZZZZ        | 131515 | 2.95 | 343265 | 3.92 | 195825 | 5.30 | 355216 | 6.49 | 326223 | 9.13 | 592053 | 10.52 |
| ZZZZZZ        | 131498 | 2.95 | 340366 | 3.92 | 194417 | 5.30 | 359167 | 6.49 | 324630 | 9.13 | 601980 | 10.52 |
| ZZZZZZ        | 124835 | 2.95 | 320143 | 3.92 | 184740 | 5.30 | 339733 | 6.49 | 310860 | 9.13 | 583406 | 10.53 |
| ZZZZZZ        | 135371 | 2.95 | 349667 | 3.92 | 201856 | 5.30 | 364241 | 6.48 | 334666 | 9.13 | 614540 | 10.52 |
| ZZZZZZ        | 118375 | 2.95 | 307495 | 3.92 | 174665 | 5.30 | 320380 | 6.49 | 300127 | 9.13 | 564845 | 10.53 |
| ZZZZZZ        | 125404 | 2.95 | 326601 | 3.92 | 186493 | 5.30 | 332963 | 6.49 | 311366 | 9.13 | 588102 | 10.53 |

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.4.1  
7

# Semivolatile Internal Standard Area Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSR1173-CC1159 | Injection Date: | 07/12/13    |
| Lab File ID:   | R32145.D       | Injection Time: | 07:40       |
| Instrument ID: | GCMSR          | 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                | 74370  | 4.37 | 275712 | 5.42 | 172561 | 6.97 | 306570 | 8.39 | 334149 | 11.38 | 310767 | 12.98 |
| Upper Limit <sup>a</sup> | 148740 | 4.87 | 551424 | 5.92 | 345122 | 7.47 | 613140 | 8.89 | 668298 | 11.88 | 621534 | 13.48 |
| Lower Limit <sup>b</sup> | 37185  | 3.87 | 137856 | 4.92 | 86281  | 6.47 | 153285 | 7.89 | 167075 | 10.88 | 155384 | 12.48 |

| 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    |
| OP33941-MB    | 81437 | 4.37 | 301571 | 5.42 | 183920 | 6.96 | 325983 | 8.38 | 362209 | 11.38 | 347476 | 12.98 |
| OP33941-BS    | 79153 | 4.37 | 285823 | 5.42 | 177077 | 6.96 | 318295 | 8.39 | 350935 | 11.38 | 327189 | 12.98 |
| OP33976-MB    | 83313 | 4.37 | 307011 | 5.42 | 187369 | 6.96 | 334845 | 8.38 | 373490 | 11.38 | 347706 | 12.98 |
| OP33976-BS    | 79025 | 4.37 | 287531 | 5.42 | 173182 | 6.96 | 300792 | 8.38 | 334043 | 11.38 | 309196 | 12.98 |
| ZZZZZZ        | 78393 | 4.37 | 288409 | 5.42 | 171785 | 6.96 | 305337 | 8.38 | 331413 | 11.38 | 306388 | 12.98 |
| ZZZZZZ        | 71667 | 4.36 | 264072 | 5.42 | 157559 | 6.96 | 276928 | 8.38 | 300699 | 11.38 | 283550 | 12.98 |
| OP33941-MS    | 76133 | 4.37 | 278047 | 5.42 | 172119 | 6.97 | 303708 | 8.39 | 338691 | 11.38 | 322554 | 12.98 |
| OP33941-MSD   | 80897 | 4.37 | 291666 | 5.42 | 173294 | 6.97 | 313735 | 8.39 | 347763 | 11.38 | 320283 | 12.98 |
| MC22534-6     | 83267 | 4.37 | 303682 | 5.42 | 181097 | 6.96 | 326505 | 8.38 | 356271 | 11.38 | 335021 | 12.98 |
| ZZZZZZ        | 69550 | 4.37 | 255194 | 5.42 | 156195 | 6.96 | 274444 | 8.38 | 314388 | 11.38 | 284388 | 12.98 |
| MC22534-1     | 83223 | 4.37 | 300272 | 5.42 | 183689 | 6.96 | 331568 | 8.38 | 367598 | 11.38 | 343693 | 12.98 |
| MC22534-2     | 78499 | 4.37 | 292673 | 5.42 | 179186 | 6.96 | 316589 | 8.38 | 353277 | 11.38 | 333289 | 12.98 |
| MC22534-3     | 77832 | 4.37 | 284577 | 5.42 | 170241 | 6.96 | 307767 | 8.38 | 344342 | 11.38 | 318528 | 12.98 |
| MC22534-4     | 78950 | 4.37 | 281573 | 5.42 | 169642 | 6.96 | 304455 | 8.38 | 332346 | 11.38 | 312747 | 12.98 |
| ZZZZZZ        | 69661 | 4.37 | 258279 | 5.42 | 155901 | 6.96 | 278975 | 8.38 | 319765 | 11.38 | 290768 | 12.98 |
| MC22534-5     | 78274 | 4.37 | 289482 | 5.42 | 174560 | 6.96 | 315689 | 8.38 | 344441 | 11.38 | 317833 | 12.98 |
| ZZZZZZ        | 77062 | 4.36 | 285713 | 5.42 | 169903 | 6.96 | 305340 | 8.38 | 336117 | 11.38 | 308235 | 12.98 |
| ZZZZZZ        | 73125 | 4.37 | 270939 | 5.42 | 163138 | 6.96 | 293175 | 8.38 | 327857 | 11.38 | 302553 | 12.98 |
| ZZZZZZ        | 73418 | 4.36 | 273393 | 5.42 | 165104 | 6.96 | 298172 | 8.38 | 328378 | 11.38 | 304561 | 12.98 |
| ZZZZZZ        | 73394 | 4.36 | 265579 | 5.42 | 161121 | 6.96 | 293804 | 8.38 | 319679 | 11.38 | 297642 | 12.98 |
| ZZZZZZ        | 83463 | 4.36 | 304089 | 5.42 | 183880 | 6.96 | 329210 | 8.38 | 363747 | 11.38 | 335266 | 12.98 |
| ZZZZZZ        | 83502 | 4.36 | 305904 | 5.42 | 183540 | 6.96 | 325363 | 8.38 | 356205 | 11.38 | 323974 | 12.98 |
| ZZZZZZ        | 80030 | 4.36 | 294961 | 5.42 | 178995 | 6.96 | 319582 | 8.38 | 354085 | 11.38 | 324632 | 12.98 |
| ZZZZZZ        | 77532 | 4.37 | 284989 | 5.42 | 171562 | 6.96 | 305335 | 8.38 | 335733 | 11.38 | 305689 | 12.98 |
| ZZZZZZ        | 85606 | 4.37 | 314032 | 5.42 | 190830 | 6.96 | 334658 | 8.38 | 379988 | 11.38 | 346232 | 12.98 |
| ZZZZZZ        | 77755 | 4.36 | 281505 | 5.42 | 173089 | 6.96 | 305724 | 8.38 | 337408 | 11.38 | 315318 | 12.98 |

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.

7.4.2  
7



# Semivolatile Internal Standard Area Summary

Job Number: MC22534  
Account: SHELLWIC Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSR1173-CC1159 | Injection Date: | 07/12/13    |
| Lab File ID:   | R32145.D       | Injection Time: | 07:40       |
| Instrument ID: | GCMSR          | 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 |

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.4.2

7

# Semivolatile Internal Standard Area Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSR1179-CC1159 | Injection Date: | 07/23/13    |
| Lab File ID:   | R32324.D       | Injection Time: | 11:40       |
| Instrument ID: | GCMSR          | 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                | 76980  | 4.31 | 284275 | 5.37 | 178259 | 6.91 | 309710 | 8.32 | 356647 | 11.31 | 330501 | 12.90 |
| Upper Limit <sup>a</sup> | 153960 | 4.81 | 568550 | 5.87 | 356518 | 7.41 | 619420 | 8.82 | 713294 | 11.81 | 661002 | 13.40 |
| Lower Limit <sup>b</sup> | 38490  | 3.81 | 142138 | 4.87 | 89130  | 6.41 | 154855 | 7.82 | 178324 | 10.81 | 165251 | 12.40 |

| Lab Sample ID          | IS 1   |      | IS 2   |      | IS 3   |      | IS 4   |      | IS 5   |       | IS 6   |       |
|------------------------|--------|------|--------|------|--------|------|--------|------|--------|-------|--------|-------|
|                        | AREA   | RT   | AREA   | RT   | AREA   | RT   | AREA   | RT   | AREA   | RT    | AREA   | RT    |
| ZZZZZZ                 | 90139  | 4.31 | 332191 | 5.37 | 199647 | 6.91 | 359456 | 8.32 | 413652 | 11.31 | 388344 | 12.90 |
| ZZZZZZ                 | 97620  | 4.31 | 366536 | 5.37 | 218947 | 6.91 | 393783 | 8.32 | 433912 | 11.31 | 405931 | 12.90 |
| ZZZZZZ                 | 111842 | 4.31 | 420997 | 5.37 | 258497 | 6.91 | 477849 | 8.32 | 537374 | 11.31 | 498751 | 12.90 |
| OP34082-MB             | 101685 | 4.31 | 392549 | 5.37 | 241136 | 6.91 | 448433 | 8.32 | 502615 | 11.31 | 463400 | 12.90 |
| OP34082-BS             | 97361  | 4.31 | 376246 | 5.37 | 228589 | 6.91 | 413741 | 8.32 | 468013 | 11.31 | 429704 | 12.90 |
| OP34082-MS             | 97244  | 4.31 | 367656 | 5.37 | 222273 | 6.91 | 410899 | 8.32 | 458195 | 11.31 | 423812 | 12.90 |
| OP34082-MSD            | 91413  | 4.31 | 351479 | 5.37 | 213138 | 6.91 | 393915 | 8.32 | 440020 | 11.31 | 401259 | 12.90 |
| MC22900-3              | 93519  | 4.31 | 359279 | 5.37 | 216730 | 6.91 | 409341 | 8.32 | 456193 | 11.31 | 422669 | 12.90 |
| MC22534-3 <sup>c</sup> | 100825 | 4.31 | 380769 | 5.37 | 232915 | 6.91 | 428455 | 8.32 | 483203 | 11.31 | 447809 | 12.90 |
| OP34083-MB             | 99233  | 4.31 | 372747 | 5.37 | 229869 | 6.91 | 422841 | 8.32 | 463738 | 11.31 | 400551 | 12.90 |
| OP34083-BS             | 88760  | 4.31 | 333984 | 5.37 | 204423 | 6.91 | 373144 | 8.32 | 407105 | 11.31 | 360533 | 12.90 |
| ZZZZZZ                 | 90436  | 4.31 | 347779 | 5.37 | 215813 | 6.91 | 389451 | 8.32 | 428320 | 11.31 | 380729 | 12.90 |
| ZZZZZZ                 | 81259  | 4.31 | 314145 | 5.37 | 188126 | 6.90 | 347518 | 8.32 | 386157 | 11.31 | 353482 | 12.90 |
| ZZZZZZ                 | 84804  | 4.31 | 319554 | 5.37 | 194654 | 6.91 | 358864 | 8.32 | 396199 | 11.31 | 367243 | 12.90 |

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

- (a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
- (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
- (c) Sample re-extracted beyond recommended holding time.

7.4.3  
7

# Semivolatile Surrogate Recovery Summary

Job Number: MC22534

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 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  |
|---------------|-------------|------|------|------|----|----|-----|
| MC22534-1     | R32156.D    | 41   | 33   | 82   | 80 | 85 | 89  |
| MC22534-2     | R32157.D    | 45   | 30   | 87   | 76 | 78 | 97  |
| MC22534-3     | R32336.D    | 28   | 20   | 48   | 70 | 85 | 80  |
| MC22534-3     | R32159.D    | 2* a | 1* a | 4* a | 85 | 90 | 103 |
| MC22534-4     | R32160.D    | 47   | 39   | 91   | 86 | 88 | 104 |
| MC22534-5     | R32162.D    | 26   | 23   | 47   | 83 | 94 | 101 |
| MC22534-6     | R32154.D    | 54   | 49   | 93   | 83 | 96 | 98  |
| OP33941-BS    | R32147.D    | 53   | 35   | 99   | 90 | 96 | 104 |
| OP33941-MB    | R32146.D    | 49   | 32   | 91   | 81 | 85 | 97  |
| OP33941-MS    | R32152.D    | 52   | 39   | 96   | 84 | 92 | 98  |
| OP33941-MSD   | R32153.D    | 52   | 38   | 95   | 85 | 94 | 101 |
| OP34082-BS    | R32332.D    | 57   | 21   | 93   | 76 | 87 | 80  |
| OP34082-MB    | R32331.D    | 48   | 18   | 73   | 67 | 77 | 77  |
| OP34082-MS    | R32333.D    | 57   | 21   | 92   | 80 | 91 | 81  |
| OP34082-MSD   | R32334.D    | 54   | 21   | 89   | 79 | 92 | 82  |

| 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.

7.5.1  
7

# Semivolatile Surrogate Recovery Summary

Job Number: MC22534

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 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  |
|---------------|-------------|----|----|-----|
| MC22534-1     | I84761A.D   | 87 | 88 | 97  |
| MC22534-2     | I84762A.D   | 85 | 80 | 106 |
| MC22534-3     | I84763A.D   | 96 | 92 | 111 |
| MC22534-4     | I84764A.D   | 96 | 90 | 111 |
| MC22534-5     | I84765A.D   | 92 | 98 | 109 |
| MC22534-6     | I84760A.D   | 93 | 98 | 104 |
| OP33942-BS    | I84755A.D   | 99 | 96 | 111 |
| OP33942-MB    | I84754A.D   | 89 | 89 | 105 |
| OP33942-MS    | I84758A.D   | 93 | 94 | 106 |
| OP33942-MSD   | I84759A.D   | 95 | 92 | 112 |

**Surrogate Compounds**                      **Recovery Limits**

|                       |         |
|-----------------------|---------|
| S1 = Nitrobenzene-d5  | 30-130% |
| S2 = 2-Fluorobiphenyl | 30-130% |
| S3 = Terphenyl-d14    | 30-130% |

7.5.2  
7

## GC Volatiles

---

## QC Data Summaries



---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

# Method Blank Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| OP33961-MB | BK26671.D | 1  | 07/11/13 | NK | 07/11/13  | OP33961    | GBK917           |

The QC reported here applies to the following samples: Method: SW846 8011

MC22534-1, MC22534-2, MC22534-3, MC22534-4, MC22534-5, MC22534-6, MC22534-8

| CAS No.  | Compound                    | Result | RL    | MDL    | Units | Q |
|----------|-----------------------------|--------|-------|--------|-------|---|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND     | 0.015 | 0.0045 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.015 | 0.0097 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Limits |         |
|----------|------------------------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 121%   | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 121%   | 36-173% |

8.1.1  
8

# Blank Spike Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| OP33961-BS | BK26672.D | 1  | 07/11/13 | NK | 07/11/13  | OP33961    | GBK917           |

The QC reported here applies to the following samples: Method: SW846 8011

MC22534-1, MC22534-2, MC22534-3, MC22534-4, MC22534-5, MC22534-6, MC22534-8

| CAS No.  | Compound                    | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | Limits |
|----------|-----------------------------|---------------|-------------|----------|--------|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | 0.071         | 0.081       | 114      | 60-140 |
| 106-93-4 | 1,2-Dibromoethane           | 0.071         | 0.075       | 106      | 60-140 |

| CAS No.  | Surrogate Recoveries   | BSP  | Limits  |
|----------|------------------------|------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 124% | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 123% | 36-173% |

8.2.1  
8

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|-----------|----|----------|----|-----------|------------|------------------|
| OP33961-MS  | BK26673.D | 1  | 07/11/13 | NK | 07/11/13  | OP33961    | GBK917           |
| OP33961-MSD | BK26674.D | 1  | 07/11/13 | NK | 07/11/13  | OP33961    | GBK917           |
| MC22534-6   | BK26680.D | 1  | 07/11/13 | NK | 07/11/13  | OP33961    | GBK917           |

The QC reported here applies to the following samples: Method: SW846 8011

MC22534-1, MC22534-2, MC22534-3, MC22534-4, MC22534-5, MC22534-6, MC22534-8

| CAS No.  | Compound                    | MC22534-6<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|----------|-----------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND                | 0.0708     | 0.080      | 113     | 0.0714        | 0.087       | 122      | 8   | 64-141/29         |
| 106-93-4 | 1,2-Dibromoethane           | ND                | 0.0708     | 0.068      | 96      | 0.0714        | 0.071       | 99       | 4   | 63-163/27         |

| CAS No.  | Surrogate Recoveries   | MS   | MSD  | MC22534-6 | Limits  |
|----------|------------------------|------|------|-----------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 123% | 132% | 171%      | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 121% | 132% | 166%      | 36-173% |

8.3.1  
8

\* = Outside of Control Limits.



# Volatile Surrogate Recovery Summary

Job Number: MC22534

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

Method: SW846 8011

Matrix: AQ

Samples and QC shown here apply to the above method

| Lab Sample ID | Lab File ID | S1 <sup>a</sup> | S1 <sup>b</sup> |
|---------------|-------------|-----------------|-----------------|
| MC22534-1     | BK26675.D   | 128             | 126             |
| MC22534-2     | BK26676.D   | 137             | 138             |
| MC22534-3     | BK26677.D   | 159             | 153             |
| MC22534-4     | BK26678.D   | 155             | 155             |
| MC22534-5     | BK26679.D   | 135             | 133             |
| MC22534-6     | BK26680.D   | 171             | 166             |
| MC22534-8     | BK26682.D   | 161             | 148             |
| OP33961-BS    | BK26672.D   | 124             | 123             |
| OP33961-MB    | BK26671.D   | 121             | 121             |
| OP33961-MS    | BK26673.D   | 123             | 121             |
| OP33961-MSD   | BK26674.D   | 132             | 132             |

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: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Check Std:     | GBK917-ICC917 | Injection Date: | 07/11/13   |
| Lab File ID:   | BK26666.D     | Injection Time: | 14:22      |
| Instrument ID: | GCBK          | Method:         | SW846 8011 |

S1<sup>a</sup>    S1<sup>b</sup>  
 RT      RT

|           |      |      |
|-----------|------|------|
| Check Std | 4.60 | 4.97 |
|-----------|------|------|

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 <sup>a</sup> RT | S1 <sup>b</sup> RT |
|---------------|-------------|---------------|---------------|--------------------|--------------------|
| ZZZZZZ        | BK26669A.D  | 07/11/13      | 15:31         | 4.60               | 4.97               |
| OP33961-MB    | BK26671.D   | 07/11/13      | 16:17         | 4.60               | 4.97               |
| OP33961-BS    | BK26672.D   | 07/11/13      | 16:40         | 4.60               | 4.97               |
| OP33961-MS    | BK26673.D   | 07/11/13      | 17:02         | 4.60               | 4.97               |
| OP33961-MSD   | BK26674.D   | 07/11/13      | 17:25         | 4.60               | 4.97               |
| MC22534-1     | BK26675.D   | 07/11/13      | 17:48         | 4.60               | 4.97               |
| MC22534-2     | BK26676.D   | 07/11/13      | 18:11         | 4.60               | 4.97               |
| MC22534-3     | BK26677.D   | 07/11/13      | 18:33         | 4.60               | 4.97               |
| MC22534-4     | BK26678.D   | 07/11/13      | 18:56         | 4.60               | 4.97               |
| MC22534-5     | BK26679.D   | 07/11/13      | 19:19         | 4.60               | 4.97               |
| MC22534-6     | BK26680.D   | 07/11/13      | 19:42         | 4.60               | 4.97               |

**Surrogate Compounds**

S1 = Bromofluorobenzene (S)

- (a) Retention time from GC signal #2
- (b) Retention time from GC signal #1

8.5.1  
8

# GC Surrogate Retention Time Summary

Job Number: MC22534  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |            |
|----------------|--------------|-----------------|------------|
| Check Std:     | GBK917-CC917 | Injection Date: | 07/11/13   |
| Lab File ID:   | BK26681.D    | Injection Time: | 20:04      |
| Instrument ID: | GCBK         | Method:         | SW846 8011 |

S1<sup>a</sup>    S1<sup>b</sup>  
 RT     RT

|           |      |      |
|-----------|------|------|
| Check Std | 4.60 | 4.97 |
|-----------|------|------|

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 <sup>a</sup> RT | S1 <sup>b</sup> RT |
|---------------|-------------|---------------|---------------|--------------------|--------------------|
| MC22534-8     | BK26682.D   | 07/11/13      | 20:27         | 4.60               | 4.97               |
| ZZZZZZ        | BK26683.D   | 07/11/13      | 20:49         | 4.60               | 4.97               |
| ZZZZZZ        | BK26684.D   | 07/11/13      | 21:12         | 4.60               | 4.97               |
| ZZZZZZ        | BK26685.D   | 07/11/13      | 21:35         | 4.60               | 4.97               |
| ZZZZZZ        | BK26686.D   | 07/11/13      | 21:57         | 4.60               | 4.97               |
| ZZZZZZ        | BK26687.D   | 07/11/13      | 22:20         | 4.60               | 4.97               |
| ZZZZZZ        | BK26688.D   | 07/11/13      | 22:43         | 4.60               | 4.97               |
| ZZZZZZ        | BK26689.D   | 07/11/13      | 23:06         | 4.60               | 4.97               |
| ZZZZZZ        | BK26690.D   | 07/11/13      | 23:29         | 4.60               | 4.97               |
| ZZZZZZ        | BK26691.D   | 07/11/13      | 23:52         | 4.60               | 4.97               |

## Surrogate Compounds

S1 = Bromofluorobenzene (S)

- (a) Retention time from GC signal #2
- (b) Retention time from GC signal #1

8.5.2  
8

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VERIFICATION, TESTING AND CERTIFICATION COMPANY.



*e-Hardcopy 2.0*  
*Automated Report*

### Technical Report for

### Shell Oil

URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana,

SGS Accutest Job Number: MC22664

Sampling Date: 07/11/13

#### Report to:

AECOM, INC.

Melissa.mansker@aecom.com

ATTN: Melissa Mansker

Total number of pages in report: 135



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.

H. (Brad) Madadian  
Lab Director

Client Service contact: Jeremy Vienneau 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO (MA00136) 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

November 1, 2016

AECOM  
1001 Highlands Plaza Drive West Suite 300  
St. Louis, MO 63110

RE: SGS Accutest Job # MC22664

Dear Elizabeth Kunkel

As you are aware, SGS Accutest Inc. - Marlborough has been conducting an extensive review of data associated with some historical Gas Chromatography-Mass Spectroscopy volatiles analyses. As a result of this review it was determined that some revisions of the original test report for this job were needed. These corrections have been incorporated into the revised report.

Please be assured that corrective actions have been put in place to address this matter and prevent a recurrence.

We apologize for any inconvenience that this issue may have caused. Please don't hesitate to contact us if we can be of further assistance.

Sincerely,

**H. (Brad) Madadian**

Regional Laboratory Director  
SGS Accutest Inc. - Marlborough

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TESTING AND CERTIFICATION COMPANY. NN

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## Sample Summary

Shell Oil

Job No: MC22664  
URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample Number | Collected Date | Time By | Received     | Matrix Code | Type             | Client Sample ID    |
|---------------|----------------|---------|--------------|-------------|------------------|---------------------|
| MC22664-1     | 07/11/13       | 09:00   | LRDM07/12/13 | AQ          | Ground Water     | MW24-ROX-071113     |
| MC22664-2     | 07/11/13       | 09:50   | LRDM07/12/13 | AQ          | Ground Water     | P54-ROX-071113      |
| MC22664-3     | 07/11/13       | 10:35   | LRDM07/12/13 | AQ          | Ground Water     | MW3-ROX-071113      |
| MC22664-4     | 07/11/13       | 10:50   | LRDM07/12/13 | AQ          | Ground Water     | MW2-ROX-071113-EB   |
| MC22664-5     | 07/11/13       | 11:35   | LRDM07/12/13 | AQ          | Ground Water     | MW2-ROX-071113      |
| MC22664-6     | 07/11/13       | 13:15   | LRDM07/12/13 | AQ          | Ground Water     | ROST4PZC-ROX-071113 |
| MC22664-7     | 07/11/13       | 14:05   | LRDM07/12/13 | AQ          | Ground Water     | ROST3MW-ROX-071113  |
| MC22664-8     | 07/11/13       | 15:00   | LRDM07/12/13 | AQ          | Ground Water     | MW22-ROX-071113     |
| MC22664-9     | 07/11/13       | 15:00   | LRDM07/12/13 | AQ          | Ground Water     | MW22-ROX-071113-DUP |
| MC22664-10    | 07/11/13       | 00:00   | LRDM07/12/13 | AQ          | Trip Blank Water | TB-ROX-071113-HCL   |
| MC22664-11    | 07/11/13       | 00:00   | LRDM07/12/13 | AQ          | Trip Blank Water | TB-ROX-071113-ST    |

## SAMPLE DELIVERY GROUP CASE NARRATIVE

2

**Client:** She O

**Job No** MC22664

**Site:** URSMOSTL:Roxana 3Q 3 GW/ 2 562850 03003 900 South Centra **Report Date** / /20 6 4:03:4 PM

9 Samp e(s), 2 Trip Blank(s) were collected on 07/ /20 3 and were received at SGS Accutest New England on 07/ 2/20 3 properly preserved, at 0 4 Deg C and intact. These Samples received a job number of MC22664. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. -Chlorohexane, Benzenethiol, D benz(a,h)anthracene, Indene, and Quinoline were searched in the library search and reported on if detections were found.

Except as noted below, all method specified calibration 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

|                   |                          |
|-------------------|--------------------------|
| <b>Matrix:</b> AQ | <b>Batch ID:</b> MSN2948 |
|-------------------|--------------------------|

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC22702-4MS, MC22702-4MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specification criteria.
- Blank Spike Recovery(s) for Acroene, Dichlorodifluoromethane are outside control limits.
- MC22702-4MS/MSD Recovery(s) for 2-Butanone (MEK), 2-Hexanone, Acetone, Vinyl Acetate are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike

|                   |                          |
|-------------------|--------------------------|
| <b>Matrix:</b> AQ | <b>Batch ID:</b> MSN2949 |
|-------------------|--------------------------|

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC22739-8MS, MC22739-8MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specification criteria.



## Extractables by GCMS By Method SW846 8270C

**Matrix:** AQ

**Batch ID:** OP34009

- A samples were extracted within the recommended method holding time
- A samples were analyzed within the recommended method holding time
- Sample(s) MC22548- 8MS, MC22548- 8MSD were used as the QC samples indicated
- A method blanks for this batch meet method specification criteria
- Blank Spike Recovery(s) for Benzoc Ac d, Hexachlorocyclopentadiene, Hexachloroethane, Phenol, Pyridine are outside control limits
- Matrix Spike Recovery(s) for Benzoc Ac d, Dimethylphthalate, Hexachlorocyclopentadiene, Hexachloroethane, Pyridine are outside control limits. Out of control limits due to possible matrix interference
- Matrix Spike Duplicate Recovery(s) for Hexachlorocyclopentadiene, Hexachloroethane, Phenol, Pyridine are outside control limits. Out of control limits due to possible matrix interference
- RPD(s) for MSD for Dimethylphthalate are outside control limits for sample OP34009-MSD. High RPD due to possible sample nonhomogeneity
- MC22664-7 for 2-Fluorophenol: Out of control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis
- MC22664- for Phenol-d5: Out of control limits. Sample re-extracted/reanalyzed
- MC22664- for 2-Fluorophenol: Out of control limits. Sample re-extracted/reanalyzed
- MC22664-7 for Phenol-d5: Out of control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis

**Matrix:** AQ

**Batch ID:** OP34099

- Sample(s) MC22900-7MS, MC22900-7MSD were used as the QC samples indicated
- A method blanks for this batch meet method specification criteria
- MC22664- ,7: Sample re-extracted beyond recommended holding time
- MC22664-7 for Phenol-d5: Out of 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:** OP340 0

- A samples were extracted within the recommended method holding time
- A samples were analyzed within the recommended method holding time
- Sample(s) MC22548- 9MS, MC22548- 9MSD were used as the QC samples indicated
- Sample(s) MC22664-8, MC22664-9 have compound(s) reported with a "B" qualifier, indicating analytes found in the associated method blank
- OP340 0-MS/MSD Recovery(s) for 1-Methylnaphthalene, 2-Methylnaphthalene are outside control limits. Out of control limits due to possible matrix interference. Refer to Blank Spike

## Volatiles by GC By Method SW846 8011

**Matrix:** AQ

**Batch ID:** OP34092

- A samples were analyzed within the recommended method holding time
- A method blanks for this batch meet method specification criteria
- Sample(s) MC22787-5MS, MC22787-5MSD were used as the QC samples indicated

SGS Accutest New England certifies that all analyses were performed within method specification. It is further recommended that this report be used in its entirety. The Laboratory Director for SGS Accutest New England or assignee as verified by the signature on the cover page has authorized the release of this report (MC22664)

## Summary of Hits

Job Number: MC22664  
 Account: Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
 Collected: 07/11/13



| Lab Sample ID | Client Sample ID | Result/<br>Analyte | RL | MDL | Units | Method |
|---------------|------------------|--------------------|----|-----|-------|--------|
|---------------|------------------|--------------------|----|-----|-------|--------|

**MC22664-1 MW24-ROX-071113**

|                     |         |       |       |      |                    |
|---------------------|---------|-------|-------|------|--------------------|
| Acetone             | 15.7    | 10    | 2.8   | ug/l | SW846 8260B        |
| Acenaphthene        | 0.024 J | 0.11  | 0.015 | ug/l | SW846 8270C BY SIM |
| 2-Methylnaphthalene | 0.062 J | 0.22  | 0.056 | ug/l | SW846 8270C BY SIM |
| Phenanthrene        | 0.038 J | 0.054 | 0.014 | ug/l | SW846 8270C BY SIM |

**MC22664-2 P54-ROX-071113**

|                            |         |       |       |      |                    |
|----------------------------|---------|-------|-------|------|--------------------|
| bis(2-Ethylhexyl)phthalate | 0.52 J  | 2.1   | 0.51  | ug/l | SW846 8270C        |
| Acenaphthene               | 0.032 J | 0.10  | 0.014 | ug/l | SW846 8270C BY SIM |
| Acenaphthylene             | 0.016 J | 0.10  | 0.014 | ug/l | SW846 8270C BY SIM |
| Anthracene                 | 0.018 J | 0.10  | 0.018 | ug/l | SW846 8270C BY SIM |
| 2-Methylnaphthalene        | 0.083 J | 0.21  | 0.054 | ug/l | SW846 8270C BY SIM |
| Phenanthrene               | 0.049 J | 0.052 | 0.013 | ug/l | SW846 8270C BY SIM |

**MC22664-3 MW3-ROX-071113**

|                            |         |       |       |      |                    |
|----------------------------|---------|-------|-------|------|--------------------|
| Benzene                    | 5.9     | 0.50  | 0.45  | ug/l | SW846 8260B        |
| Isopropylbenzene           | 4.9 J   | 5.0   | 0.64  | ug/l | SW846 8260B        |
| Methyl Tert Butyl Ether    | 3.5     | 1.0   | 0.43  | ug/l | SW846 8260B        |
| n-Propylbenzene            | 5.5     | 5.0   | 0.59  | ug/l | SW846 8260B        |
| Toluene                    | 1.3     | 1.0   | 0.46  | ug/l | SW846 8260B        |
| 1,2,4-Trimethylbenzene     | 1.3 J   | 5.0   | 0.47  | ug/l | SW846 8260B        |
| m,p-Xylene                 | 2.8     | 1.0   | 0.70  | ug/l | SW846 8260B        |
| Xylene (total)             | 2.8     | 1.0   | 0.41  | ug/l | SW846 8260B        |
| bis(2-Ethylhexyl)phthalate | 3.8     | 2.2   | 0.53  | ug/l | SW846 8270C        |
| Acenaphthene               | 0.028 J | 0.11  | 0.015 | ug/l | SW846 8270C BY SIM |
| 1-Methylnaphthalene        | 0.44    | 0.22  | 0.15  | ug/l | SW846 8270C BY SIM |
| 2-Methylnaphthalene        | 0.38    | 0.22  | 0.056 | ug/l | SW846 8270C BY SIM |
| Phenanthrene               | 0.039 J | 0.054 | 0.014 | ug/l | SW846 8270C BY SIM |
| Pyrene                     | 0.072 J | 0.11  | 0.039 | ug/l | SW846 8270C BY SIM |

**MC22664-4 MW2-ROX-071113-EB**

|              |         |       |       |      |                    |
|--------------|---------|-------|-------|------|--------------------|
| Phenanthrene | 0.033 J | 0.051 | 0.013 | ug/l | SW846 8270C BY SIM |
| Pyrene       | 0.065 J | 0.10  | 0.036 | ug/l | SW846 8270C BY SIM |

**MC22664-5 MW2-ROX-071113**

|                   |       |      |      |      |             |
|-------------------|-------|------|------|------|-------------|
| Benzene           | 6.0   | 0.50 | 0.45 | ug/l | SW846 8260B |
| sec-Butylbenzene  | 7.3   | 5.0  | 0.58 | ug/l | SW846 8260B |
| tert-Butylbenzene | 2.9 J | 5.0  | 0.87 | ug/l | SW846 8260B |
| Ethylbenzene      | 1570  | 50   | 19   | ug/l | SW846 8260B |
| Isopropylbenzene  | 93.1  | 5.0  | 0.64 | ug/l | SW846 8260B |

# Summary of Hits

Job Number: MC22664  
 Account: Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
 Collected: 07/11/13



| Lab Sample ID | Client Sample ID | Result/<br>Analyte         | RL      | MDL   | Units | Method                  |
|---------------|------------------|----------------------------|---------|-------|-------|-------------------------|
|               |                  | p-Isopropyltoluene         | 7.5     | 5.0   | 0.55  | ug/l SW846 8260B        |
|               |                  | Methyl Tert Butyl Ether    | 6.2     | 1.0   | 0.43  | ug/l SW846 8260B        |
|               |                  | Naphthalene                | 114     | 5.0   | 0.79  | ug/l SW846 8260B        |
|               |                  | n-Propylbenzene            | 127     | 5.0   | 0.59  | ug/l SW846 8260B        |
|               |                  | Toluene                    | 110     | 1.0   | 0.46  | ug/l SW846 8260B        |
|               |                  | 1,2,4-Trimethylbenzene     | 522     | 250   | 23    | ug/l SW846 8260B        |
|               |                  | 1,3,5-Trimethylbenzene     | 175     | 5.0   | 1.1   | ug/l SW846 8260B        |
|               |                  | m,p-Xylene                 | 1880    | 50    | 35    | ug/l SW846 8260B        |
|               |                  | o-Xylene                   | 174     | 1.0   | 0.41  | ug/l SW846 8260B        |
|               |                  | Xylene (total)             | 1880    | 50    | 20    | ug/l SW846 8260B        |
|               |                  | 2,4-Dimethylphenol         | 5.0 J   | 11    | 1.3   | ug/l SW846 8270C        |
|               |                  | bis(2-Ethylhexyl)phthalate | 0.63 J  | 2.2   | 0.54  | ug/l SW846 8270C        |
|               |                  | Acenaphthene               | 0.035 J | 0.11  | 0.015 | ug/l SW846 8270C BY SIM |
|               |                  | 1-Methylnaphthalene        | 12.3    | 0.22  | 0.15  | ug/l SW846 8270C BY SIM |
|               |                  | 2-Methylnaphthalene        | 24.9    | 0.22  | 0.057 | ug/l SW846 8270C BY SIM |
|               |                  | Phenanthrene               | 0.051 J | 0.055 | 0.014 | ug/l SW846 8270C BY SIM |

**MC22664-6 ROST4PZC-ROX-071113**

|  |  |                            |         |       |       |                         |
|--|--|----------------------------|---------|-------|-------|-------------------------|
|  |  | Benzene                    | 49.7    | 0.50  | 0.45  | ug/l SW846 8260B        |
|  |  | Ethylbenzene               | 65.1    | 1.0   | 0.38  | ug/l SW846 8260B        |
|  |  | Isopropylbenzene           | 2.5 J   | 5.0   | 0.64  | ug/l SW846 8260B        |
|  |  | Naphthalene                | 18.9    | 5.0   | 0.79  | ug/l SW846 8260B        |
|  |  | n-Propylbenzene            | 4.1 J   | 5.0   | 0.59  | ug/l SW846 8260B        |
|  |  | Toluene                    | 41.0    | 1.0   | 0.46  | ug/l SW846 8260B        |
|  |  | 1,2,4-Trimethylbenzene     | 19.4    | 5.0   | 0.47  | ug/l SW846 8260B        |
|  |  | 1,3,5-Trimethylbenzene     | 4.4 J   | 5.0   | 1.1   | ug/l SW846 8260B        |
|  |  | m,p-Xylene                 | 126     | 1.0   | 0.70  | ug/l SW846 8260B        |
|  |  | o-Xylene                   | 64.9    | 1.0   | 0.41  | ug/l SW846 8260B        |
|  |  | Xylene (total)             | 191     | 1.0   | 0.41  | ug/l SW846 8260B        |
|  |  | Phenol                     | 0.57 J  | 5.4   | 0.55  | ug/l SW846 8270C        |
|  |  | bis(2-Ethylhexyl)phthalate | 3.2     | 2.2   | 0.53  | ug/l SW846 8270C        |
|  |  | Acenaphthene               | 0.19    | 0.11  | 0.015 | ug/l SW846 8270C BY SIM |
|  |  | Acenaphthylene             | 0.073 J | 0.11  | 0.014 | ug/l SW846 8270C BY SIM |
|  |  | Anthracene                 | 0.12    | 0.11  | 0.019 | ug/l SW846 8270C BY SIM |
|  |  | Fluoranthene               | 0.099 J | 0.11  | 0.035 | ug/l SW846 8270C BY SIM |
|  |  | Fluorene                   | 0.27    | 0.11  | 0.050 | ug/l SW846 8270C BY SIM |
|  |  | 1-Methylnaphthalene        | 2.7     | 0.22  | 0.15  | ug/l SW846 8270C BY SIM |
|  |  | 2-Methylnaphthalene        | 2.1     | 0.22  | 0.056 | ug/l SW846 8270C BY SIM |
|  |  | Phenanthrene               | 0.52    | 0.054 | 0.014 | ug/l SW846 8270C BY SIM |
|  |  | Pyrene                     | 0.090 J | 0.11  | 0.038 | ug/l SW846 8270C BY SIM |

**MC22664-7 ROST3MW-ROX-071113**

|  |  |         |      |      |      |                  |
|--|--|---------|------|------|------|------------------|
|  |  | Benzene | 12.5 | 0.50 | 0.45 | ug/l SW846 8260B |
|--|--|---------|------|------|------|------------------|

# Summary of Hits

Job Number: MC22664  
 Account: Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
 Collected: 07/11/13



| Lab Sample ID | Client Sample ID | Result/<br>Analyte              | RL      | MDL   | Units | Method |                    |
|---------------|------------------|---------------------------------|---------|-------|-------|--------|--------------------|
|               |                  | sec-Butylbenzene                | 1.4 J   | 5.0   | 0.58  | ug/l   | SW846 8260B        |
|               |                  | Ethylbenzene                    | 218     | 1.0   | 0.38  | ug/l   | SW846 8260B        |
|               |                  | Isopropylbenzene                | 14.6    | 5.0   | 0.64  | ug/l   | SW846 8260B        |
|               |                  | p-Isopropyltoluene              | 1.4 J   | 5.0   | 0.55  | ug/l   | SW846 8260B        |
|               |                  | Naphthalene                     | 41.1    | 5.0   | 0.79  | ug/l   | SW846 8260B        |
|               |                  | n-Propylbenzene                 | 27.9    | 5.0   | 0.59  | ug/l   | SW846 8260B        |
|               |                  | Toluene                         | 14.0    | 1.0   | 0.46  | ug/l   | SW846 8260B        |
|               |                  | 1,2,4-Trimethylbenzene          | 164     | 5.0   | 0.47  | ug/l   | SW846 8260B        |
|               |                  | 1,3,5-Trimethylbenzene          | 37.3    | 5.0   | 1.1   | ug/l   | SW846 8260B        |
|               |                  | m,p-Xylene                      | 644     | 1.0   | 0.70  | ug/l   | SW846 8260B        |
|               |                  | o-Xylene                        | 124     | 1.0   | 0.41  | ug/l   | SW846 8260B        |
|               |                  | Xylene (total)                  | 768     | 1.0   | 0.41  | ug/l   | SW846 8260B        |
|               |                  | 2,4-Dimethylphenol <sup>a</sup> | 1.6 J   | 11    | 1.2   | ug/l   | SW846 8270C        |
|               |                  | Dibenzofuran                    | 0.25 J  | 2.2   | 0.17  | ug/l   | SW846 8270C        |
|               |                  | bis(2-Ethylhexyl)phthalate      | 0.61 J  | 2.2   | 0.53  | ug/l   | SW846 8270C        |
|               |                  | Acenaphthene                    | 0.29    | 0.11  | 0.015 | ug/l   | SW846 8270C BY SIM |
|               |                  | Anthracene                      | 0.091 J | 0.11  | 0.019 | ug/l   | SW846 8270C BY SIM |
|               |                  | Fluorene                        | 0.43    | 0.11  | 0.050 | ug/l   | SW846 8270C BY SIM |
|               |                  | 1-Methylnaphthalene             | 10.5    | 0.22  | 0.15  | ug/l   | SW846 8270C BY SIM |
|               |                  | 2-Methylnaphthalene             | 14.2    | 0.22  | 0.056 | ug/l   | SW846 8270C BY SIM |
|               |                  | Phenanthrene                    | 0.73    | 0.054 | 0.014 | ug/l   | SW846 8270C BY SIM |
|               |                  | Pyrene                          | 0.044 J | 0.11  | 0.038 | ug/l   | SW846 8270C BY SIM |

MC22664-8      MW22-ROX-071113

|                             |       |     |      |      |             |
|-----------------------------|-------|-----|------|------|-------------|
| Benzene                     | 1190  | 50  | 45   | ug/l | SW846 8260B |
| sec-Butylbenzene            | 11.6  | 5.0 | 0.58 | ug/l | SW846 8260B |
| tert-Butylbenzene           | 14.2  | 5.0 | 0.87 | ug/l | SW846 8260B |
| Ethylbenzene                | 2070  | 100 | 38   | ug/l | SW846 8260B |
| Isopropylbenzene            | 131   | 5.0 | 0.64 | ug/l | SW846 8260B |
| p-Isopropyltoluene          | 8.7   | 5.0 | 0.55 | ug/l | SW846 8260B |
| 4-Methyl-2-pentanone (MIBK) | 10.2  | 5.0 | 1.3  | ug/l | SW846 8260B |
| Naphthalene                 | 345   | 5.0 | 0.79 | ug/l | SW846 8260B |
| n-Propylbenzene             | 242   | 5.0 | 0.59 | ug/l | SW846 8260B |
| Toluene                     | 3920  | 100 | 46   | ug/l | SW846 8260B |
| 1,2,4-Trimethylbenzene      | 864   | 500 | 47   | ug/l | SW846 8260B |
| 1,3,5-Trimethylbenzene      | 309   | 5.0 | 1.1  | ug/l | SW846 8260B |
| m,p-Xylene                  | 4130  | 100 | 70   | ug/l | SW846 8260B |
| o-Xylene                    | 2260  | 100 | 41   | ug/l | SW846 8260B |
| Xylene (total)              | 6390  | 100 | 41   | ug/l | SW846 8260B |
| 2,4-Dimethylphenol          | 104   | 11  | 1.2  | ug/l | SW846 8270C |
| 2-Methylphenol              | 15.9  | 11  | 1.4  | ug/l | SW846 8270C |
| 3&4-Methylphenol            | 29.0  | 11  | 2.2  | ug/l | SW846 8270C |
| Phenol                      | 9.4   | 5.4 | 0.56 | ug/l | SW846 8270C |
| bis(2-Ethylhexyl)phthalate  | 1.7 J | 2.2 | 0.53 | ug/l | SW846 8270C |

## Summary of Hits

Job Number: MC22664  
 Account: Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
 Collected: 07/11/13



| Lab Sample ID | Client Sample ID | Result/<br>Analyte  | RL      | MDL   | Units | Method                  |
|---------------|------------------|---------------------|---------|-------|-------|-------------------------|
|               |                  | Acenaphthene        | 0.26    | 0.11  | 0.015 | ug/l SW846 8270C BY SIM |
|               |                  | Acenaphthylene      | 0.48    | 0.11  | 0.014 | ug/l SW846 8270C BY SIM |
|               |                  | Anthracene          | 0.035 J | 0.11  | 0.019 | ug/l SW846 8270C BY SIM |
|               |                  | Fluorene            | 0.27    | 0.11  | 0.050 | ug/l SW846 8270C BY SIM |
|               |                  | 1-Methylnaphthalene | 23.2    | 0.22  | 0.15  | ug/l SW846 8270C BY SIM |
|               |                  | 2-Methylnaphthalene | 39.3    | 0.22  | 0.056 | ug/l SW846 8270C BY SIM |
|               |                  | Phenanthrene        | 0.20 B  | 0.054 | 0.014 | ug/l SW846 8270C BY SIM |

**MC22664-9 MW22-ROX-071113-DUP**

|                             |        |       |       |      |                    |
|-----------------------------|--------|-------|-------|------|--------------------|
| Benzene                     | 1110   | 50    | 45    | ug/l | SW846 8260B        |
| sec-Butylbenzene            | 11.6   | 5.0   | 0.58  | ug/l | SW846 8260B        |
| tert-Butylbenzene           | 14.8   | 5.0   | 0.87  | ug/l | SW846 8260B        |
| Ethylbenzene                | 1790   | 100   | 38    | ug/l | SW846 8260B        |
| Isopropylbenzene            | 133    | 5.0   | 0.64  | ug/l | SW846 8260B        |
| p-Isopropyltoluene          | 8.7    | 5.0   | 0.55  | ug/l | SW846 8260B        |
| 4-Methyl-2-pentanone (MIBK) | 10.3   | 5.0   | 1.3   | ug/l | SW846 8260B        |
| Naphthalene                 | 362    | 5.0   | 0.79  | ug/l | SW846 8260B        |
| n-Propylbenzene             | 245    | 5.0   | 0.59  | ug/l | SW846 8260B        |
| Toluene                     | 3570   | 100   | 46    | ug/l | SW846 8260B        |
| 1,2,4-Trimethylbenzene      | 754    | 500   | 47    | ug/l | SW846 8260B        |
| 1,3,5-Trimethylbenzene      | 311    | 5.0   | 1.1   | ug/l | SW846 8260B        |
| m,p-Xylene                  | 3830   | 100   | 70    | ug/l | SW846 8260B        |
| o-Xylene                    | 2050   | 100   | 41    | ug/l | SW846 8260B        |
| Xylene (total)              | 5880   | 100   | 41    | ug/l | SW846 8260B        |
| 2,4-Dimethylphenol          | 97.8   | 11    | 1.3   | ug/l | SW846 8270C        |
| 2-Methylphenol              | 14.7   | 11    | 1.4   | ug/l | SW846 8270C        |
| 3&4-Methylphenol            | 26.9   | 11    | 2.3   | ug/l | SW846 8270C        |
| Phenol                      | 8.8    | 5.6   | 0.57  | ug/l | SW846 8270C        |
| Di-n-butyl phtalate         | 0.52 J | 5.6   | 0.43  | ug/l | SW846 8270C        |
| bis(2-Ethylhexyl)phtalate   | 2.1 J  | 2.2   | 0.54  | ug/l | SW846 8270C        |
| Acenaphthene                | 0.18   | 0.11  | 0.015 | ug/l | SW846 8270C BY SIM |
| Acenaphthylene              | 0.47   | 0.11  | 0.015 | ug/l | SW846 8270C BY SIM |
| Fluorene                    | 0.17   | 0.11  | 0.051 | ug/l | SW846 8270C BY SIM |
| 1-Methylnaphthalene         | 21.6   | 0.22  | 0.16  | ug/l | SW846 8270C BY SIM |
| 2-Methylnaphthalene         | 37.0   | 0.22  | 0.058 | ug/l | SW846 8270C BY SIM |
| Phenanthrene                | 0.20 B | 0.056 | 0.014 | ug/l | SW846 8270C BY SIM |

**MC22664-10 TB-ROX-071113-HCL**

No hits reported in this sample.

**MC22664-11 TB-ROX-071113-ST**

No hits reported in this sample.

## Summary of Hits

Job Number: MC22664

Account: Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

Collected: 07/11/13



| Lab Sample ID | Client Sample ID | Result/<br>Qual | RL | MDL | Units | Method |
|---------------|------------------|-----------------|----|-----|-------|--------|
|---------------|------------------|-----------------|----|-----|-------|--------|

(a) Sample re-extracted beyond recommended holding time.

**Sample Results**

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**Report of Analysis**

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## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW24-ROX-071113   | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-1  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | N78532.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |
| Run #2 |          |    |          |    |           |            |                  |

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

## VOA Special List

| CAS No.  | Compound                  | Result | RL   | MDL  | Units | Q |
|----------|---------------------------|--------|------|------|-------|---|
| 67-64-1  | Acetone                   | 15.7   | 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  | 1.1  | 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: | MW24-ROX-071113   | Date Sampled:   | 07/11/13 |
| Lab Sample ID:    | MC22664-1         | Date Received:  | 07/12/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> MW24-ROX-071113   |  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-1  |  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 95%    |        | 70-130% |
| 2037-26-5 | Toluene-D8           | 100%   |        | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 105%   |        | 70-130% |

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

---

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

## Report of Analysis

|                   |                         |   |          |
|-------------------|-------------------------|---|----------|
| Client Sample ID: | MW24-ROX-071113         | Date Sampled:   | 07/11/13 |
| Lab Sample ID:    | MC22664-1               | Date Received:  | 07/12/13 |
| Matrix:           | AQ - Ground Water       | Percent Solids:   | n/a      |
| Method:           | SW846 8270C SW846 3510C | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #               | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---------------------|----------|----|----------|----|-----------|------------|------------------|
| Run #1              | F65713.D | 1  | 07/19/13 | KR | 07/15/13  | OP34009    | MSF3044          |
| Run #2 <sup>a</sup> | R32380.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 930 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 <sup>b</sup> | 11  | 1.3  | ug/l  |   |
| 95-57-8   | 2-Chlorophenol              | ND <sup>b</sup> | 5.3 | 0.41 | ug/l  |   |
| 59-50-7   | 4-Chloro-3-methyl phenol    | ND <sup>b</sup> | 11  | 0.52 | ug/l  |   |
| 120-83-2  | 2,4-Dichlorophenol          | ND <sup>b</sup> | 11  | 0.35 | ug/l  |   |
| 105-67-9  | 2,4-Dimethylphenol          | ND <sup>b</sup> | 11  | 1.2  | ug/l  |   |
| 51-28-5   | 2,4-Dinitrophenol           | ND <sup>b</sup> | 21  | 2.7  | ug/l  |   |
| 534-52-1  | 4,6-Dinitro-o-cresol        | ND <sup>b</sup> | 11  | 1.3  | ug/l  |   |
| 95-48-7   | 2-Methylphenol              | ND <sup>b</sup> | 11  | 1.4  | ug/l  |   |
|           | 3&4-Methylphenol            | ND <sup>b</sup> | 11  | 2.2  | ug/l  |   |
| 88-75-5   | 2-Nitrophenol               | ND <sup>b</sup> | 11  | 0.53 | ug/l  |   |
| 100-02-7  | 4-Nitrophenol               | ND <sup>b</sup> | 21  | 0.62 | ug/l  |   |
| 87-86-5   | Pentachlorophenol           | ND <sup>b</sup> | 11  | 1.3  | ug/l  |   |
| 108-95-2  | Phenol                      | ND <sup>b</sup> | 5.3 | 0.54 | ug/l  |   |
| 95-95-4   | 2,4,5-Trichlorophenol       | ND <sup>b</sup> | 11  | 0.61 | ug/l  |   |
| 88-06-2   | 2,4,6-Trichlorophenol       | ND <sup>b</sup> | 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: | MW24-ROX-071113         | Date Sampled:  | 07/11/13 |
| Lab Sample ID:    | MC22664-1               | Date Received:   | 07/12/13 |
| Matrix:           | AQ - Ground Water       | Percent Solids:  | n/a      |
| Method:           | SW846 8270C SW846 3510C | Project: URMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## ABN Special List

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

| CAS No.   | Surrogate Recoveries | Run# 1          | Run# 2 | Limits  |
|-----------|----------------------|-----------------|--------|---------|
| 367-12-4  | 2-Fluorophenol       | 7% <sup>c</sup> | 36%    | 15-110% |
| 4165-62-2 | Phenol-d5            | 6% <sup>c</sup> | 15%    | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 28%             | 76%    | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 76%             | 52%    | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 59%             | 64%    | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 91%             | 83%    | 30-130% |

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

- (a) Sample re-extracted beyond recommended holding time.  
 (b) Result is from Run# 2  
 (c) Outside control limits. Sample re-extracted/reanalyzed.

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

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW24-ROX-071113   | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-1  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14029.D | 1  | 07/19/13 | KR | 07/15/13  | OP34010    | MSW635           |
| Run #2 |          |    |          |    |           |            |                  |

| Run #  | 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           | 0.024  | 0.11  | 0.015 | ug/l  | J |
| 208-96-8 | Acenaphthylene         | ND     | 0.11  | 0.014 | ug/l  |   |
| 120-12-7 | Anthracene             | ND     | 0.11  | 0.019 | ug/l  |   |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.054 | 0.032 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.11  | 0.019 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.054 | 0.025 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.11  | 0.041 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.063 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.078 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.11  | 0.045 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.11  | 0.035 | ug/l  |   |
| 86-73-7  | Fluorene               | ND     | 0.11  | 0.050 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.11  | 0.049 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | ND     | 0.22  | 0.15  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | 0.062  | 0.22  | 0.056 | ug/l  | J |
| 85-01-8  | Phenanthrene           | 0.038  | 0.054 | 0.014 | ug/l  | J |
| 129-00-0 | Pyrene                 | ND     | 0.11  | 0.038 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 4165-60-0 | Nitrobenzene-d5      | 77%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 60%    |        | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW24-ROX-071113   | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-1  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27086.D | 1  | 07/24/13 | NK | 07/23/13  | OP34092    | GBK929           |
| Run #2 |           |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 36.8 ml        | 2.0 ml       |
| Run #2 |                |              |

### VOA Special List

| CAS No.  | Compound                    | Result | RL    | MDL    | Units | Q |
|----------|-----------------------------|--------|-------|--------|-------|---|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND     | 0.014 | 0.0043 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.014 | 0.0092 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 106%   |        | 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

4.1  
4

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P54-ROX-071113  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-2  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | N78534.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |
| Run #2 |          |    |          |    |           |            |                  |

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

## VOA Special List

| CAS No.  | Compound                  | Result | RL   | MDL  | Units | Q |
|----------|---------------------------|--------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND     | 10   | 2.8  | 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  | 1.1  | ug/l  |   |
| 67-66-3  | Chloroform                | ND     | 1.0  | 0.50 | ug/l  |   |
| 74-87-3  | Chloromethane             | ND     | 2.0  | 1.4  | ug/l  |   |
| 95-49-8  | o-Chlorotoluene           | ND     | 5.0  | 0.55 | ug/l  |   |
| 106-43-4 | p-Chlorotoluene           | ND     | 5.0  | 0.48 | ug/l  |   |
| 124-48-1 | Dibromochloromethane      | ND     | 1.0  | 0.33 | ug/l  |   |
| 95-50-1  | 1,2-Dichlorobenzene       | ND     | 1.0  | 0.35 | ug/l  |   |
| 541-73-1 | 1,3-Dichlorobenzene       | ND     | 1.0  | 0.30 | ug/l  |   |
| 106-46-7 | 1,4-Dichlorobenzene       | ND     | 1.0  | 0.26 | ug/l  |   |
| 75-71-8  | Dichlorodifluoromethane   | ND     | 2.0  | 1.2  | ug/l  |   |
| 75-34-3  | 1,1-Dichloroethane        | ND     | 1.0  | 0.37 | ug/l  |   |
| 107-06-2 | 1,2-Dichloroethane        | ND     | 1.0  | 0.35 | ug/l  |   |
| 75-35-4  | 1,1-Dichloroethene        | ND     | 1.0  | 0.67 | ug/l  |   |
| 156-59-2 | cis-1,2-Dichloroethene    | ND     | 1.0  | 0.54 | ug/l  |   |
| 156-60-5 | trans-1,2-Dichloroethene  | ND     | 1.0  | 0.54 | ug/l  |   |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

|                   |                   |   |          |
|-------------------|-------------------|---|----------|
| Client Sample ID: | P54-ROX-071113    | Date Sampled:   | 07/11/13 |
| Lab Sample ID:    | MC22664-2         | Date Received:  | 07/12/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> P54-ROX-071113  |  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-2  |  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

4.2  
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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 97%    |        | 70-130% |
| 2037-26-5 | Toluene-D8           | 99%    |        | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 107%   |        | 70-130% |

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

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P54-ROX-071113  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-2  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | F65714.D | 1  | 07/19/13 | KR | 07/15/13  | OP34009    | MSF3044          |
| Run #2 |          |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 960 ml         | 1.0 ml       |
| Run #2 |                |              |

## ABN Special List

| CAS No.   | Compound                    | Result | RL  | MDL  | Units | Q |
|-----------|-----------------------------|--------|-----|------|-------|---|
| 65-85-0   | Benzoic Acid                | ND     | 10  | 1.3  | ug/l  |   |
| 95-57-8   | 2-Chlorophenol              | ND     | 5.2 | 0.40 | ug/l  |   |
| 59-50-7   | 4-Chloro-3-methyl phenol    | ND     | 10  | 0.51 | ug/l  |   |
| 120-83-2  | 2,4-Dichlorophenol          | ND     | 10  | 0.34 | ug/l  |   |
| 105-67-9  | 2,4-Dimethylphenol          | ND     | 10  | 1.2  | ug/l  |   |
| 51-28-5   | 2,4-Dinitrophenol           | ND     | 21  | 2.6  | ug/l  |   |
| 534-52-1  | 4,6-Dinitro-o-cresol        | ND     | 10  | 1.2  | ug/l  |   |
| 95-48-7   | 2-Methylphenol              | ND     | 10  | 1.3  | ug/l  |   |
|           | 3&4-Methylphenol            | ND     | 10  | 2.1  | ug/l  |   |
| 88-75-5   | 2-Nitrophenol               | ND     | 10  | 0.52 | ug/l  |   |
| 100-02-7  | 4-Nitrophenol               | ND     | 21  | 0.61 | ug/l  |   |
| 87-86-5   | Pentachlorophenol           | ND     | 10  | 1.3  | ug/l  |   |
| 108-95-2  | Phenol                      | ND     | 5.2 | 0.53 | ug/l  |   |
| 95-95-4   | 2,4,5-Trichlorophenol       | ND     | 10  | 0.60 | ug/l  |   |
| 88-06-2   | 2,4,6-Trichlorophenol       | ND     | 10  | 0.33 | ug/l  |   |
| 62-53-3   | Aniline                     | ND     | 10  | 0.66 | ug/l  |   |
| 101-55-3  | 4-Bromophenyl phenyl ether  | ND     | 5.2 | 0.21 | ug/l  |   |
| 85-68-7   | Butyl benzyl phthalate      | ND     | 5.2 | 0.89 | ug/l  |   |
| 100-51-6  | Benzyl Alcohol              | ND     | 10  | 0.60 | ug/l  |   |
| 91-58-7   | 2-Chloronaphthalene         | ND     | 5.2 | 0.96 | ug/l  |   |
| 106-47-8  | 4-Chloroaniline             | ND     | 10  | 0.26 | ug/l  |   |
| 111-91-1  | bis(2-Chloroethoxy)methane  | ND     | 5.2 | 0.22 | ug/l  |   |
| 111-44-4  | bis(2-Chloroethyl)ether     | ND     | 5.2 | 0.24 | ug/l  |   |
| 108-60-1  | bis(2-Chloroisopropyl)ether | ND     | 5.2 | 0.14 | ug/l  |   |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND     | 5.2 | 0.21 | ug/l  |   |
| 122-66-7  | 1,2-Diphenylhydrazine       | ND     | 5.2 | 0.68 | ug/l  |   |
| 121-14-2  | 2,4-Dinitrotoluene          | ND     | 10  | 0.70 | ug/l  |   |
| 606-20-2  | 2,6-Dinitrotoluene          | ND     | 10  | 0.67 | ug/l  |   |
| 91-94-1   | 3,3'-Dichlorobenzidine      | ND     | 5.2 | 0.52 | ug/l  |   |
| 132-64-9  | Dibenzofuran                | ND     | 2.1 | 0.16 | ug/l  |   |
| 84-74-2   | Di-n-butyl phthalate        | ND     | 5.2 | 0.40 | ug/l  |   |
| 117-84-0  | Di-n-octyl phthalate        | ND     | 5.2 | 0.45 | ug/l  |   |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates 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-071113          | Date Sampled:  | 07/11/13 |
| Lab Sample ID:    | MC22664-2               | Date Received:   | 07/12/13 |
| Matrix:           | AQ - Ground Water       | Percent Solids:  | n/a      |
| Method:           | SW846 8270C SW846 3510C | Project: URMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## ABN Special List

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.2 | 0.52 | ug/l  |   |
| 131-11-3 | Dimethyl phthalate         | ND     | 5.2 | 0.52 | ug/l  |   |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 0.52   | 2.1 | 0.51 | ug/l  | J |
| 118-74-1 | Hexachlorobenzene          | ND     | 5.2 | 0.31 | ug/l  |   |
| 77-47-4  | Hexachlorocyclopentadiene  | ND     | 10  | 2.6  | ug/l  |   |
| 67-72-1  | Hexachloroethane           | ND     | 5.2 | 0.46 | ug/l  |   |
| 78-59-1  | Isophorone                 | ND     | 5.2 | 0.21 | ug/l  |   |
| 88-74-4  | 2-Nitroaniline             | ND     | 10  | 0.29 | ug/l  |   |
| 99-09-2  | 3-Nitroaniline             | ND     | 10  | 0.52 | ug/l  |   |
| 100-01-6 | 4-Nitroaniline             | ND     | 10  | 4.5  | ug/l  |   |
| 98-95-3  | Nitrobenzene               | ND     | 5.2 | 0.26 | ug/l  |   |
| 62-75-9  | n-Nitrosodimethylamine     | ND     | 5.2 | 0.52 | ug/l  |   |
| 621-64-7 | N-Nitroso-di-n-propylamine | ND     | 5.2 | 0.84 | ug/l  |   |
| 86-30-6  | N-Nitrosodiphenylamine     | ND     | 5.2 | 0.56 | ug/l  |   |
| 110-86-1 | Pyridine                   | ND     | 10  | 0.54 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 367-12-4  | 2-Fluorophenol       | 41%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 29%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 77%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 79%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 61%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 87%    |        | 30-130% |

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

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

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P54-ROX-071113  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-2  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14030.D | 1  | 07/19/13 | KR | 07/15/13  | OP34010    | MSW635           |
| Run #2 |          |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 960 ml         | 1.0 ml       |
| Run #2 |                |              |

## BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | 0.032  | 0.10  | 0.014 | ug/l  | J |
| 208-96-8 | Acenaphthylene         | 0.016  | 0.10  | 0.014 | ug/l  | J |
| 120-12-7 | Anthracene             | 0.018  | 0.10  | 0.018 | ug/l  | J |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.052 | 0.031 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.10  | 0.018 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.052 | 0.025 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.10  | 0.039 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.10  | 0.061 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.10  | 0.076 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.10  | 0.043 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.10  | 0.034 | ug/l  |   |
| 86-73-7  | Fluorene               | ND     | 0.10  | 0.048 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.10  | 0.048 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | ND     | 0.21  | 0.15  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | 0.083  | 0.21  | 0.054 | ug/l  | J |
| 85-01-8  | Phenanthrene           | 0.049  | 0.052 | 0.013 | ug/l  | J |
| 129-00-0 | Pyrene                 | ND     | 0.10  | 0.037 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 4165-60-0 | Nitrobenzene-d5      | 78%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 62%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 87%    |        | 30-130% |

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

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P54-ROX-071113  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-2  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27087.D | 1  | 07/24/13 | NK | 07/23/13  | OP34092    | GBK929           |
| 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 | 0.0043 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.014 | 0.0092 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 104%   |        | 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

4.2  
4

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW3-ROX-071113  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-3  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | N78535.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |
| Run #2 |          |    |          |    |           |            |                  |

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

## VOA Special List

| CAS No.  | Compound                  | Result | RL   | MDL  | Units | Q |
|----------|---------------------------|--------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND     | 10   | 2.8  | 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                   | 5.9    | 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)          | 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  | 1.1  | 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-071113    | Date Sampled:   | 07/11/13 |
| Lab Sample ID:    | MC22664-3         | Date Received:  | 07/12/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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            | 4.9    | 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     | 3.5    | 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             | 5.5    | 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      | 1.3    | 5.0  | 0.47 | ug/l  | J |
| 108-67-8   | 1,3,5-Trimethylbenzene      | ND     | 5.0  | 1.1  | ug/l  |   |
| 108-05-4   | Vinyl Acetate               | ND     | 5.0  | 1.3  | ug/l  |   |
| 75-01-4    | Vinyl chloride              | ND     | 1.0  | 0.61 | ug/l  |   |
|            | m,p-Xylene                  | 2.8    | 1.0  | 0.70 | ug/l  |   |
| 95-47-6    | o-Xylene                    | ND     | 1.0  | 0.41 | ug/l  |   |
| 1330-20-7  | Xylene (total)              | 2.8    | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> MW3-ROX-071113  |  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-3  |  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 97%    |        | 70-130% |
| 2037-26-5 | Toluene-D8           | 102%   |        | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 108%   |        | 70-130% |

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

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



## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW3-ROX-071113  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-3  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | F65715.D | 1  | 07/19/13 | KR | 07/15/13  | OP34009    | MSF3044          |
| Run #2 |          |    |          |    |           |            |                  |

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

## ABN Special List

| CAS No.   | Compound                    | Result | RL  | MDL  | Units | Q |
|-----------|-----------------------------|--------|-----|------|-------|---|
| 65-85-0   | Benzoic Acid                | ND     | 11  | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW3-ROX-071113  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-3  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

**ABN Special List**

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.4 | 0.54 | ug/l  |   |
| 131-11-3 | Dimethyl phthalate         | ND     | 5.4 | 0.54 | ug/l  |   |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 3.8    | 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       | 30%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 23%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 68%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 74%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 55%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 85%    |        | 30-130% |

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

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

4.3  
4

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW3-ROX-071113  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-3  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14031.D | 1  | 07/19/13 | KR | 07/15/13  | OP34010    | MSW635           |
| Run #2 |          |    |          |    |           |            |                  |

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

## BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | 0.028  | 0.11  | 0.015 | ug/l  | J |
| 208-96-8 | Acenaphthylene         | ND     | 0.11  | 0.014 | ug/l  |   |
| 120-12-7 | Anthracene             | ND     | 0.11  | 0.019 | ug/l  |   |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.054 | 0.033 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.11  | 0.019 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.054 | 0.026 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.11  | 0.041 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.064 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.079 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.11  | 0.045 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.11  | 0.035 | ug/l  |   |
| 86-73-7  | Fluorene               | ND     | 0.11  | 0.050 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.11  | 0.050 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | 0.44   | 0.22  | 0.15  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | 0.38   | 0.22  | 0.056 | ug/l  |   |
| 85-01-8  | Phenanthrene           | 0.039  | 0.054 | 0.014 | ug/l  | J |
| 129-00-0 | Pyrene                 | 0.072  | 0.11  | 0.039 | ug/l  | J |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 4165-60-0 | Nitrobenzene-d5      | 74%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 55%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 85%    |        | 30-130% |

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

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW3-ROX-071113  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-3  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27088.D | 1  | 07/24/13 | NK | 07/23/13  | OP34092    | GBK929           |
| 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 | 0.0044 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.014 | 0.0093 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 134%   |        | 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

4.3  
4

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW2-ROX-071113-EB   | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-4  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | N78536.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |
| Run #2 |          |    |          |    |           |            |                  |

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

## VOA Special List

| CAS No.  | Compound                  | Result | RL   | MDL  | Units | Q |
|----------|---------------------------|--------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND     | 10   | 2.8  | 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  | 1.1  | 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-071113-EB | Date Sampled:   | 07/11/13 |
| Lab Sample ID:    | MC22664-4         | Date Received:  | 07/12/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW2-ROX-071113-EB   | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-4  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

4.4  
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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 100%   |        | 70-130% |
| 2037-26-5 | Toluene-D8           | 102%   |        | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 105%   |        | 70-130% |

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

---

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW2-ROX-071113-EB   | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-4  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | F65716.D | 1  | 07/19/13 | KR | 07/15/13  | OP34009    | MSF3044          |
| Run #2 |          |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 980 ml         | 1.0 ml       |
| Run #2 |                |              |

## ABN Special List

| CAS No.   | Compound                    | Result | RL  | MDL  | Units | Q |
|-----------|-----------------------------|--------|-----|------|-------|---|
| 65-85-0   | Benzoic Acid                | ND     | 10  | 1.3  | ug/l  |   |
| 95-57-8   | 2-Chlorophenol              | ND     | 5.1 | 0.39 | ug/l  |   |
| 59-50-7   | 4-Chloro-3-methyl phenol    | ND     | 10  | 0.50 | ug/l  |   |
| 120-83-2  | 2,4-Dichlorophenol          | ND     | 10  | 0.33 | ug/l  |   |
| 105-67-9  | 2,4-Dimethylphenol          | ND     | 10  | 1.2  | ug/l  |   |
| 51-28-5   | 2,4-Dinitrophenol           | ND     | 20  | 2.6  | ug/l  |   |
| 534-52-1  | 4,6-Dinitro-o-cresol        | ND     | 10  | 1.2  | ug/l  |   |
| 95-48-7   | 2-Methylphenol              | ND     | 10  | 1.3  | ug/l  |   |
|           | 3&4-Methylphenol            | ND     | 10  | 2.1  | ug/l  |   |
| 88-75-5   | 2-Nitrophenol               | ND     | 10  | 0.51 | ug/l  |   |
| 100-02-7  | 4-Nitrophenol               | ND     | 20  | 0.60 | ug/l  |   |
| 87-86-5   | Pentachlorophenol           | ND     | 10  | 1.3  | ug/l  |   |
| 108-95-2  | Phenol                      | ND     | 5.1 | 0.52 | ug/l  |   |
| 95-95-4   | 2,4,5-Trichlorophenol       | ND     | 10  | 0.58 | ug/l  |   |
| 88-06-2   | 2,4,6-Trichlorophenol       | ND     | 10  | 0.32 | ug/l  |   |
| 62-53-3   | Aniline                     | ND     | 10  | 0.65 | ug/l  |   |
| 101-55-3  | 4-Bromophenyl phenyl ether  | ND     | 5.1 | 0.21 | ug/l  |   |
| 85-68-7   | Butyl benzyl phthalate      | ND     | 5.1 | 0.87 | ug/l  |   |
| 100-51-6  | Benzyl Alcohol              | ND     | 10  | 0.59 | ug/l  |   |
| 91-58-7   | 2-Chloronaphthalene         | ND     | 5.1 | 0.94 | ug/l  |   |
| 106-47-8  | 4-Chloroaniline             | ND     | 10  | 0.26 | ug/l  |   |
| 111-91-1  | bis(2-Chloroethoxy)methane  | ND     | 5.1 | 0.21 | ug/l  |   |
| 111-44-4  | bis(2-Chloroethyl)ether     | ND     | 5.1 | 0.24 | ug/l  |   |
| 108-60-1  | bis(2-Chloroisopropyl)ether | ND     | 5.1 | 0.14 | ug/l  |   |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND     | 5.1 | 0.20 | ug/l  |   |
| 122-66-7  | 1,2-Diphenylhydrazine       | ND     | 5.1 | 0.67 | ug/l  |   |
| 121-14-2  | 2,4-Dinitrotoluene          | ND     | 10  | 0.69 | ug/l  |   |
| 606-20-2  | 2,6-Dinitrotoluene          | ND     | 10  | 0.65 | ug/l  |   |
| 91-94-1   | 3,3'-Dichlorobenzidine      | ND     | 5.1 | 0.51 | ug/l  |   |
| 132-64-9  | Dibenzofuran                | ND     | 2.0 | 0.16 | ug/l  |   |
| 84-74-2   | Di-n-butyl phthalate        | ND     | 5.1 | 0.40 | ug/l  |   |
| 117-84-0  | Di-n-octyl phthalate        | ND     | 5.1 | 0.44 | ug/l  |   |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



## Report of Analysis

|                          |                         |   |          |
|--------------------------|-------------------------|---|----------|
| <b>Client Sample ID:</b> | MW2-ROX-071113-EB       | <b>Date Sampled:</b>  | 07/11/13 |
| <b>Lab Sample ID:</b>    | MC22664-4               | <b>Date Received:</b>   | 07/12/13 |
| <b>Matrix:</b>           | AQ - Ground Water       | <b>Percent Solids:</b>  | n/a      |
| <b>Method:</b>           | SW846 8270C SW846 3510C | <b>Project:</b> URMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## ABN Special List

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.1 | 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       | 39%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 27%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 76%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 72%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 58%    |        | 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  |   |

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

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW2-ROX-071113-EB   | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-4  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14032.D | 1  | 07/19/13 | KR | 07/15/13  | OP34010    | MSW635           |
| Run #2 |          |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 980 ml         | 1.0 ml       |
| Run #2 |                |              |

## BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | ND     | 0.10  | 0.014 | ug/l  |   |
| 208-96-8 | Acenaphthylene         | ND     | 0.10  | 0.014 | ug/l  |   |
| 120-12-7 | Anthracene             | ND     | 0.10  | 0.018 | ug/l  |   |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.051 | 0.031 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.10  | 0.018 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.051 | 0.024 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.10  | 0.038 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.10  | 0.060 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.10  | 0.074 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.10  | 0.043 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.10  | 0.033 | ug/l  |   |
| 86-73-7  | Fluorene               | ND     | 0.10  | 0.047 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.10  | 0.047 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | ND     | 0.20  | 0.14  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | ND     | 0.20  | 0.053 | ug/l  |   |
| 85-01-8  | Phenanthrene           | 0.033  | 0.051 | 0.013 | ug/l  | J |
| 129-00-0 | Pyrene                 | 0.065  | 0.10  | 0.036 | ug/l  | J |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 4165-60-0 | Nitrobenzene-d5      | 72%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 60%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 85%    |        | 30-130% |

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

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW2-ROX-071113-EB   | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-4  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27089.D | 1  | 07/24/13 | NK | 07/23/13  | OP34092    | GBK929           |
| 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 | 0.0043 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.014 | 0.0092 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 108%   |        | 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

4.4

## Report of Analysis

|                   |                   |   |          |
|-------------------|-------------------|---|----------|
| Client Sample ID: | MW2-ROX-071113    | Date Sampled:   | 07/11/13 |
| Lab Sample ID:    | MC22664-5         | Date Received:  | 07/12/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | N78537.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |
| Run #2 | N78584.D | 50 | 07/24/13 | JB | n/a       | n/a        | MSN2949          |

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

## VOA Special List

| CAS No.  | Compound                  | Result | RL   | MDL  | Units | Q |
|----------|---------------------------|--------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND     | 10   | 2.8  | 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                   | 6.0    | 0.50 | 0.45 | ug/l  |   |
| 108-86-1 | Bromobenzene              | ND     | 5.0  | 0.44 | ug/l  |   |
| 74-97-5  | Bromochloromethane        | ND     | 5.0  | 0.64 | ug/l  |   |
| 75-27-4  | Bromodichloromethane      | ND     | 1.0  | 0.33 | ug/l  |   |
| 75-25-2  | Bromoform                 | ND     | 1.0  | 0.42 | ug/l  |   |
| 74-83-9  | Bromomethane              | ND     | 2.0  | 1.5  | ug/l  |   |
| 78-93-3  | 2-Butanone (MEK)          | ND     | 5.0  | 1.6  | ug/l  |   |
| 104-51-8 | n-Butylbenzene            | ND     | 5.0  | 0.54 | ug/l  |   |
| 135-98-8 | sec-Butylbenzene          | 7.3    | 5.0  | 0.58 | ug/l  |   |
| 98-06-6  | tert-Butylbenzene         | 2.9    | 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  | 1.1  | 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-071113    | Date Sampled:   | 07/11/13 |
| Lab Sample ID:    | MC22664-5         | Date Received:  | 07/12/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result            | RL   | MDL  | Units | Q |
|------------|-----------------------------|-------------------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND                | 2.0  | 0.45 | 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                | 1570 <sup>a</sup> | 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            | 93.1              | 5.0  | 0.64 | ug/l  |   |
| 99-87-6    | p-Isopropyltoluene          | 7.5               | 5.0  | 0.55 | ug/l  |   |
| 1634-04-4  | Methyl Tert Butyl Ether     | 6.2               | 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                 | 114               | 5.0  | 0.79 | ug/l  |   |
| 103-65-1   | n-Propylbenzene             | 127               | 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                     | 110               | 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      | 522 <sup>a</sup>  | 250  | 23   | ug/l  |   |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 175               | 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                  | 1880 <sup>a</sup> | 50   | 35   | ug/l  |   |
| 95-47-6    | o-Xylene                    | 174               | 1.0  | 0.41 | ug/l  |   |
| 1330-20-7  | Xylene (total)              | 1880 <sup>a</sup> | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW2-ROX-071113  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-5  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

4.5  
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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 92%    | 95%    | 70-130% |
| 2037-26-5 | Toluene-D8           | 103%   | 100%   | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 101%   | 103%   | 70-130% |

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

(a) Result is from Run# 2

---

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW2-ROX-071113  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-5  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #1 | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | F65717.D | 1  | 07/19/13 | KR | 07/15/13  | OP34009    | MSF3044          |
| Run #2 |          |    |          |    |           |            |                  |

| Run #1 | 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          | 5.0    | 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  |   |
| 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 method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

|   |                                |
|---|--------------------------------|
| <b>Client Sample ID:</b> MW2-ROX-071113   | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-5   | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C  |                                |
| <b>Project:</b> URMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

**ABN Special List**

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.5 | 0.55 | ug/l  |   |
| 131-11-3 | Dimethyl phthalate         | ND     | 5.5 | 0.55 | ug/l  |   |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 0.63   | 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       | 42%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 32%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 77%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 75%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 50%    |        | 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  |   |

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

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

4.5  
4



## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW2-ROX-071113  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-5  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14033.D | 1  | 07/19/13 | KR | 07/15/13  | OP34010    | MSW635           |
| Run #2 |          |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 910 ml         | 1.0 ml       |
| Run #2 |                |              |

## BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | 0.035  | 0.11  | 0.015 | ug/l  | J |
| 208-96-8 | Acenaphthylene         | ND     | 0.11  | 0.015 | ug/l  |   |
| 120-12-7 | Anthracene             | ND     | 0.11  | 0.019 | ug/l  |   |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.055 | 0.033 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.11  | 0.019 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.055 | 0.026 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.11  | 0.041 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.064 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.080 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.11  | 0.046 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.11  | 0.036 | ug/l  |   |
| 86-73-7  | Fluorene               | ND     | 0.11  | 0.051 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.11  | 0.051 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | 12.3   | 0.22  | 0.15  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | 24.9   | 0.22  | 0.057 | ug/l  |   |
| 85-01-8  | Phenanthrene           | 0.051  | 0.055 | 0.014 | ug/l  | J |
| 129-00-0 | Pyrene                 | ND     | 0.11  | 0.039 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 4165-60-0 | Nitrobenzene-d5      | 71%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 51%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 87%    |        | 30-130% |

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

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW2-ROX-071113  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-5  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27090.D | 1  | 07/24/13 | NK | 07/23/13  | OP34092    | GBK929           |
| Run #2 |           |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 36.0 ml        | 2.0 ml       |
| Run #2 |                |              |

### VOA Special List

| CAS No.  | Compound                    | Result | RL    | MDL    | Units | Q |
|----------|-----------------------------|--------|-------|--------|-------|---|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND     | 0.015 | 0.0044 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.015 | 0.0094 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 121%   |        | 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

4.5  
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## Report of Analysis

|                          |                     |  |          |
|--------------------------|---------------------|--|----------|
| <b>Client Sample ID:</b> | ROST4PZC-ROX-071113 | <b>Date Sampled:</b>   | 07/11/13 |
| <b>Lab Sample ID:</b>    | MC22664-6           | <b>Date Received:</b>  | 07/12/13 |
| <b>Matrix:</b>           | AQ - Ground Water   | <b>Percent Solids:</b>   | n/a      |
| <b>Method:</b>           | SW846 8260B         | <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | N78538.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |
| Run #2 |          |    |          |    |           |            |                  |

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

## VOA Special List

| CAS No.  | Compound                  | Result | RL   | MDL  | Units | Q |
|----------|---------------------------|--------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND     | 10   | 2.8  | 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                   | 49.7   | 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  | 1.1  | 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-071113 | Date Sampled:   | 07/11/13 |
| Lab Sample ID:    | MC22664-6           | Date Received:  | 07/12/13 |
| Matrix:           | AQ - Ground Water   | Percent Solids:   | n/a      |
| Method:           | SW846 8260B         | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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                | 65.1   | 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            | 2.5    | 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     | 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                 | 18.9   | 5.0  | 0.79 | ug/l  |   |
| 103-65-1   | n-Propylbenzene             | 4.1    | 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                     | 41.0   | 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 | 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      | 19.4   | 5.0  | 0.47 | ug/l  |   |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 4.4    | 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                  | 126    | 1.0  | 0.70 | ug/l  |   |
| 95-47-6    | o-Xylene                    | 64.9   | 1.0  | 0.41 | ug/l  |   |
| 1330-20-7  | Xylene (total)              | 191    | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> ROST4PZC-ROX-071113   |  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-6  |  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 98%    |        | 70-130% |
| 2037-26-5 | Toluene-D8           | 102%   |        | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 100%   |        | 70-130% |

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

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

## Report of Analysis

|                          |                         |   |          |
|--------------------------|-------------------------|---|----------|
| <b>Client Sample ID:</b> | ROST4PZC-ROX-071113     | <b>Date Sampled:</b>  | 07/11/13 |
| <b>Lab Sample ID:</b>    | MC22664-6               | <b>Date Received:</b>   | 07/12/13 |
| <b>Matrix:</b>           | AQ - Ground Water       | <b>Percent Solids:</b>  | n/a      |
| <b>Method:</b>           | SW846 8270C SW846 3510C | <b>Project:</b> URMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #1 | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | F65718.D | 1  | 07/19/13 | KR | 07/15/13  | OP34009    | MSF3044          |
| Run #2 |          |    |          |    |           |            |                  |

| Run #1 | 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                      | 0.57   | 5.4 | 0.55 | ug/l  | J |
| 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

|                          |                         |   |          |
|--------------------------|-------------------------|---|----------|
| <b>Client Sample ID:</b> | ROST4PZC-ROX-071113     | <b>Date Sampled:</b>  | 07/11/13 |
| <b>Lab Sample ID:</b>    | MC22664-6               | <b>Date Received:</b>   | 07/12/13 |
| <b>Matrix:</b>           | AQ - Ground Water       | <b>Percent Solids:</b>  | n/a      |
| <b>Method:</b>           | SW846 8270C SW846 3510C | <b>Project:</b> URMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## ABN Special List

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.4 | 0.54 | ug/l  |   |
| 131-11-3 | Dimethyl phthalate         | ND     | 5.4 | 0.54 | ug/l  |   |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 3.2    | 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       | 26%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 22%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 71%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 70%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 54%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 92%    |        | 30-130% |

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

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

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

## Report of Analysis

|                          |                                |  |          |
|--------------------------|--------------------------------|--|----------|
| <b>Client Sample ID:</b> | ROST4PZC-ROX-071113            | <b>Date Sampled:</b>   | 07/11/13 |
| <b>Lab Sample ID:</b>    | MC22664-6                      | <b>Date Received:</b>  | 07/12/13 |
| <b>Matrix:</b>           | AQ - Ground Water              | <b>Percent Solids:</b>   | n/a      |
| <b>Method:</b>           | SW846 8270C BY SIM SW846 3510C | <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14034.D | 1  | 07/19/13 | KR | 07/15/13  | OP34010    | MSW635           |
| Run #2 |          |    |          |    |           |            |                  |

| Run #  | 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  | 0.015 | ug/l  |   |
| 208-96-8 | Acenaphthylene         | 0.073  | 0.11  | 0.014 | ug/l  | J |
| 120-12-7 | Anthracene             | 0.12   | 0.11  | 0.019 | ug/l  |   |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.054 | 0.032 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.11  | 0.019 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.054 | 0.025 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.11  | 0.041 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.063 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.078 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.11  | 0.045 | ug/l  |   |
| 206-44-0 | Fluoranthene           | 0.099  | 0.11  | 0.035 | ug/l  | J |
| 86-73-7  | Fluorene               | 0.27   | 0.11  | 0.050 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.11  | 0.049 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | 2.7    | 0.22  | 0.15  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | 2.1    | 0.22  | 0.056 | ug/l  |   |
| 85-01-8  | Phenanthrene           | 0.52   | 0.054 | 0.014 | ug/l  |   |
| 129-00-0 | Pyrene                 | 0.090  | 0.11  | 0.038 | ug/l  | J |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 4165-60-0 | Nitrobenzene-d5      | 74%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 55%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 91%    |        | 30-130% |

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

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



## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> ROST4PZC-ROX-071113   | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-6  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27091.D | 1  | 07/24/13 | NK | 07/23/13  | OP34092    | GBK929           |
| Run #2 |           |    |          |    |           |            |                  |

|        | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 37.0 ml        | 2.0 ml       |
| Run #2 |                |              |

**VOA Special List**

| CAS No.  | Compound                    | Result | RL    | MDL    | Units | Q |
|----------|-----------------------------|--------|-------|--------|-------|---|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND     | 0.014 | 0.0043 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.014 | 0.0091 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 115%   |        | 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

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## Report of Analysis

|                          |                    |  |  |          |
|--------------------------|--------------------|--|--|----------|
| <b>Client Sample ID:</b> | ROST3MW-ROX-071113 |  | <b>Date Sampled:</b>   | 07/11/13 |
| <b>Lab Sample ID:</b>    | MC22664-7          |  | <b>Date Received:</b>  | 07/12/13 |
| <b>Matrix:</b>           | AQ - Ground Water  |  | <b>Percent Solids:</b>   | n/a      |
| <b>Method:</b>           | SW846 8260B        |  | <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | N78539.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |
| Run #2 |          |    |          |    |           |            |                  |

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

## VOA Special List

| CAS No.  | Compound                  | Result | RL   | MDL  | Units | Q |
|----------|---------------------------|--------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND     | 10   | 2.8  | 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                   | 12.5   | 0.50 | 0.45 | ug/l  |   |
| 108-86-1 | Bromobenzene              | ND     | 5.0  | 0.44 | ug/l  |   |
| 74-97-5  | Bromochloromethane        | ND     | 5.0  | 0.64 | ug/l  |   |
| 75-27-4  | Bromodichloromethane      | ND     | 1.0  | 0.33 | ug/l  |   |
| 75-25-2  | Bromoform                 | ND     | 1.0  | 0.42 | ug/l  |   |
| 74-83-9  | Bromomethane              | ND     | 2.0  | 1.5  | ug/l  |   |
| 78-93-3  | 2-Butanone (MEK)          | ND     | 5.0  | 1.6  | ug/l  |   |
| 104-51-8 | n-Butylbenzene            | ND     | 5.0  | 0.54 | ug/l  |   |
| 135-98-8 | sec-Butylbenzene          | 1.4    | 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  | 1.1  | 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: | ROST3MW-ROX-071113 | Date Sampled:   | 07/11/13 |
| Lab Sample ID:    | MC22664-7          | Date Received:  | 07/12/13 |
| Matrix:           | AQ - Ground Water  | Percent Solids:   | n/a      |
| Method:           | SW846 8260B        | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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                | 218    | 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            | 14.6   | 5.0  | 0.64 | ug/l  |   |
| 99-87-6    | p-Isopropyltoluene          | 1.4    | 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                 | 41.1   | 5.0  | 0.79 | ug/l  |   |
| 103-65-1   | n-Propylbenzene             | 27.9   | 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                     | 14.0   | 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 | 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      | 164    | 5.0  | 0.47 | ug/l  |   |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 37.3   | 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                  | 644    | 1.0  | 0.70 | ug/l  |   |
| 95-47-6    | o-Xylene                    | 124    | 1.0  | 0.41 | ug/l  |   |
| 1330-20-7  | Xylene (total)              | 768    | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> ROST3MW-ROX-071113  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-7  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 97%    |        | 70-130% |
| 2037-26-5 | Toluene-D8           | 98%    |        | 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 | J = Indicates an estimated value                       |
| RL = Reporting Limit                          |                              | B = Indicates analyte found in associated method blank |
| E = Indicates value exceeds calibration range |                              | N = Indicates presumptive evidence of a compound       |

## Report of Analysis

|                          |                         |  |  |          |
|--------------------------|-------------------------|--|--|----------|
| <b>Client Sample ID:</b> | ROST3MW-ROX-071113      |  | <b>Date Sampled:</b>   | 07/11/13 |
| <b>Lab Sample ID:</b>    | MC22664-7               |  | <b>Date Received:</b>  | 07/12/13 |
| <b>Matrix:</b>           | AQ - Ground Water       |  | <b>Percent Solids:</b>   | n/a      |
| <b>Method:</b>           | SW846 8270C SW846 3510C |  | <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #               | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---------------------|----------|----|----------|----|-----------|------------|------------------|
| Run #1              | F65719.D | 1  | 07/19/13 | KR | 07/15/13  | OP34009    | MSF3044          |
| Run #2 <sup>a</sup> | R32381.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |

| Run #  | 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 <sup>b</sup>  | 11  | 1.3  | ug/l  |   |
| 95-57-8   | 2-Chlorophenol              | ND <sup>b</sup>  | 5.4 | 0.41 | ug/l  |   |
| 59-50-7   | 4-Chloro-3-methyl phenol    | ND <sup>b</sup>  | 11  | 0.53 | ug/l  |   |
| 120-83-2  | 2,4-Dichlorophenol          | ND <sup>b</sup>  | 11  | 0.35 | ug/l  |   |
| 105-67-9  | 2,4-Dimethylphenol          | 1.6 <sup>b</sup> | 11  | 1.2  | ug/l  | J |
| 51-28-5   | 2,4-Dinitrophenol           | ND <sup>b</sup>  | 22  | 2.7  | ug/l  |   |
| 534-52-1  | 4,6-Dinitro-o-cresol        | ND <sup>b</sup>  | 11  | 1.3  | ug/l  |   |
| 95-48-7   | 2-Methylphenol              | ND <sup>b</sup>  | 11  | 1.4  | ug/l  |   |
|           | 3&4-Methylphenol            | ND <sup>b</sup>  | 11  | 2.2  | ug/l  |   |
| 88-75-5   | 2-Nitrophenol               | ND <sup>b</sup>  | 11  | 0.54 | ug/l  |   |
| 100-02-7  | 4-Nitrophenol               | ND <sup>b</sup>  | 22  | 0.63 | ug/l  |   |
| 87-86-5   | Pentachlorophenol           | ND <sup>b</sup>  | 11  | 1.3  | ug/l  |   |
| 108-95-2  | Phenol                      | ND <sup>b</sup>  | 5.4 | 0.55 | ug/l  |   |
| 95-95-4   | 2,4,5-Trichlorophenol       | ND <sup>b</sup>  | 11  | 0.62 | ug/l  |   |
| 88-06-2   | 2,4,6-Trichlorophenol       | ND <sup>b</sup>  | 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                | 0.25             | 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

|                          |                         |   |          |
|--------------------------|-------------------------|---|----------|
| <b>Client Sample ID:</b> | ROST3MW-ROX-071113      | <b>Date Sampled:</b>  | 07/11/13 |
| <b>Lab Sample ID:</b>    | MC22664-7               | <b>Date Received:</b>   | 07/12/13 |
| <b>Matrix:</b>           | AQ - Ground Water       | <b>Percent Solids:</b>  | n/a      |
| <b>Method:</b>           | SW846 8270C SW846 3510C | <b>Project:</b> URMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## ABN Special List

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.4 | 0.54 | ug/l  |   |
| 131-11-3 | Dimethyl phthalate         | ND     | 5.4 | 0.54 | ug/l  |   |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 0.61   | 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       | 2% <sup>c</sup> | 27%              | 15-110% |
| 4165-62-2 | Phenol-d5            | 1% <sup>c</sup> | 14% <sup>c</sup> | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 18%             | 67%              | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 67%             | 64%              | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 46%             | 73%              | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 74%             | 80%              | 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) Result is from Run# 2  
 (c) 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> ROST3MW-ROX-071113  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-7  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14035.D | 1  | 07/19/13 | KR | 07/15/13  | OP34010    | MSW635           |
| Run #2 |          |    |          |    |           |            |                  |

| Run #  | 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           | 0.29   | 0.11  | 0.015 | ug/l  |   |
| 208-96-8 | Acenaphthylene         | ND     | 0.11  | 0.014 | ug/l  |   |
| 120-12-7 | Anthracene             | 0.091  | 0.11  | 0.019 | ug/l  | J |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.054 | 0.032 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.11  | 0.019 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.054 | 0.025 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.11  | 0.041 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.063 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.078 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.11  | 0.045 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.11  | 0.035 | ug/l  |   |
| 86-73-7  | Fluorene               | 0.43   | 0.11  | 0.050 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.11  | 0.049 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | 10.5   | 0.22  | 0.15  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | 14.2   | 0.22  | 0.056 | ug/l  |   |
| 85-01-8  | Phenanthrene           | 0.73   | 0.054 | 0.014 | ug/l  |   |
| 129-00-0 | Pyrene                 | 0.044  | 0.11  | 0.038 | 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     | 48%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 74%    |        | 30-130% |

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

4.7  
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## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> ROST3MW-ROX-071113  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-7  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27092.D | 1  | 07/24/13 | NK | 07/23/13  | OP34092    | GBK929           |
| Run #2 |           |    |          |    |           |            |                  |

|        | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 37.1 ml        | 2.0 ml       |
| Run #2 |                |              |

### VOA Special List

| CAS No.  | Compound                    | Result | RL    | MDL    | Units | Q |
|----------|-----------------------------|--------|-------|--------|-------|---|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND     | 0.014 | 0.0043 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.014 | 0.0091 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 114%   |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 96%    |        | 36-173% |

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

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

4.7  
4



## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW22-ROX-071113   | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-8  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF  | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|-----|----------|----|-----------|------------|------------------|
| Run #1 | N78540.D | 1   | 07/23/13 | JB | n/a       | n/a        | MSN2948          |
| Run #2 | N78585.D | 100 | 07/24/13 | JB | n/a       | n/a        | MSN2949          |

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

## VOA Special List

| CAS No.  | Compound                  | Result            | RL  | MDL  | Units | Q |
|----------|---------------------------|-------------------|-----|------|-------|---|
| 67-64-1  | Acetone                   | ND                | 10  | 2.8  | 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                   | 1190 <sup>a</sup> | 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          | 11.6              | 5.0 | 0.58 | ug/l  |   |
| 98-06-6  | tert-Butylbenzene         | 14.2              | 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 | 1.1  | 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-071113   | Date Sampled:   | 07/11/13 |
| Lab Sample ID:    | MC22664-8         | Date Received:  | 07/12/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result            | RL   | MDL  | Units | Q |
|------------|-----------------------------|-------------------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND                | 2.0  | 0.45 | 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                | 2070 <sup>a</sup> | 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            | 131               | 5.0  | 0.64 | ug/l  |   |
| 99-87-6    | p-Isopropyltoluene          | 8.7               | 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) | 10.2              | 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                 | 345               | 5.0  | 0.79 | ug/l  |   |
| 103-65-1   | n-Propylbenzene             | 242               | 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                     | 3920 <sup>a</sup> | 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      | 864 <sup>a</sup>  | 500  | 47   | ug/l  |   |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 309               | 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                  | 4130 <sup>a</sup> | 100  | 70   | ug/l  |   |
| 95-47-6    | o-Xylene                    | 2260 <sup>a</sup> | 100  | 41   | ug/l  |   |
| 1330-20-7  | Xylene (total)              | 6390 <sup>a</sup> | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> MW22-ROX-071113   |  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-8  |  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 94%    | 96%    | 70-130% |
| 2037-26-5 | Toluene-D8           | 98%    | 100%   | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 97%    | 100%   | 70-130% |

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

(a) Result is from Run# 2

---

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW22-ROX-071113   | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-8  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #1 | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | F65720.D | 1  | 07/19/13 | KR | 07/15/13  | OP34009    | MSF3044          |
| Run #2 |          |    |          |    |           |            |                  |

| Run #1 | 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          | 104    | 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              | 15.9   | 11  | 1.4  | ug/l  |   |
|           | 3&4-Methylphenol            | 29.0   | 11  | 2.2  | ug/l  |   |
| 88-75-5   | 2-Nitrophenol               | ND     | 11  | 0.54 | ug/l  |   |
| 100-02-7  | 4-Nitrophenol               | ND     | 22  | 0.63 | ug/l  |   |
| 87-86-5   | Pentachlorophenol           | ND     | 11  | 1.4  | ug/l  |   |
| 108-95-2  | Phenol                      | 9.4    | 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              | 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

|   |  |                                |
|---|--|--------------------------------|
| <b>Client Sample ID:</b> MW22-ROX-071113  |  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-8   |  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water  |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C  |  |                                |
| <b>Project:</b> URMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

**ABN Special List**

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.4 | 0.54 | ug/l  |   |
| 131-11-3 | Dimethyl phthalate         | ND     | 5.4 | 0.54 | ug/l  |   |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 1.7    | 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       | 49%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 35%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 82%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 94%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 71%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 89%    |        | 30-130% |

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

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

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## Report of Analysis

|                   |                                |   |          |
|-------------------|--------------------------------|---|----------|
| Client Sample ID: | MW22-ROX-071113                | Date Sampled:   | 07/11/13 |
| Lab Sample ID:    | MC22664-8                      | Date Received:  | 07/12/13 |
| Matrix:           | AQ - Ground Water              | Percent Solids:   | n/a      |
| Method:           | SW846 8270C BY SIM SW846 3510C | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14036.D | 1  | 07/19/13 | KR | 07/15/13  | OP34010    | MSW635           |
| Run #2 |          |    |          |    |           |            |                  |

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

## BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | 0.26   | 0.11  | 0.015 | ug/l  |   |
| 208-96-8 | Acenaphthylene         | 0.48   | 0.11  | 0.014 | ug/l  |   |
| 120-12-7 | Anthracene             | 0.035  | 0.11  | 0.019 | ug/l  | J |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.054 | 0.033 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.11  | 0.019 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.054 | 0.026 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.11  | 0.041 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.064 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.079 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.11  | 0.045 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.11  | 0.035 | ug/l  |   |
| 86-73-7  | Fluorene               | 0.27   | 0.11  | 0.050 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.11  | 0.050 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | 23.2   | 0.22  | 0.15  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | 39.3   | 0.22  | 0.056 | ug/l  |   |
| 85-01-8  | Phenanthrene           | 0.20   | 0.054 | 0.014 | ug/l  | B |
| 129-00-0 | Pyrene                 | ND     | 0.11  | 0.039 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 4165-60-0 | Nitrobenzene-d5      | 85%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 63%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 89%    |        | 30-130% |

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

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW22-ROX-071113   | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-8  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27093.D | 1  | 07/24/13 | NK | 07/23/13  | OP34092    | GBK929           |
| Run #2 |           |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 36.9 ml        | 2.0 ml       |
| Run #2 |                |              |

**VOA Special List**

| CAS No.  | Compound                    | Result | RL    | MDL    | Units | Q |
|----------|-----------------------------|--------|-------|--------|-------|---|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND     | 0.014 | 0.0043 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.014 | 0.0092 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 124%   |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 90%    |        | 36-173% |

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

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## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW22-ROX-071113-DUP   | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-9  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF  | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|-----|----------|----|-----------|------------|------------------|
| Run #1 | N78541.D | 1   | 07/23/13 | JB | n/a       | n/a        | MSN2948          |
| Run #2 | N78586.D | 100 | 07/24/13 | JB | n/a       | n/a        | MSN2949          |

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

## VOA Special List

| CAS No.  | Compound                  | Result            | RL  | MDL  | Units | Q |
|----------|---------------------------|-------------------|-----|------|-------|---|
| 67-64-1  | Acetone                   | ND                | 10  | 2.8  | 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                   | 1110 <sup>a</sup> | 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          | 11.6              | 5.0 | 0.58 | ug/l  |   |
| 98-06-6  | tert-Butylbenzene         | 14.8              | 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 | 1.1  | 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-071113-DUP | Date Sampled:   | 07/11/13 |
| Lab Sample ID:    | MC22664-9           | Date Received:  | 07/12/13 |
| Matrix:           | AQ - Ground Water   | Percent Solids:   | n/a      |
| Method:           | SW846 8260B         | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result            | RL   | MDL  | Units | Q |
|------------|-----------------------------|-------------------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND                | 2.0  | 0.45 | 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                | 1790 <sup>a</sup> | 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            | 133               | 5.0  | 0.64 | ug/l  |   |
| 99-87-6    | p-Isopropyltoluene          | 8.7               | 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) | 10.3              | 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                 | 362               | 5.0  | 0.79 | ug/l  |   |
| 103-65-1   | n-Propylbenzene             | 245               | 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                     | 3570 <sup>a</sup> | 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      | 754 <sup>a</sup>  | 500  | 47   | ug/l  |   |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 311               | 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                  | 3830 <sup>a</sup> | 100  | 70   | ug/l  |   |
| 95-47-6    | o-Xylene                    | 2050 <sup>a</sup> | 100  | 41   | ug/l  |   |
| 1330-20-7  | Xylene (total)              | 5880 <sup>a</sup> | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW22-ROX-071113-DUP   | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-9  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 96%    | 95%    | 70-130% |
| 2037-26-5 | Toluene-D8           | 97%    | 100%   | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 102%   | 99%    | 70-130% |

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

(a) Result is from Run# 2

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW22-ROX-071113-DUP   | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-9  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #1 | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | F65721.D | 1  | 07/19/13 | KR | 07/15/13  | OP34009    | MSF3044          |
| Run #2 |          |    |          |    |           |            |                  |

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

## ABN Special List

| CAS No.   | Compound                    | Result | RL  | MDL  | Units | Q |
|-----------|-----------------------------|--------|-----|------|-------|---|
| 65-85-0   | Benzoic Acid                | ND     | 11  | 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  | 0.36 | ug/l  |   |
| 105-67-9  | 2,4-Dimethylphenol          | 97.8   | 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              | 14.7   | 11  | 1.4  | ug/l  |   |
|           | 3&4-Methylphenol            | 26.9   | 11  | 2.3  | ug/l  |   |
| 88-75-5   | 2-Nitrophenol               | ND     | 11  | 0.56 | ug/l  |   |
| 100-02-7  | 4-Nitrophenol               | ND     | 22  | 0.65 | ug/l  |   |
| 87-86-5   | Pentachlorophenol           | ND     | 11  | 1.4  | ug/l  |   |
| 108-95-2  | Phenol                      | 8.8    | 5.6 | 0.57 | ug/l  |   |
| 95-95-4   | 2,4,5-Trichlorophenol       | ND     | 11  | 0.64 | ug/l  |   |
| 88-06-2   | 2,4,6-Trichlorophenol       | ND     | 11  | 0.35 | ug/l  |   |
| 62-53-3   | Aniline                     | ND     | 11  | 0.71 | 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 | 0.95 | ug/l  |   |
| 100-51-6  | Benzyl Alcohol              | ND     | 11  | 0.64 | 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 | 0.23 | 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 | 0.72 | ug/l  |   |
| 121-14-2  | 2,4-Dinitrotoluene          | ND     | 11  | 0.75 | ug/l  |   |
| 606-20-2  | 2,6-Dinitrotoluene          | ND     | 11  | 0.71 | ug/l  |   |
| 91-94-1   | 3,3'-Dichlorobenzidine      | ND     | 5.6 | 0.56 | ug/l  |   |
| 132-64-9  | Dibenzofuran                | ND     | 2.2 | 0.17 | ug/l  |   |
| 84-74-2   | Di-n-butyl phthalate        | 0.52   | 5.6 | 0.43 | ug/l  | J |
| 117-84-0  | Di-n-octyl phthalate        | ND     | 5.6 | 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

|                          |                         |   |          |
|--------------------------|-------------------------|---|----------|
| <b>Client Sample ID:</b> | MW22-ROX-071113-DUP     | <b>Date Sampled:</b>  | 07/11/13 |
| <b>Lab Sample ID:</b>    | MC22664-9               | <b>Date Received:</b>   | 07/12/13 |
| <b>Matrix:</b>           | AQ - Ground Water       | <b>Percent Solids:</b>  | n/a      |
| <b>Method:</b>           | SW846 8270C SW846 3510C | <b>Project:</b> URMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## ABN Special List

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.6 | 0.56 | ug/l  |   |
| 131-11-3 | Dimethyl phthalate         | ND     | 5.6 | 0.56 | ug/l  |   |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 2.1    | 2.2 | 0.54 | ug/l  | J |
| 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  | 4.8  | 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 | 0.90 | ug/l  |   |
| 86-30-6  | N-Nitrosodiphenylamine     | ND     | 5.6 | 0.60 | ug/l  |   |
| 110-86-1 | Pyridine                   | ND     | 11  | 0.57 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 367-12-4  | 2-Fluorophenol       | 45%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 33%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 80%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 91%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 60%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 88%    |        | 30-130% |

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

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

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW22-ROX-071113-DUP   | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-9  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14037.D | 1  | 07/19/13 | KR | 07/15/13  | OP34010    | MSW635           |
| Run #2 |          |    |          |    |           |            |                  |

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

### BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | 0.18   | 0.11  | 0.015 | ug/l  |   |
| 208-96-8 | Acenaphthylene         | 0.47   | 0.11  | 0.015 | ug/l  |   |
| 120-12-7 | Anthracene             | ND     | 0.11  | 0.020 | ug/l  |   |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.056 | 0.033 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.11  | 0.019 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.056 | 0.026 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.11  | 0.042 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.065 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.081 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.11  | 0.046 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.11  | 0.036 | ug/l  |   |
| 86-73-7  | Fluorene               | 0.17   | 0.11  | 0.051 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.11  | 0.051 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | 21.6   | 0.22  | 0.16  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | 37.0   | 0.22  | 0.058 | ug/l  |   |
| 85-01-8  | Phenanthrene           | 0.20   | 0.056 | 0.014 | ug/l  | B |
| 129-00-0 | Pyrene                 | ND     | 0.11  | 0.039 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 4165-60-0 | Nitrobenzene-d5      | 81%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 57%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 88%    |        | 30-130% |

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

4.9

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW22-ROX-071113-DUP   | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-9  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27095.D | 1  | 07/24/13 | NK | 07/23/13  | OP34092    | GBK929           |
| 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 | 0.0045 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.015 | 0.0095 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 147%   |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 116%   |        | 36-173% |

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

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

4.9  
4

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> TB-ROX-071113-HCL   | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-10   | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Trip Blank Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | N78528.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |
| Run #2 |          |    |          |    |           |            |                  |

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

## VOA Special List

| CAS No.  | Compound                  | Result | RL   | MDL  | Units | Q |
|----------|---------------------------|--------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND     | 10   | 2.8  | 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  | 1.1  | 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-071113-HCL     | Date Sampled:   | 07/11/13 |
| Lab Sample ID:    | MC22664-10            | Date Received:  | 07/12/13 |
| Matrix:           | AQ - Trip Blank Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B           | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> TB-ROX-071113-HCL   |  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-10   |  | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Trip Blank Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 98%    |        | 70-130% |
| 2037-26-5 | Toluene-D8           | 102%   |        | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 107%   |        | 70-130% |

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

---

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> TB-ROX-071113-ST  | <b>Date Sampled:</b> 07/11/13  |
| <b>Lab Sample ID:</b> MC22664-11   | <b>Date Received:</b> 07/12/13 |
| <b>Matrix:</b> AQ - Trip Blank Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27096.D | 1  | 07/24/13 | NK | 07/23/13  | OP34092    | GBK929           |
| Run #2 |           |    |          |    |           |            |                  |

|        | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 37.1 ml        | 2.0 ml       |
| Run #2 |                |              |

### VOA Special List

| CAS No.  | Compound                    | Result | RL    | MDL    | Units | Q |
|----------|-----------------------------|--------|-------|--------|-------|---|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND     | 0.014 | 0.0043 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.014 | 0.0091 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 118%   |        | 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

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## Misc. Forms

### Custody Documents and Other Forms

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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

CALCISENCE

OTHER Accutest Labs, 495 Technology Ctr. W (Marlborough, MA 01752 (508-461-6200)

SPL Lab Vendor #

Lab Vendor #

Please Check Appropriate Box:

ENV. SERVICES     MOTIVA RETAIL     SHELL RETAIL

MOTIVA SDB/CH     CONSULTANT     LUBES

SHELL PIPELINE     OTHER

Print Bill To Contact Name: Bob Billman

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

PO # \_\_\_\_\_ SAP # \_\_\_\_\_

DATE: 7/11/13

PAGE: 1 of 2

SAMPLING COMPANY: **URS CORPORATION**

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**

TURNAROUND TIME (CALENDAR DAYS):  STANDARD (10 DAY)     5 DAYS     3 DAYS     2 DAYS     24 HOURS     RESULTS NEEDED ON WEEK-END

DELIVERABLES:  LEVEL 1     LEVEL 2     LEVEL 3     LEVEL 4     OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT °C: Cooler #1 \_\_\_\_\_ Cooler #2 \_\_\_\_\_ Cooler #3 \_\_\_\_\_

SPECIAL INSTRUCTIONS OR NOTES:  
 \* Please include "J" values on Reports.  
 \* Please provide sample receipt upon login.

SHELL CONTRACT RATE APPLIES  
 STATE REIMBURSEMENT RATE APPLIES  
 EDD NOT NEEDED  
 RECEIPT VERIFICATION REQUESTED  
 PROVIDE LEDD DISK

STATE: IL COUNTY: ROXANA, IL

STATE ADDRESS: Street and City: **900 South Central Ave; ROXANA**

PHONE NO. \_\_\_\_\_ FAX NO. \_\_\_\_\_

CONSULTANT PROJECT NO.: **Roxana Quarterly GW / 21562850.03003**

SAMPLER NAME(S) (Print): L Rathnow; D Mattingly

LAB USE ONLY: MC22664

| LAB USE ONLY | Field Sample Identification | SAMPLING |       | MATRIX | PRESERVATIVE |      |       |      |       | NO. OF CONT. | VOC 8260B SL+TICS |   |   | SVOC 8270C SL+TICS |  |  | PAH 8270LL |  |  | PID (ppm) | FIELD NOTES:<br>TEMPERATURE ON RECEIPT °C<br><br>Container PID Readings or Laboratory Notes |
|--------------|-----------------------------|----------|-------|--------|--------------|------|-------|------|-------|--------------|-------------------|---|---|--------------------|--|--|------------|--|--|-----------|---|
|              |                             | DATE     | TIME  |        | HCL          | HN03 | HN204 | HC9E | OTHER |              |                   |   |   |                    |  |  |            |  |  |           |   |
| -1           | MW24-ROX-071113             | 7/11     | 0900  | water  | 2            |      | 2     | 2    | 6     | X            | X                 | X | X |                    |  |  |            |  |  | 0         |   |
| -2           | P54-ROX-071113              |          | 0950  |        | 2            |      | 2     | 2    | 6     | X            | X                 | X | X |                    |  |  |            |  |  |           |   |
| -3           | MW3-ROX-071113              |          | 1035  |        | 2            |      | 2     | 2    | 6     | X            | X                 | X | X |                    |  |  |            |  |  |           |   |
| -4           | MW2-ROX-071113-EB           |          | 1050  |        | 2            |      | 2     | 2    | 6     | X            | X                 | X | X |                    |  |  |            |  |  |           |   |
| -5           | MW2-ROX-071113              |          | 1135  |        | 2            |      | 2     | 2    | 6     | X            | X                 | X | X |                    |  |  |            |  |  |           |   |
| -6           | ROST4PZC-ROX-071113         |          | 1315  |        | 2            |      | 2     | 2    | 6     | X            | X                 | X | X |                    |  |  |            |  |  |           |   |
| -7           | ROST37MW-ROX-071113         |          | 1405  |        | 2            |      | 2     | 2    | 6     | X            | X                 | X | X |                    |  |  |            |  |  |           |   |
| -8           | MW22-ROX-071113             |          | 1500  |        | 2            |      | 2     | 2    | 6     | X            | X                 | X | X |                    |  |  |            |  |  |           | 18D 5B2   |
| -9           | MW22-ROX-071113-Np          |          | 1500  |        | 2            |      | 2     | 2    | 6     | X            | X                 | X | X |                    |  |  |            |  |  |           |   |
| -10          | TB-ROX-071113-HCL           |          | 00:00 |        | 2            |      |       |      | 2     | X            |                   |   |   |                    |  |  |            |  |  |           |   |

Requested by (Signature): [Signature] Received by (Signature): [Signature]

Requested by (Signature): [Signature] Received by (Signature): [Signature]

Requested by (Signature): \_\_\_\_\_ Received by (Signature): \_\_\_\_\_

Date: 7/11/13 Date: 7-12-13

Time: \_\_\_\_\_ Time: 8:30

**FED EX**

05/08 Revision  
0.6 - 0.4°C

51  
5



# Shell Oil Products Chain Of Custody Record

**URS**

LAB (LOCATION)

XENCO

CALSICANCE

OTHER: Accutest Labs 495 Technology Ctr W (Marlborough, MA 01752 (508-481-6290)

SPL

Lab Vendor # \_\_\_\_\_

Lab Vendor # \_\_\_\_\_

Please Check Appropriate Box:

ENV. SERVICES     MOTIVA RETAIL     SHELL RETAIL

MOTIVA SDRM     CONSULTANT     LUBES

SHELL PIPELINE     OTHER \_\_\_\_\_

Print Bill To Contact Name: Bob Bilman

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

PO # \_\_\_\_\_ SAP # \_\_\_\_\_

DATE: 7/11/13    PAGE: 2 of 2

SAMPLING COMPANY: **URS CORPORATION**

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

PROJECT CONTACT (Name/Company or PDP Report to): **Elizabeth Kunkel, Wendy Pennington, Bob Bilman**

TELEPHONE: **314-429-0100**    FAX: **314-429-0462**    Bill To Contact Email: **bob.bilman@urs.com / elizabeth.kunkel@urs.com / wendy.pennington@urs.com**

LOG CODE: \_\_\_\_\_

STATE: \_\_\_\_\_ COUNTY: \_\_\_\_\_

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

LA - RIVQCB 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 LEED DISK

SITE ADDRESS: Street and City: **800 South Central Ave: ROXANA**    State: **IL**    COUNTY: \_\_\_\_\_

FOR DELIVERABLE TO (Name, Company, Office Location): \_\_\_\_\_    PHONE NO: \_\_\_\_\_    E-MAIL: \_\_\_\_\_

CONSULTANT PROJECT NO: **Roxana Quarterly GW / 21582860.03003**

SAMPLER NAME(S): (Print): L. Rothman, B. Mottinelly    LAB USE ONLY: MC22664

| LAB USE ONLY                         | Field Sample Identification | SAMPLING |      | MATRIX | PRESERVATIVE |      |       |      |       | NO. DP CONT. | VOC 8260B SL+TICS | VOC 8011 SL | SVOC 8270C SL+TICS | PAH 8270LL | PID (ppm) | FIELD NOTES:<br>TEMPERATURE ON RECEIPT C°<br><br>Container PID Readings or Laboratory Notes |
|--------------------------------------|-----------------------------|----------|------|--------|--------------|------|-------|------|-------|--------------|-------------------|-------------|--------------------|------------|-----------|---|
|                                      |                             | DATE     | TIME |        | HCL          | HNO3 | H2SO4 | NONE | OTHER |              |                   |             |                    |            |           |   |
| -11                                  | TB-ROX-071113-ST            | 7/11/13  | 0800 | Water  |              |      |       |      | 2     | 2            | X                 |             |                    |            | 0         |   |
| <i>[Large handwritten signature]</i> |                             |          |      |        |              |      |       |      |       |              |                   |             |                    |            |           |   |

|   |   |                      |                      |             |
|---|---|----------------------|----------------------|-------------|
| Relinquished by (Signature): <u>[Signature]</u> | Received by (Signature): _____              | Unit: <b>FED EX</b>  | Date: <u>7/11/13</u> | Time: _____ |
| Relinquished by (Signature): <u>FED EX</u>      | Received by (Signature): <u>[Signature]</u> | Date: <u>7-12-13</u> | Time: <u>970</u>     |             |

0.6 - 0.4 °C

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## Accutest Laboratories Sample Receipt Summary

**Accutest Job Number:** MC22664      **Client:** URS      **Immediate Client Services Action Required:** No  
**Date / Time Received:** 7/12/2013      **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. Smp'l Dates/Time OK:

**Cooler Temperature**      Y or N  
 1. Temp criteria achieved:    
 2. Cooler temp verification: Infrared gun  
 3. Cooler media: Ice (bag)

**Quality Control Preservation**      Y or N      N/A  
 1. Trip Blank present / cooler:     
 2. Trip Blank listed on COC:     
 3. Samples preserved properly:    
 4. VOCs headspace free:

**Sample Integrity - Documentation**      Y or N  
 1. Sample labels present on bottles:    
 2. Container labeling complete:    
 3. Sample container label / COC agree:

**Sample Integrity - Condition**      Y or N  
 1. Sample recvd within HT:    
 2. All containers accounted for:    
 3. Condition of sample: Intact

**Sample Integrity - Instructions**      Y or N      N/A  
 1. Analysis requested is clear:    
 2. Bottles received for unspecified tests:    
 3. Sufficient volume recvd for analysis:    
 4. Compositing instructions clear:     
 5. Filtering instructions clear:

Comments

5.1  
**5**

### Internal Sample Tracking Chronicle

Shell Oil

Job No: MC22664

URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

5.2  
5

| Sample Number   | Method             | Analyzed        | By | Prepped   | By | Test Codes |
|---|--------------------|-----------------|----|-----------|----|------------|
| MC22664-1 Collected: 11-JUL-13 09:00 By: LRDM Received: 12-JUL-13 By: MW24-ROX-071113   |                    |                 |    |           |    |            |
| MC22664-1   | SW846 8270C        | 19-JUL-13 10:07 | KR | 15-JUL-13 | MR | AB8270SL + |
| MC22664-1   | SW846 8270C BY SIM | 19-JUL-13 14:00 | KR | 15-JUL-13 | MR | B8270SIMSL |
| MC22664-1   | SW846 8260B        | 23-JUL-13 12:39 | JB |           |    | V8260SL +  |
| MC22664-1   | SW846 8011         | 24-JUL-13 17:24 | NK | 23-JUL-13 | BJ | V8011SL    |
| MC22664-1   | SW846 8270C        | 25-JUL-13 14:44 | WK | 23-JUL-13 | PA | AB8270SL + |
| MC22664-2 Collected: 11-JUL-13 09:50 By: LRDM Received: 12-JUL-13 By: P54-ROX-071113    |                    |                 |    |           |    |            |
| MC22664-2   | SW846 8270C        | 19-JUL-13 10:31 | KR | 15-JUL-13 | MR | AB8270SL + |
| MC22664-2   | SW846 8270C BY SIM | 19-JUL-13 15:12 | KR | 15-JUL-13 | MR | B8270SIMSL |
| MC22664-2   | SW846 8260B        | 23-JUL-13 13:36 | JB |           |    | V8260SL +  |
| MC22664-2   | SW846 8011         | 24-JUL-13 17:46 | NK | 23-JUL-13 | BJ | V8011SL    |
| MC22664-3 Collected: 11-JUL-13 10:35 By: LRDM Received: 12-JUL-13 By: MW3-ROX-071113    |                    |                 |    |           |    |            |
| MC22664-3   | SW846 8270C        | 19-JUL-13 10:55 | KR | 15-JUL-13 | MR | AB8270SL + |
| MC22664-3   | SW846 8270C BY SIM | 19-JUL-13 15:34 | KR | 15-JUL-13 | MR | B8270SIMSL |
| MC22664-3   | SW846 8260B        | 23-JUL-13 14:04 | JB |           |    | V8260SL +  |
| MC22664-3   | SW846 8011         | 24-JUL-13 18:08 | NK | 23-JUL-13 | BJ | V8011SL    |
| MC22664-4 Collected: 11-JUL-13 10:50 By: LRDM Received: 12-JUL-13 By: MW2-ROX-071113-EB |                    |                 |    |           |    |            |
| MC22664-4   | SW846 8270C        | 19-JUL-13 11:19 | KR | 15-JUL-13 | MR | AB8270SL + |
| MC22664-4   | SW846 8270C BY SIM | 19-JUL-13 15:56 | KR | 15-JUL-13 | MR | B8270SIMSL |
| MC22664-4   | SW846 8260B        | 23-JUL-13 14:32 | JB |           |    | V8260SL +  |
| MC22664-4   | SW846 8011         | 24-JUL-13 18:31 | NK | 23-JUL-13 | BJ | V8011SL    |
| MC22664-5 Collected: 11-JUL-13 11:35 By: LRDM Received: 12-JUL-13 By: MW2-ROX-071113    |                    |                 |    |           |    |            |
| MC22664-5   | SW846 8270C        | 19-JUL-13 11:43 | KR | 15-JUL-13 | MR | AB8270SL + |
| MC22664-5   | SW846 8270C BY SIM | 19-JUL-13 16:18 | KR | 15-JUL-13 | MR | B8270SIMSL |
| MC22664-5   | SW846 8260B        | 23-JUL-13 15:00 | JB |           |    | V8260SL +  |
| MC22664-5   | SW846 8260B        | 24-JUL-13 13:09 | JB |           |    | V8260SL +  |

### Internal Sample Tracking Chronicle

Shell Oil

Job No: MC22664

URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

5.2  
5

| Sample Number   | Method             | Analyzed        | By | Prepped   | By | Test Codes |
|---|--------------------|-----------------|----|-----------|----|------------|
| MC22664-5   | SW846 8011         | 24-JUL-13 18:54 | NK | 23-JUL-13 | BJ | V8011SL    |
| MC22664-6 Collected: 11-JUL-13 13:15 By: LRDM Received: 12-JUL-13 By: ROST4PZC-ROX-071113 |                    |                 |    |           |    |            |
| MC22664-6   | SW846 8270C        | 19-JUL-13 12:07 | KR | 15-JUL-13 | MR | AB8270SL + |
| MC22664-6   | SW846 8270C BY SIM | 19-JUL-13 16:40 | KR | 15-JUL-13 | MR | B8270SIMSL |
| MC22664-6   | SW846 8260B        | 23-JUL-13 15:29 | JB |           |    | V8260SL +  |
| MC22664-6   | SW846 8011         | 24-JUL-13 19:17 | NK | 23-JUL-13 | BJ | V8011SL    |
| MC22664-7 Collected: 11-JUL-13 14:05 By: LRDM Received: 12-JUL-13 By: ROST3MW-ROX-071113  |                    |                 |    |           |    |            |
| MC22664-7   | SW846 8270C        | 19-JUL-13 12:32 | KR | 15-JUL-13 | MR | AB8270SL + |
| MC22664-7   | SW846 8270C BY SIM | 19-JUL-13 17:02 | KR | 15-JUL-13 | MR | B8270SIMSL |
| MC22664-7   | SW846 8260B        | 23-JUL-13 15:57 | JB |           |    | V8260SL +  |
| MC22664-7   | SW846 8011         | 24-JUL-13 19:40 | NK | 23-JUL-13 | BJ | V8011SL    |
| MC22664-7   | SW846 8270C        | 25-JUL-13 15:08 | WK | 23-JUL-13 | PA | AB8270SL + |
| MC22664-8 Collected: 11-JUL-13 15:00 By: LRDM Received: 12-JUL-13 By: MW22-ROX-071113     |                    |                 |    |           |    |            |
| MC22664-8   | SW846 8270C        | 19-JUL-13 12:56 | KR | 15-JUL-13 | MR | AB8270SL + |
| MC22664-8   | SW846 8270C BY SIM | 19-JUL-13 17:24 | KR | 15-JUL-13 | MR | B8270SIMSL |
| MC22664-8   | SW846 8260B        | 23-JUL-13 16:25 | JB |           |    | V8260SL +  |
| MC22664-8   | SW846 8260B        | 24-JUL-13 13:37 | JB |           |    | V8260SL +  |
| MC22664-8   | SW846 8011         | 24-JUL-13 20:03 | NK | 23-JUL-13 | BJ | V8011SL    |
| MC22664-9 Collected: 11-JUL-13 15:00 By: LRDM Received: 12-JUL-13 By: MW22-ROX-071113-DUP |                    |                 |    |           |    |            |
| MC22664-9   | SW846 8270C        | 19-JUL-13 13:20 | KR | 15-JUL-13 | MR | AB8270SL + |
| MC22664-9   | SW846 8270C BY SIM | 19-JUL-13 17:47 | KR | 15-JUL-13 | MR | B8270SIMSL |
| MC22664-9   | SW846 8260B        | 23-JUL-13 16:53 | JB |           |    | V8260SL +  |
| MC22664-9   | SW846 8260B        | 24-JUL-13 14:05 | JB |           |    | V8260SL +  |
| MC22664-9   | SW846 8011         | 24-JUL-13 20:48 | NK | 23-JUL-13 | BJ | V8011SL    |
| MC22664-10 Collected: 11-JUL-13 00:00 By: LRDM Received: 12-JUL-13 By: TB-ROX-071113-HCL  |                    |                 |    |           |    |            |



### Internal Sample Tracking Chronicle

Shell Oil

Job No: MC22664

URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

5.2  
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| Sample Number   | Method      | Analyzed        | By | Prepped   | By | Test Codes |
|---|-------------|-----------------|----|-----------|----|------------|
| MC22664-10  | SW846 8260B | 23-JUL-13 10:46 | JB |           |    | V8260SL+   |
| MC22664-11 Collected: 11-JUL-13 00:00 By: LRDM Received: 12-JUL-13 By: TB-ROX-071113-ST |             |                 |    |           |    |            |
| MC22664-11  | SW846 8011  | 24-JUL-13 21:11 | NK | 23-JUL-13 | BJ | V8011SL    |

# SGS Accutest Internal Chain of Custody

**Job Number:** MC22664  
**Account:** SHELLWIC Shell Oil  
**Project:** URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
**Received:** 07/12/13

| Sample.Bottle Number | Transfer FROM    | Transfer TO      | Date/Time      | Reason                 |
|----------------------|------------------|------------------|----------------|------------------------|
| MC22664-1.1          | Walk In Ref #22  | Thomas Abruzzise | 07/23/13 14:59 | Retrieve from Storage  |
| MC22664-1.1          | Thomas Abruzzise |                  | 07/30/13 14:35 | Depleted               |
| MC22664-1.2          | Walk In Ref #22  | Michael Rolo     | 07/15/13 07:05 | Retrieve from Storage  |
| MC22664-1.2          | Michael Rolo     |                  | 08/02/13 07:19 | Depleted               |
| MC22664-1.4          | VOC Ref #5       | Jaclyn Bergeron  | 07/23/13 09:49 | Retrieve from Storage  |
| MC22664-1.4          | Jaclyn Bergeron  | GCMSN            | 07/23/13 09:49 | Load on Instrument     |
| MC22664-1.4          | GCMSN            | Jaclyn Bergeron  | 07/24/13 09:44 | Unload from Instrument |
| MC22664-1.4          | Jaclyn Bergeron  | VOC Ref #5       | 07/24/13 09:44 | Return to Storage      |
| MC22664-1.4          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22664-1.6          | VOC Ref #5       | Bijan Jafari     | 07/23/13 10:47 | Retrieve from Storage  |
| MC22664-1.6          | Bijan Jafari     |                  | 07/23/13 18:13 | Depleted               |
| MC22664-2.1          | Walk In Ref #22  | Michael Rolo     | 07/15/13 07:05 | Retrieve from Storage  |
| MC22664-2.1          | Michael Rolo     |                  | 08/02/13 07:19 | Depleted               |
| MC22664-2.4          | VOC Ref #5       | Jaclyn Bergeron  | 07/23/13 09:49 | Retrieve from Storage  |
| MC22664-2.4          | Jaclyn Bergeron  | GCMSN            | 07/23/13 09:49 | Load on Instrument     |
| MC22664-2.4          | GCMSN            | Jaclyn Bergeron  | 07/24/13 09:44 | Unload from Instrument |
| MC22664-2.4          | Jaclyn Bergeron  | VOC Ref #5       | 07/24/13 09:44 | Return to Storage      |
| MC22664-2.4          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22664-2.6          | VOC Ref #5       | Bijan Jafari     | 07/23/13 10:47 | Retrieve from Storage  |
| MC22664-2.6          | Bijan Jafari     |                  | 07/23/13 18:13 | Depleted               |
| MC22664-3.2          | Walk In Ref #22  | Michael Rolo     | 07/15/13 07:05 | Retrieve from Storage  |
| MC22664-3.2          | Michael Rolo     |                  | 08/02/13 07:19 | Depleted               |
| MC22664-3.4          | VOC Ref #5       | Jaclyn Bergeron  | 07/23/13 09:49 | Retrieve from Storage  |
| MC22664-3.4          | Jaclyn Bergeron  | GCMSN            | 07/23/13 09:49 | Load on Instrument     |
| MC22664-3.4          | GCMSN            | Jaclyn Bergeron  | 07/24/13 09:44 | Unload from Instrument |
| MC22664-3.4          | Jaclyn Bergeron  | VOC Ref #5       | 07/24/13 09:44 | Return to Storage      |
| MC22664-3.4          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22664-3.6          | VOC Ref #5       | Bijan Jafari     | 07/23/13 10:47 | Retrieve from Storage  |
| MC22664-3.6          | Bijan Jafari     |                  | 07/23/13 18:13 | Depleted               |
| MC22664-4.2          | Walk In Ref #22  | Michael Rolo     | 07/15/13 07:05 | Retrieve from Storage  |
| MC22664-4.2          | Michael Rolo     |                  | 08/02/13 07:19 | Depleted               |
| MC22664-4.3          | VOC Ref #5       | Jaclyn Bergeron  | 07/23/13 09:49 | Retrieve from Storage  |
| MC22664-4.3          | Jaclyn Bergeron  | GCMSN            | 07/23/13 09:49 | Load on Instrument     |

5.3  
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# SGS Accutest Internal Chain of Custody

**Job Number:** MC22664  
**Account:** SHELLWIC Shell Oil  
**Project:** URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
**Received:** 07/12/13

| Sample.Bottle Number | Transfer FROM    | Transfer TO      | Date/Time      | Reason                 |
|----------------------|------------------|------------------|----------------|------------------------|
| MC22664-4.3          | GCMSN            | Jaclyn Bergeron  | 07/24/13 09:44 | Unload from Instrument |
| MC22664-4.3          | Jaclyn Bergeron  | VOC Ref #5       | 07/24/13 09:44 | Return to Storage      |
| MC22664-4.3          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22664-4.4          | VOC Ref #5       | Jaclyn Bergeron  | 07/24/13 09:45 | Retrieve from Storage  |
| MC22664-4.4          | Jaclyn Bergeron  | GCMSN            | 07/24/13 09:46 | Load on Instrument     |
| MC22664-4.4          | GCMSN            | Jaclyn Bergeron  | 07/30/13 09:00 | Unload from Instrument |
| MC22664-4.4          | Jaclyn Bergeron  | VOC Ref #5       | 07/30/13 09:01 | Return to Storage      |
| MC22664-4.4          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22664-4.5          | VOC Ref #5       | Bijan Jafari     | 07/23/13 10:47 | Retrieve from Storage  |
| MC22664-4.5          | Bijan Jafari     |                  | 07/23/13 18:13 | Depleted               |
| MC22664-5.2          | Walk In Ref #22  | Michael Rolo     | 07/15/13 07:05 | Retrieve from Storage  |
| MC22664-5.2          | Michael Rolo     |                  | 08/02/13 07:19 | Depleted               |
| MC22664-5.3          | VOC Ref #5       | Jaclyn Bergeron  | 07/23/13 09:49 | Retrieve from Storage  |
| MC22664-5.3          | Jaclyn Bergeron  | GCMSN            | 07/23/13 09:49 | Load on Instrument     |
| MC22664-5.3          | GCMSN            | Jaclyn Bergeron  | 07/24/13 09:44 | Unload from Instrument |
| MC22664-5.3          | Jaclyn Bergeron  | VOC Ref #5       | 07/24/13 09:44 | Return to Storage      |
| MC22664-5.3          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22664-5.6          | VOC Ref #5       | Bijan Jafari     | 07/23/13 10:47 | Retrieve from Storage  |
| MC22664-5.6          | Bijan Jafari     |                  | 07/23/13 18:13 | Depleted               |
| MC22664-6.2          | Walk In Ref #22  | Michael Rolo     | 07/15/13 07:05 | Retrieve from Storage  |
| MC22664-6.2          | Michael Rolo     |                  | 08/02/13 07:19 | Depleted               |
| MC22664-6.4          | VOC Ref #5       | Jaclyn Bergeron  | 07/23/13 09:49 | Retrieve from Storage  |
| MC22664-6.4          | Jaclyn Bergeron  | GCMSN            | 07/23/13 09:49 | Load on Instrument     |
| MC22664-6.4          | GCMSN            | Jaclyn Bergeron  | 07/24/13 09:44 | Unload from Instrument |
| MC22664-6.4          | Jaclyn Bergeron  | VOC Ref #5       | 07/24/13 09:44 | Return to Storage      |
| MC22664-6.4          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22664-6.6          | VOC Ref #5       | Bijan Jafari     | 07/23/13 10:47 | Retrieve from Storage  |
| MC22664-6.6          | Bijan Jafari     |                  | 07/23/13 18:13 | Depleted               |
| MC22664-7.1          | Walk In Ref #22  | Michael Rolo     | 07/15/13 07:05 | Retrieve from Storage  |
| MC22664-7.1          | Michael Rolo     |                  | 08/02/13 07:19 | Depleted               |
| MC22664-7.2          | Walk In Ref #22  | Thomas Abruzzise | 07/23/13 14:59 | Retrieve from Storage  |
| MC22664-7.2          | Thomas Abruzzise |                  | 07/30/13 14:35 | Depleted               |
| MC22664-7.4          | VOC Ref #5       | Jaclyn Bergeron  | 07/23/13 09:49 | Retrieve from Storage  |

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5

# SGS Accutest Internal Chain of Custody

**Job Number:** MC22664  
**Account:** SHELLWIC Shell Oil  
**Project:** URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
**Received:** 07/12/13

| Sample.Bottle Number | Transfer FROM   | Transfer TO     | Date/Time      | Reason                 |
|----------------------|-----------------|-----------------|----------------|------------------------|
| MC22664-7.4          | Jaclyn Bergeron | GCMSN           | 07/23/13 09:49 | Load on Instrument     |
| MC22664-7.4          | GCMSN           | Jaclyn Bergeron | 07/24/13 09:44 | Unload from Instrument |
| MC22664-7.4          | Jaclyn Bergeron | VOC Ref #5      | 07/24/13 09:44 | Return to Storage      |
| MC22664-7.4          | Scott Parsick   |                 | 10/04/13 13:49 | Disposed               |
| MC22664-7.5          | VOC Ref #5      | Bijan Jafari    | 07/23/13 10:47 | Retrieve from Storage  |
| MC22664-7.5          | Bijan Jafari    |                 | 07/23/13 18:13 | Depleted               |
| MC22664-8.1          | Walk In Ref #22 | Michael Rolo    | 07/15/13 07:05 | Retrieve from Storage  |
| MC22664-8.1          | Michael Rolo    |                 | 08/02/13 07:19 | Depleted               |
| MC22664-8.3          | VOC Ref #5      | Jaclyn Bergeron | 07/24/13 09:45 | Retrieve from Storage  |
| MC22664-8.3          | Jaclyn Bergeron | GCMSN           | 07/24/13 09:46 | Load on Instrument     |
| MC22664-8.3          | GCMSN           | Jaclyn Bergeron | 07/30/13 09:00 | Unload from Instrument |
| MC22664-8.3          | Jaclyn Bergeron | VOC Ref #5      | 07/30/13 09:01 | Return to Storage      |
| MC22664-8.3          | Scott Parsick   |                 | 10/04/13 13:49 | Disposed               |
| MC22664-8.4          | VOC Ref #5      | Jaclyn Bergeron | 07/23/13 09:49 | Retrieve from Storage  |
| MC22664-8.4          | Jaclyn Bergeron | GCMSN           | 07/23/13 09:49 | Load on Instrument     |
| MC22664-8.4          | GCMSN           | Jaclyn Bergeron | 07/24/13 09:44 | Unload from Instrument |
| MC22664-8.4          | Jaclyn Bergeron | VOC Ref #5      | 07/24/13 09:44 | Return to Storage      |
| MC22664-8.4          | Scott Parsick   |                 | 10/04/13 13:49 | Disposed               |
| MC22664-8.5          | VOC Ref #5      | Bijan Jafari    | 07/23/13 10:47 | Retrieve from Storage  |
| MC22664-8.5          | Bijan Jafari    |                 | 07/23/13 18:13 | Depleted               |
| MC22664-9.1          | Walk In Ref #22 | Michael Rolo    | 07/15/13 07:05 | Retrieve from Storage  |
| MC22664-9.1          | Michael Rolo    |                 | 08/02/13 07:19 | Depleted               |
| MC22664-9.3          | VOC Ref #5      | Jaclyn Bergeron | 07/23/13 09:49 | Retrieve from Storage  |
| MC22664-9.3          | Jaclyn Bergeron | GCMSN           | 07/23/13 09:49 | Load on Instrument     |
| MC22664-9.3          | GCMSN           | Jaclyn Bergeron | 07/24/13 09:44 | Unload from Instrument |
| MC22664-9.3          | Jaclyn Bergeron | VOC Ref #5      | 07/24/13 09:44 | Return to Storage      |
| MC22664-9.3          | Scott Parsick   |                 | 10/04/13 13:49 | Disposed               |
| MC22664-9.4          | VOC Ref #5      | Jaclyn Bergeron | 07/24/13 09:45 | Retrieve from Storage  |
| MC22664-9.4          | Jaclyn Bergeron | GCMSN           | 07/24/13 09:46 | Load on Instrument     |
| MC22664-9.4          | GCMSN           | Jaclyn Bergeron | 07/30/13 09:00 | Unload from Instrument |
| MC22664-9.4          | Jaclyn Bergeron | VOC Ref #5      | 07/30/13 09:01 | Return to Storage      |
| MC22664-9.4          | Scott Parsick   |                 | 10/04/13 13:49 | Disposed               |
| MC22664-9.6          | VOC Ref #5      | Bijan Jafari    | 07/23/13 10:47 | Retrieve from Storage  |
| MC22664-9.6          | Bijan Jafari    |                 | 07/23/13 18:13 | Depleted               |

5.3  
5

# SGS Accutest Internal Chain of Custody

Job Number: MC22664  
Account: SHELLWIC Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
Received: 07/12/13

| Sample.Bottle Number | Transfer FROM   | Transfer TO     | Date/Time      | Reason                 |
|----------------------|-----------------|-----------------|----------------|------------------------|
| MC22664-10.1         | VOC Ref #5      | Jaclyn Bergeron | 07/23/13 09:49 | Retrieve from Storage  |
| MC22664-10.1         | Jaclyn Bergeron | GCMSN           | 07/23/13 09:49 | Load on Instrument     |
| MC22664-10.1         | GCMSN           | Jaclyn Bergeron | 07/24/13 09:44 | Unload from Instrument |
| MC22664-10.1         | Jaclyn Bergeron | VOC Ref #5      | 07/24/13 09:45 | Return to Storage      |
| MC22664-10.1         | Scott Parsick   |                 | 10/04/13 13:49 | Disposed               |
| MC22664-11.1         | VOC Ref #5      | Bijan Jafari    | 07/23/13 10:47 | Retrieve from Storage  |
| MC22664-11.1         | Bijan Jafari    |                 | 07/23/13 18:13 | Depleted               |

5.3  
5

## GC/MS Volatiles

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## QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

# Method Blank Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2948-MB | N78527.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9, MC22664-10

| 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  | 1.1  | 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: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2948-MB | N78527.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9, MC22664-10

| 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  
6



# Method Blank Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2948-MB | N78527.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |

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

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9, MC22664-10

| CAS No.   | Surrogate Recoveries | Limits |         |
|-----------|----------------------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 99%    | 70-130% |
| 2037-26-5 | Toluene-D8           | 102%   | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 106%   | 70-130% |

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

6.1.1  
6

# Method Blank Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2949-MB1 | N78578.D | 1  | 07/24/13 | JB | n/a       | n/a        | MSN2949          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22664-5, MC22664-8, MC22664-9

| 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 | 97% 70-130%  |
| 2037-26-5 | Toluene-D8           | 101% 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 101% 70-130% |

6.1.2  
6

# Method Blank Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2949-MB | N78552.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2949          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MSN2949-BS1, MC22739-8MS, MC22739-8MSD

| CAS No.   | Compound               | Result | RL   | MDL  | Units | Q |
|-----------|------------------------|--------|------|------|-------|---|
| 71-43-2   | Benzene                | ND     | 0.50 | 0.45 | ug/l  |   |
| 100-41-4  | Ethylbenzene           | 0.87   | 1.0  | 0.38 | ug/l  | J |
| 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             | 2.0    | 1.0  | 0.70 | ug/l  |   |
| 95-47-6   | o-Xylene               | ND     | 1.0  | 0.41 | ug/l  |   |
| 1330-20-7 | Xylene (total)         | 2.0    | 1.0  | 0.41 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Limits       |
|-----------|----------------------|--------------|
| 1868-53-7 | Dibromofluoromethane | 93% 70-130%  |
| 2037-26-5 | Toluene-D8           | 101% 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 101% 70-130% |

# Blank Spike Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2948-BS | N78524.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9, MC22664-10

| CAS No.  | Compound                  | Spike ug/l | BSP ug/l | BSP %  | Limits |
|----------|---------------------------|------------|----------|--------|--------|
| 67-64-1  | Acetone                   | 50         | 41.8     | 84     | 70-130 |
| 107-02-8 | Acrolein                  | 250        | 345      | 138* a | 70-130 |
| 107-13-1 | Acrylonitrile             | 50         | 44.4     | 89     | 70-130 |
| 71-43-2  | Benzene                   | 50         | 49.1     | 98     | 70-130 |
| 108-86-1 | Bromobenzene              | 50         | 50.2     | 100    | 70-130 |
| 74-97-5  | Bromochloromethane        | 50         | 49.4     | 99     | 70-130 |
| 75-27-4  | Bromodichloromethane      | 50         | 60.7     | 121    | 70-130 |
| 75-25-2  | Bromoform                 | 50         | 44.8     | 90     | 70-130 |
| 74-83-9  | Bromomethane              | 50         | 54.4     | 109    | 70-130 |
| 78-93-3  | 2-Butanone (MEK)          | 50         | 41.7     | 83     | 70-130 |
| 104-51-8 | n-Butylbenzene            | 50         | 49.9     | 100    | 70-130 |
| 135-98-8 | sec-Butylbenzene          | 50         | 54.7     | 109    | 70-130 |
| 98-06-6  | tert-Butylbenzene         | 50         | 58.2     | 116    | 70-130 |
| 75-15-0  | Carbon disulfide          | 50         | 47.4     | 95     | 70-130 |
| 56-23-5  | Carbon tetrachloride      | 50         | 59.0     | 118    | 70-130 |
| 108-90-7 | Chlorobenzene             | 50         | 49.0     | 98     | 70-130 |
| 75-00-3  | Chloroethane              | 50         | 46.6     | 93     | 70-130 |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50         | 47.5     | 95     | 70-130 |
| 67-66-3  | Chloroform                | 50         | 55.1     | 110    | 70-130 |
| 74-87-3  | Chloromethane             | 50         | 54.1     | 108    | 70-130 |
| 95-49-8  | o-Chlorotoluene           | 50         | 53.2     | 106    | 70-130 |
| 106-43-4 | p-Chlorotoluene           | 50         | 56.2     | 112    | 70-130 |
| 124-48-1 | Dibromochloromethane      | 50         | 47.1     | 94     | 70-130 |
| 95-50-1  | 1,2-Dichlorobenzene       | 50         | 54.8     | 110    | 70-130 |
| 541-73-1 | 1,3-Dichlorobenzene       | 50         | 52.3     | 105    | 70-130 |
| 106-46-7 | 1,4-Dichlorobenzene       | 50         | 50.2     | 100    | 70-130 |
| 75-71-8  | Dichlorodifluoromethane   | 50         | 65.4     | 131* a | 70-130 |
| 75-34-3  | 1,1-Dichloroethane        | 50         | 50.6     | 101    | 70-130 |
| 107-06-2 | 1,2-Dichloroethane        | 50         | 61.5     | 123    | 70-130 |
| 75-35-4  | 1,1-Dichloroethene        | 50         | 49.5     | 99     | 70-130 |
| 156-59-2 | cis-1,2-Dichloroethene    | 50         | 47.6     | 95     | 70-130 |
| 156-60-5 | trans-1,2-Dichloroethene  | 50         | 48.6     | 97     | 70-130 |
| 78-87-5  | 1,2-Dichloropropane       | 50         | 47.7     | 95     | 70-130 |
| 142-28-9 | 1,3-Dichloropropane       | 50         | 45.6     | 91     | 70-130 |
| 594-20-7 | 2,2-Dichloropropane       | 50         | 50.3     | 101    | 70-130 |
| 563-58-6 | 1,1-Dichloropropene       | 50         | 56.2     | 112    | 70-130 |

\* = Outside of Control Limits.

6.2.1  
6

# Blank Spike Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2948-BS | N78524.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9, MC22664-10

| CAS No.    | Compound                    | Spike ug/l | BSP ug/l | BSP % | Limits |
|------------|-----------------------------|------------|----------|-------|--------|
| 10061-01-5 | cis-1,3-Dichloropropene     | 50         | 44.2     | 88    | 70-130 |
| 10061-02-6 | trans-1,3-Dichloropropene   | 50         | 47.0     | 94    | 70-130 |
| 123-91-1   | 1,4-Dioxane                 | 250        | 218      | 87    | 70-130 |
| 97-63-2    | Ethyl methacrylate          | 50         | 45.3     | 91    | 77-137 |
| 100-41-4   | Ethylbenzene                | 50         | 48.0     | 96    | 70-130 |
| 87-68-3    | Hexachlorobutadiene         | 50         | 50.1     | 100   | 70-130 |
| 591-78-6   | 2-Hexanone                  | 50         | 40.7     | 81    | 70-130 |
| 98-82-8    | Isopropylbenzene            | 50         | 54.7     | 109   | 70-130 |
| 99-87-6    | p-Isopropyltoluene          | 50         | 53.9     | 108   | 70-130 |
| 1634-04-4  | Methyl Tert Butyl Ether     | 50         | 46.6     | 93    | 70-130 |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | 50         | 46.0     | 92    | 70-130 |
| 74-95-3    | Methylene bromide           | 50         | 52.7     | 105   | 70-130 |
| 75-09-2    | Methylene chloride          | 50         | 46.6     | 93    | 70-130 |
| 91-20-3    | Naphthalene                 | 50         | 38.8     | 78    | 70-130 |
| 103-65-1   | n-Propylbenzene             | 50         | 52.9     | 106   | 70-130 |
| 100-42-5   | Styrene                     | 50         | 44.5     | 89    | 70-130 |
| 630-20-6   | 1,1,1,2-Tetrachloroethane   | 50         | 49.1     | 98    | 70-130 |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | 50         | 47.7     | 95    | 70-130 |
| 127-18-4   | Tetrachloroethene           | 50         | 51.0     | 102   | 70-130 |
| 108-88-3   | Toluene                     | 50         | 52.2     | 104   | 70-130 |
| 87-61-6    | 1,2,3-Trichlorobenzene      | 50         | 44.9     | 90    | 70-130 |
| 120-82-1   | 1,2,4-Trichlorobenzene      | 50         | 46.3     | 93    | 70-130 |
| 71-55-6    | 1,1,1-Trichloroethane       | 50         | 57.5     | 115   | 70-130 |
| 79-00-5    | 1,1,2-Trichloroethane       | 50         | 50.3     | 101   | 70-130 |
| 79-01-6    | Trichloroethene             | 50         | 52.2     | 104   | 70-130 |
| 75-69-4    | Trichlorofluoromethane      | 50         | 58.0     | 116   | 70-130 |
| 96-18-4    | 1,2,3-Trichloropropane      | 50         | 43.1     | 86    | 70-130 |
| 95-63-6    | 1,2,4-Trimethylbenzene      | 50         | 50.0     | 100   | 70-130 |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 50         | 50.1     | 100   | 70-130 |
| 108-05-4   | Vinyl Acetate               | 50         | 37.2     | 74    | 70-130 |
| 75-01-4    | Vinyl chloride              | 50         | 41.1     | 82    | 70-130 |
|            | m,p-Xylene                  | 100        | 97.8     | 98    | 70-130 |
| 95-47-6    | o-Xylene                    | 50         | 52.1     | 104   | 70-130 |
| 1330-20-7  | Xylene (total)              | 150        | 150      | 100   | 70-130 |

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22664  
Account: SHELLWIC Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2948-BS | N78524.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9, MC22664-10

| CAS No.   | Surrogate Recoveries | BSP  | Limits  |
|-----------|----------------------|------|---------|
| 1868-53-7 | Dibromofluoromethane | 98%  | 70-130% |
| 2037-26-5 | Toluene-D8           | 102% | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 95%  | 70-130% |

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

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| MSN2949-BS1 | N78575.D | 1  | 07/24/13 | JB | n/a       | n/a        | MSN2949          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22664-5, MC22664-8, MC22664-9

| CAS No.   | Compound               | Spike ug/l | BSP ug/l | BSP % | Limits |
|-----------|------------------------|------------|----------|-------|--------|
| 71-43-2   | Benzene                | 50         | 51.7     | 103   | 70-130 |
| 100-41-4  | Ethylbenzene           | 50         | 50.4     | 101   | 70-130 |
| 108-88-3  | Toluene                | 50         | 53.6     | 107   | 70-130 |
| 95-63-6   | 1,2,4-Trimethylbenzene | 50         | 53.2     | 106   | 70-130 |
|           | m,p-Xylene             | 100        | 102      | 102   | 70-130 |
| 95-47-6   | o-Xylene               | 50         | 54.2     | 108   | 70-130 |
| 1330-20-7 | Xylene (total)         | 150        | 157      | 105   | 70-130 |

| CAS No.   | Surrogate Recoveries | BSP  | Limits  |
|-----------|----------------------|------|---------|
| 1868-53-7 | Dibromofluoromethane | 95%  | 70-130% |
| 2037-26-5 | Toluene-D8           | 101% | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 95%  | 70-130% |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|----|-----------|------------|------------------|
| MC22702-4MS  | N78547.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |
| MC22702-4MSD | N78548.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |
| MC22702-4    | N78531.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9, MC22664-10

| CAS No.  | Compound                  | MC22702-4<br>ug/l | Spike<br>Q<br>ug/l | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|----------|---------------------------|-------------------|--------------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 67-64-1  | Acetone                   | ND                | 50                 | 27.1       | 54* a   | 50            | 27.5        | 55* a    | 1   | 70-130/30         |
| 107-02-8 | Acrolein                  | ND                | 250                | 288        | 115     | 250           | 293         | 117      | 2   | 70-130/30         |
| 107-13-1 | Acrylonitrile             | ND                | 50                 | 43.5       | 87      | 50            | 43.3        | 87       | 0   | 70-130/30         |
| 71-43-2  | Benzene                   | ND                | 50                 | 49.9       | 100     | 50            | 51.0        | 102      | 2   | 70-130/30         |
| 108-86-1 | Bromobenzene              | ND                | 50                 | 55.0       | 110     | 50            | 52.6        | 105      | 4   | 70-130/30         |
| 74-97-5  | Bromochloromethane        | ND                | 50                 | 51.8       | 104     | 50            | 52.6        | 105      | 2   | 70-130/30         |
| 75-27-4  | Bromodichloromethane      | ND                | 50                 | 55.9       | 112     | 50            | 55.5        | 111      | 1   | 70-130/30         |
| 75-25-2  | Bromoform                 | ND                | 50                 | 43.8       | 88      | 50            | 44.5        | 89       | 2   | 70-130/30         |
| 74-83-9  | Bromomethane              | ND                | 50                 | 57.5       | 115     | 50            | 64.6        | 129      | 12  | 70-130/30         |
| 78-93-3  | 2-Butanone (MEK)          | ND                | 50                 | 32.8       | 66* a   | 50            | 33.1        | 66* a    | 1   | 70-130/30         |
| 104-51-8 | n-Butylbenzene            | ND                | 50                 | 51.2       | 102     | 50            | 50.8        | 102      | 1   | 70-130/30         |
| 135-98-8 | sec-Butylbenzene          | ND                | 50                 | 55.9       | 112     | 50            | 56.6        | 113      | 1   | 70-130/30         |
| 98-06-6  | tert-Butylbenzene         | ND                | 50                 | 57.4       | 115     | 50            | 58.0        | 116      | 1   | 70-130/30         |
| 75-15-0  | Carbon disulfide          | ND                | 50                 | 48.0       | 96      | 50            | 49.9        | 100      | 4   | 70-130/30         |
| 56-23-5  | Carbon tetrachloride      | ND                | 50                 | 51.8       | 104     | 50            | 52.5        | 105      | 1   | 70-130/30         |
| 108-90-7 | Chlorobenzene             | ND                | 50                 | 50.0       | 100     | 50            | 51.8        | 104      | 4   | 70-130/30         |
| 75-00-3  | Chloroethane              | ND                | 50                 | 49.3       | 99      | 50            | 51.5        | 103      | 4   | 70-130/30         |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND                | 50                 | 47.1       | 94      | 50            | 48.3        | 97       | 3   | 70-130/30         |
| 67-66-3  | Chloroform                | ND                | 50                 | 53.1       | 106     | 50            | 55.1        | 110      | 4   | 70-130/30         |
| 74-87-3  | Chloromethane             | ND                | 50                 | 48.9       | 98      | 50            | 52.2        | 104      | 7   | 70-130/30         |
| 95-49-8  | o-Chlorotoluene           | ND                | 50                 | 54.6       | 109     | 50            | 55.1        | 110      | 1   | 70-130/30         |
| 106-43-4 | p-Chlorotoluene           | ND                | 50                 | 56.4       | 113     | 50            | 57.6        | 115      | 2   | 70-130/30         |
| 124-48-1 | Dibromochloromethane      | ND                | 50                 | 45.6       | 91      | 50            | 47.8        | 96       | 5   | 70-130/30         |
| 95-50-1  | 1,2-Dichlorobenzene       | ND                | 50                 | 55.3       | 111     | 50            | 56.0        | 112      | 1   | 70-130/30         |
| 541-73-1 | 1,3-Dichlorobenzene       | ND                | 50                 | 53.3       | 107     | 50            | 53.9        | 108      | 1   | 70-130/30         |
| 106-46-7 | 1,4-Dichlorobenzene       | ND                | 50                 | 50.5       | 101     | 50            | 51.1        | 102      | 1   | 70-130/30         |
| 75-71-8  | Dichlorodifluoromethane   | ND                | 50                 | 59.1       | 118     | 50            | 59.1        | 118      | 0   | 70-130/30         |
| 75-34-3  | 1,1-Dichloroethane        | ND                | 50                 | 51.5       | 103     | 50            | 52.8        | 106      | 2   | 70-130/30         |
| 107-06-2 | 1,2-Dichloroethane        | ND                | 50                 | 53.9       | 108     | 50            | 52.4        | 105      | 3   | 70-130/30         |
| 75-35-4  | 1,1-Dichloroethene        | ND                | 50                 | 50.3       | 101     | 50            | 52.0        | 104      | 3   | 70-130/30         |
| 156-59-2 | cis-1,2-Dichloroethene    | ND                | 50                 | 48.5       | 97      | 50            | 51.1        | 102      | 5   | 70-130/30         |
| 156-60-5 | trans-1,2-Dichloroethene  | ND                | 50                 | 51.0       | 102     | 50            | 53.3        | 107      | 4   | 70-130/30         |
| 78-87-5  | 1,2-Dichloropropane       | ND                | 50                 | 47.3       | 95      | 50            | 48.4        | 97       | 2   | 70-130/30         |
| 142-28-9 | 1,3-Dichloropropane       | ND                | 50                 | 46.4       | 93      | 50            | 47.5        | 95       | 2   | 70-130/30         |
| 594-20-7 | 2,2-Dichloropropane       | ND                | 50                 | 48.9       | 98      | 50            | 48.7        | 97       | 0   | 70-130/30         |
| 563-58-6 | 1,1-Dichloropropene       | ND                | 50                 | 54.7       | 109     | 50            | 54.6        | 109      | 0   | 70-130/30         |

\* = Outside of Control Limits.

6.3.1  
 6



# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|----|-----------|------------|------------------|
| MC22702-4MS  | N78547.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |
| MC22702-4MSD | N78548.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |
| MC22702-4    | N78531.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9, MC22664-10

| CAS No.    | Compound                    | MC22702-4<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|------------|-----------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 10061-01-5 | cis-1,3-Dichloropropene     | ND                | 50         | 43.3       | 87      | 50            | 43.6        | 87       | 1   | 70-130/30         |
| 10061-02-6 | trans-1,3-Dichloropropene   | ND                | 50         | 44.8       | 90      | 50            | 44.4        | 89       | 1   | 70-130/30         |
| 123-91-1   | 1,4-Dioxane                 | ND                | 250        | 206        | 82      | 250           | 221         | 88       | 7   | 70-130/30         |
| 97-63-2    | Ethyl methacrylate          | ND                | 50         | 46.3       | 93      | 50            | 44.6        | 89       | 4   | 72-139/30         |
| 100-41-4   | Ethylbenzene                | ND                | 50         | 53.9       | 108     | 50            | 52.9        | 106      | 2   | 70-130/30         |
| 87-68-3    | Hexachlorobutadiene         | ND                | 50         | 47.0       | 94      | 50            | 48.0        | 96       | 2   | 70-130/30         |
| 591-78-6   | 2-Hexanone                  | ND                | 50         | 31.8       | 64* a   | 50            | 33.6        | 67* a    | 6   | 70-130/30         |
| 98-82-8    | Isopropylbenzene            | ND                | 50         | 57.0       | 114     | 50            | 57.8        | 116      | 1   | 70-130/30         |
| 99-87-6    | p-Isopropyltoluene          | ND                | 50         | 54.5       | 109     | 50            | 55.4        | 111      | 2   | 70-130/30         |
| 1634-04-4  | Methyl Tert Butyl Ether     | ND                | 50         | 48.5       | 97      | 50            | 49.4        | 99       | 2   | 70-130/30         |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | ND                | 50         | 41.7       | 83      | 50            | 39.1        | 78       | 6   | 70-130/30         |
| 74-95-3    | Methylene bromide           | ND                | 50         | 49.0       | 98      | 50            | 50.8        | 102      | 4   | 70-130/30         |
| 75-09-2    | Methylene chloride          | ND                | 50         | 49.9       | 100     | 50            | 50.2        | 100      | 1   | 70-130/30         |
| 91-20-3    | Naphthalene                 | ND                | 50         | 50.2       | 100     | 50            | 46.5        | 93       | 8   | 70-130/30         |
| 103-65-1   | n-Propylbenzene             | ND                | 50         | 57.5       | 115     | 50            | 55.9        | 112      | 3   | 70-130/30         |
| 100-42-5   | Styrene                     | ND                | 50         | 45.7       | 91      | 50            | 47.0        | 94       | 3   | 70-130/30         |
| 630-20-6   | 1,1,1,2-Tetrachloroethane   | ND                | 50         | 48.0       | 96      | 50            | 49.6        | 99       | 3   | 70-130/30         |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | ND                | 50         | 50.2       | 100     | 50            | 49.3        | 99       | 2   | 70-130/30         |
| 127-18-4   | Tetrachloroethene           | ND                | 50         | 49.7       | 99      | 50            | 51.5        | 103      | 4   | 70-130/30         |
| 108-88-3   | Toluene                     | ND                | 50         | 52.7       | 105     | 50            | 53.1        | 106      | 1   | 70-130/30         |
| 87-61-6    | 1,2,3-Trichlorobenzene      | ND                | 50         | 46.8       | 94      | 50            | 47.4        | 95       | 1   | 70-130/30         |
| 120-82-1   | 1,2,4-Trichlorobenzene      | ND                | 50         | 48.1       | 96      | 50            | 48.4        | 97       | 1   | 70-130/30         |
| 71-55-6    | 1,1,1-Trichloroethane       | ND                | 50         | 53.8       | 108     | 50            | 55.3        | 111      | 3   | 70-130/30         |
| 79-00-5    | 1,1,2-Trichloroethane       | ND                | 50         | 52.0       | 104     | 50            | 49.6        | 99       | 5   | 70-130/30         |
| 79-01-6    | Trichloroethene             | ND                | 50         | 52.6       | 105     | 50            | 52.3        | 105      | 1   | 70-130/30         |
| 75-69-4    | Trichlorofluoromethane      | ND                | 50         | 51.9       | 104     | 50            | 53.8        | 108      | 4   | 70-130/30         |
| 96-18-4    | 1,2,3-Trichloropropane      | ND                | 50         | 45.7       | 91      | 50            | 45.6        | 91       | 0   | 70-130/30         |
| 95-63-6    | 1,2,4-Trimethylbenzene      | ND                | 50         | 55.8       | 112     | 50            | 54.6        | 109      | 2   | 70-130/30         |
| 108-67-8   | 1,3,5-Trimethylbenzene      | ND                | 50         | 52.3       | 105     | 50            | 52.0        | 104      | 1   | 70-130/30         |
| 108-05-4   | Vinyl Acetate               | ND                | 50         | 32.3       | 65* a   | 50            | 32.4        | 65* a    | 0   | 70-130/30         |
| 75-01-4    | Vinyl chloride              | ND                | 50         | 41.4       | 83      | 50            | 43.1        | 86       | 4   | 70-130/30         |
|            | m,p-Xylene                  | ND                | 100        | 107        | 107     | 100           | 107         | 107      | 0   | 70-130/30         |
| 95-47-6    | o-Xylene                    | ND                | 50         | 52.9       | 106     | 50            | 54.2        | 108      | 2   | 70-130/30         |
| 1330-20-7  | Xylene (total)              | ND                | 150        | 160        | 107     | 150           | 161         | 107      | 1   | 70-130/30         |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|----|-----------|------------|------------------|
| MC22702-4MS  | N78547.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |
| MC22702-4MSD | N78548.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |
| MC22702-4    | N78531.D | 1  | 07/23/13 | JB | n/a       | n/a        | MSN2948          |

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

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9, MC22664-10

| CAS No.   | Surrogate Recoveries | MS   | MSD | MC22702-4 | Limits  |
|-----------|----------------------|------|-----|-----------|---------|
| 1868-53-7 | Dibromofluoromethane | 94%  | 96% | 100%      | 70-130% |
| 2037-26-5 | Toluene-D8           | 100% | 99% | 100%      | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 97%  | 99% | 108%      | 70-130% |

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

\* = Outside of Control Limits.

6.3.1  
6

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample                 | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------------------|----------|----|----------|----|-----------|------------|------------------|
| MC22739-8MS            | N78561.D | 5  | 07/24/13 | JB | n/a       | n/a        | MSN2949          |
| MC22739-8MSD           | N78562.D | 5  | 07/24/13 | JB | n/a       | n/a        | MSN2949          |
| MC22739-8 <sup>a</sup> | N78579.D | 1  | 07/24/13 | JB | n/a       | n/a        | MSN2949          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22664-5, MC22664-8, MC22664-9

| CAS No.   | Compound               | MC22739-8<br>ug/l | Spike<br>Q<br>ug/l | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|-----------|------------------------|-------------------|--------------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 71-43-2   | Benzene                | 1.6               | 250                | 252        | 100     | 250           | 255         | 101      | 1   | 70-130/30         |
| 100-41-4  | Ethylbenzene           | 7.9               | 250                | 251        | 97      | 250           | 250         | 97       | 0   | 70-130/30         |
| 108-88-3  | Toluene                | ND                | 250                | 262        | 105     | 250           | 262         | 105      | 0   | 70-130/30         |
| 95-63-6   | 1,2,4-Trimethylbenzene | 29.2              | 250                | 281        | 101     | 250           | 274         | 98       | 3   | 70-130/30         |
|           | m,p-Xylene             | 8.3               | 500                | 515        | 101     | 500           | 503         | 99       | 2   | 70-130/30         |
| 95-47-6   | o-Xylene               | 13.7              | 250                | 273        | 104     | 250           | 271         | 103      | 1   | 70-130/30         |
| 1330-20-7 | Xylene (total)         | 22.0              | 750                | 789        | 102     | 750           | 774         | 100      | 2   | 70-130/30         |

| CAS No.   | Surrogate Recoveries | MS   | MSD  | MC22739-8 | Limits  |
|-----------|----------------------|------|------|-----------|---------|
| 1868-53-7 | Dibromofluoromethane | 96%  | 95%  | 97%       | 70-130% |
| 2037-26-5 | Toluene-D8           | 102% | 101% | 100%      | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 99%  | 98%  | 100%      | 70-130% |

(a) Chloromethane(SPCC) does not meet the reference method acceptance criteria in instrument QC and results may be biased low.

\* = Outside of Control Limits.

# Volatile Internal Standard Area Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSN2948-CC2927 | Injection Date: | 07/23/13    |
| Lab File ID:   | N78523.D       | Injection Time: | 08:25       |
| Instrument ID: | GCMSN          | Method:         | SW846 8260B |

|                          | IS 1   |      | IS 2   |       | IS 3   |       | IS 4   |       | IS 5   |      |
|--------------------------|--------|------|--------|-------|--------|-------|--------|-------|--------|------|
|                          | AREA   | RT   | AREA   | RT    | AREA   | RT    | AREA   | RT    | AREA   | RT   |
| Check Std                | 123260 | 9.01 | 189051 | 9.88  | 109175 | 13.13 | 91168  | 15.69 | 52372  | 6.57 |
| Upper Limit <sup>a</sup> | 246520 | 9.51 | 378102 | 10.38 | 218350 | 13.63 | 182336 | 16.19 | 104744 | 7.07 |
| Lower Limit <sup>b</sup> | 61630  | 8.51 | 94526  | 9.38  | 54588  | 12.63 | 45584  | 15.19 | 26186  | 6.07 |

| Lab          | IS 1   |      | IS 2   |      | IS 3   |       | IS 4   |       | IS 5  |      |
|--------------|--------|------|--------|------|--------|-------|--------|-------|-------|------|
| Sample ID    | AREA   | RT   | AREA   | RT   | AREA   | RT    | AREA   | RT    | AREA  | RT   |
| MSN2948-BS   | 126579 | 9.01 | 192838 | 9.88 | 109594 | 13.13 | 93347  | 15.69 | 57397 | 6.57 |
| MSN2948-MB   | 109169 | 9.01 | 167471 | 9.88 | 90443  | 13.13 | 67488  | 15.69 | 50772 | 6.59 |
| MC22664-10   | 124881 | 9.01 | 189683 | 9.88 | 100218 | 13.13 | 76506  | 15.69 | 56175 | 6.58 |
| ZZZZZZ       | 121776 | 9.01 | 186535 | 9.88 | 100417 | 13.13 | 76659  | 15.69 | 53446 | 6.58 |
| ZZZZZZ       | 120841 | 9.01 | 186352 | 9.87 | 99111  | 13.13 | 74711  | 15.69 | 49707 | 6.59 |
| MC22702-4    | 120897 | 9.01 | 187197 | 9.88 | 100330 | 13.13 | 73879  | 15.69 | 52364 | 6.58 |
| MC22664-1    | 123592 | 9.01 | 185916 | 9.88 | 99469  | 13.13 | 75144  | 15.69 | 53344 | 6.58 |
| ZZZZZZ       | 120998 | 9.01 | 184998 | 9.88 | 98865  | 13.13 | 74412  | 15.69 | 56305 | 6.58 |
| MC22664-2    | 118799 | 9.01 | 185671 | 9.88 | 97651  | 13.13 | 72211  | 15.69 | 48716 | 6.59 |
| MC22664-3    | 121450 | 9.01 | 185587 | 9.88 | 99096  | 13.13 | 76103  | 15.69 | 48146 | 6.58 |
| MC22664-4    | 118545 | 9.01 | 182117 | 9.88 | 96546  | 13.13 | 74820  | 15.69 | 52278 | 6.59 |
| MC22664-5    | 136079 | 9.01 | 211137 | 9.87 | 119474 | 13.13 | 105377 | 15.69 | 76733 | 6.57 |
| MC22664-6    | 123707 | 9.01 | 192629 | 9.88 | 102687 | 13.13 | 81797  | 15.69 | 57843 | 6.59 |
| MC22664-7    | 139600 | 9.01 | 218705 | 9.88 | 112546 | 13.13 | 91677  | 15.69 | 62715 | 6.58 |
| MC22664-8    | 157424 | 9.01 | 253410 | 9.87 | 141123 | 13.13 | 124924 | 15.69 | 85661 | 6.57 |
| MC22664-9    | 164384 | 9.01 | 268021 | 9.88 | 147385 | 13.13 | 128202 | 15.69 | 87793 | 6.57 |
| ZZZZZZ       | 171592 | 9.01 | 259880 | 9.87 | 140206 | 13.13 | 131933 | 15.69 | 95058 | 6.57 |
| MC22702-4MS  | 171032 | 9.01 | 264993 | 9.87 | 146070 | 13.13 | 117822 | 15.69 | 70716 | 6.57 |
| MC22702-4MSD | 168157 | 9.01 | 267904 | 9.88 | 142677 | 13.13 | 118759 | 15.69 | 69574 | 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

6

# Volatile Internal Standard Area Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSN2949-CC2927 | Injection Date: | 07/23/13    |
| Lab File ID:   | N78550.D       | Injection Time: | 21:07       |
| Instrument ID: | GCMSN          | Method:         | SW846 8260B |

|                          | IS 1   | RT   | IS 2   | RT    | IS 3   | RT    | IS 4   | RT    | IS 5   | RT   |
|--------------------------|--------|------|--------|-------|--------|-------|--------|-------|--------|------|
|                          | AREA   |      | AREA   |       | AREA   |       | AREA   |       | AREA   |      |
| Check Std                | 164501 | 9.01 | 258586 | 9.88  | 142011 | 13.13 | 115814 | 15.69 | 66028  | 6.57 |
| Upper Limit <sup>a</sup> | 329002 | 9.51 | 517172 | 10.38 | 284022 | 13.63 | 231628 | 16.19 | 132056 | 7.07 |
| Lower Limit <sup>b</sup> | 82251  | 8.51 | 129293 | 9.38  | 71006  | 12.63 | 57907  | 15.19 | 33014  | 6.07 |

| Lab          | IS 1   | RT   | IS 2   | RT   | IS 3   | RT    | IS 4   | RT    | IS 5  | RT   |
|--------------|--------|------|--------|------|--------|-------|--------|-------|-------|------|
| Sample ID    | AREA   |      | AREA   |      | AREA   |       | AREA   |       | AREA  |      |
| MSN2949-BS   | 164501 | 9.01 | 258586 | 9.88 | 142011 | 13.13 | 115814 | 15.69 | 66028 | 6.57 |
| MSN2949-MB   | 161930 | 9.01 | 250217 | 9.88 | 129660 | 13.13 | 102132 | 15.69 | 65680 | 6.58 |
| ZZZZZZ       | 147171 | 9.01 | 225907 | 9.87 | 124865 | 13.13 | 112644 | 15.69 | 69377 | 6.57 |
| ZZZZZZ       | 156274 | 9.01 | 237661 | 9.88 | 131139 | 13.13 | 117887 | 15.69 | 59272 | 6.57 |
| MC22739-8MS  | 158590 | 9.01 | 245086 | 9.88 | 136416 | 13.13 | 111886 | 15.69 | 72203 | 6.57 |
| MC22739-8MSD | 158851 | 9.01 | 242116 | 9.87 | 135390 | 13.13 | 110166 | 15.69 | 66230 | 6.57 |
| ZZZZZZ       | 151823 | 9.01 | 229743 | 9.88 | 121825 | 13.13 | 94027  | 15.69 | 67898 | 6.59 |
| ZZZZZZ       | 145025 | 9.01 | 222053 | 9.88 | 116499 | 13.13 | 90217  | 15.69 | 61349 | 6.58 |
| ZZZZZZ       | 145767 | 9.01 | 223171 | 9.88 | 117695 | 13.13 | 88649  | 15.69 | 57211 | 6.58 |
| ZZZZZZ       | 144891 | 9.01 | 222887 | 9.88 | 116387 | 13.13 | 88086  | 15.69 | 55692 | 6.58 |
| ZZZZZZ       | 142626 | 9.01 | 215825 | 9.87 | 112541 | 13.13 | 89690  | 15.69 | 59025 | 6.58 |
| ZZZZZZ       | 142210 | 9.01 | 217334 | 9.88 | 113828 | 13.13 | 90210  | 15.69 | 57850 | 6.59 |
| ZZZZZZ       | 139169 | 9.01 | 212751 | 9.88 | 113179 | 13.13 | 86314  | 15.69 | 60258 | 6.58 |
| ZZZZZZ       | 137222 | 9.01 | 210000 | 9.87 | 114132 | 13.13 | 87111  | 15.69 | 57002 | 6.58 |

- IS 1 = Pentafluorobenzene
- IS 2 = 1,4-Difluorobenzene
- IS 3 = Chlorobenzene-D5
- IS 4 = 1,4-Dichlorobenzene-d4
- IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

6.4.2

6

# Volatile Internal Standard Area Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSN2949-CC2927 | Injection Date: | 07/24/13    |
| Lab File ID:   | N78574.D       | Injection Time: | 08:27       |
| Instrument ID: | GCMSN          | Method:         | SW846 8260B |

|                          | IS 1   |      | IS 2   |       | IS 3   |       | IS 4   |       | IS 5   |      |
|--------------------------|--------|------|--------|-------|--------|-------|--------|-------|--------|------|
|                          | AREA   | RT   | AREA   | RT    | AREA   | RT    | AREA   | RT    | AREA   | RT   |
| Check Std                | 141213 | 9.01 | 212979 | 9.88  | 119583 | 13.13 | 99343  | 15.69 | 57246  | 6.57 |
| Upper Limit <sup>a</sup> | 282426 | 9.51 | 425958 | 10.38 | 239166 | 13.63 | 198686 | 16.19 | 114492 | 7.07 |
| Lower Limit <sup>b</sup> | 70607  | 8.51 | 106490 | 9.38  | 59792  | 12.63 | 49672  | 15.19 | 28623  | 6.07 |

| Lab         | IS 1   |      | IS 2   |      | IS 3   |       | IS 4  |       | IS 5  |      |
|-------------|--------|------|--------|------|--------|-------|-------|-------|-------|------|
| Sample ID   | AREA   | RT   | AREA   | RT   | AREA   | RT    | AREA  | RT    | AREA  | RT   |
| MSN2949-BS1 | 137882 | 9.01 | 211755 | 9.88 | 119198 | 13.13 | 99126 | 15.69 | 58972 | 6.57 |
| MSN2949-MB1 | 138319 | 9.01 | 213161 | 9.88 | 112094 | 13.13 | 85440 | 15.69 | 64627 | 6.58 |
| MC22739-8   | 135549 | 9.01 | 209728 | 9.88 | 112914 | 13.13 | 90080 | 15.69 | 58113 | 6.58 |
| ZZZZZZ      | 135252 | 9.01 | 209367 | 9.88 | 109695 | 13.13 | 87201 | 15.69 | 56015 | 6.58 |
| ZZZZZZ      | 134188 | 9.01 | 206684 | 9.88 | 108869 | 13.13 | 86583 | 15.69 | 58964 | 6.58 |
| ZZZZZZ      | 132376 | 9.01 | 206481 | 9.88 | 109389 | 13.13 | 84197 | 15.69 | 52660 | 6.58 |
| ZZZZZZ      | 134725 | 9.01 | 208276 | 9.88 | 111830 | 13.13 | 96821 | 15.69 | 64924 | 6.56 |
| MC22664-5   | 140832 | 9.01 | 214499 | 9.88 | 113152 | 13.13 | 91288 | 15.69 | 57129 | 6.57 |
| MC22664-8   | 128948 | 9.01 | 199216 | 9.88 | 104414 | 13.13 | 81547 | 15.69 | 55799 | 6.58 |
| MC22664-9   | 137830 | 9.01 | 211970 | 9.88 | 111171 | 13.13 | 90275 | 15.69 | 56677 | 6.57 |
| ZZZZZZ      | 136120 | 9.01 | 210322 | 9.87 | 112999 | 13.13 | 89143 | 15.69 | 57328 | 6.58 |

- IS 1 = Pentafluorobenzene
- IS 2 = 1,4-Difluorobenzene
- IS 3 = Chlorobenzene-D5
- IS 4 = 1,4-Dichlorobenzene-d4
- IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

6.4.3

6

# Volatile Surrogate Recovery Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 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  |
|---------------|-------------|-----|-----|-----|
| MC22664-1     | N78532.D    | 95  | 100 | 105 |
| MC22664-2     | N78534.D    | 97  | 99  | 107 |
| MC22664-3     | N78535.D    | 97  | 102 | 108 |
| MC22664-4     | N78536.D    | 100 | 102 | 105 |
| MC22664-5     | N78537.D    | 92  | 103 | 101 |
| MC22664-5     | N78584.D    | 95  | 100 | 103 |
| MC22664-6     | N78538.D    | 98  | 102 | 100 |
| MC22664-7     | N78539.D    | 97  | 98  | 101 |
| MC22664-8     | N78540.D    | 94  | 98  | 97  |
| MC22664-8     | N78585.D    | 96  | 100 | 100 |
| MC22664-9     | N78541.D    | 96  | 97  | 102 |
| MC22664-9     | N78586.D    | 95  | 100 | 99  |
| MC22664-10    | N78528.D    | 98  | 102 | 107 |
| MC22702-4MS   | N78547.D    | 94  | 100 | 97  |
| MC22702-4MSD  | N78548.D    | 96  | 99  | 99  |
| MC22739-8MS   | N78561.D    | 96  | 102 | 99  |
| MC22739-8MSD  | N78562.D    | 95  | 101 | 98  |
| MSN2948-BS    | N78524.D    | 98  | 102 | 95  |
| MSN2948-MB    | N78527.D    | 99  | 102 | 106 |
| MSN2949-BS1   | N78575.D    | 95  | 101 | 95  |
| MSN2949-MB1   | N78578.D    | 97  | 101 | 101 |
| MSN2949-MB    | N78552.D    | 93  | 101 | 101 |

**Surrogate Compounds**                      **Recovery Limits**

|                           |         |
|---------------------------|---------|
| S1 = Dibromofluoromethane | 70-130% |
| S2 = Toluene-D8           | 70-130% |
| S3 = 4-Bromofluorobenzene | 70-130% |

6.5.1  
**6**

**GC/MS Semi-volatiles****QC Data Summaries****7**

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries



# Method Blank Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34009-MB | F65708.D | 1  | 07/19/13 | KR | 07/15/13  | OP34009    | MSF3044          |

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

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9

| 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  |   |

7.1.1  
7

# Method Blank Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34009-MB | F65708.D | 1  | 07/19/13 | KR | 07/15/13  | OP34009    | MSF3044          |

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

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9

| 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            | 25%    | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 72%    | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 68%    | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 49%    | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 83%    | 30-130% |

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

7.1.1  
7

# Method Blank Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34099-MB | R32367.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22664-1, MC22664-7

| 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       | 51%    | 15-110% |
| 4165-62-2 | Phenol-d5            | 18%    | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 89%    | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 78%    | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 91%    | 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         |      |            | ug/l  |   |

7.1.2  
7

# Method Blank Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34010-MB | W14024.D | 1  | 07/19/13 | KR | 07/15/13  | OP34010    | MSW635           |

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

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9

7.1.3  
7

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | ND     | 0.10  | 0.014 | ug/l  |   |
| 208-96-8 | Acenaphthylene         | ND     | 0.10  | 0.013 | ug/l  |   |
| 120-12-7 | Anthracene             | ND     | 0.10  | 0.018 | ug/l  |   |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.050 | 0.030 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.10  | 0.017 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.050 | 0.024 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.10  | 0.038 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.10  | 0.059 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.10  | 0.073 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.10  | 0.042 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.10  | 0.033 | ug/l  |   |
| 86-73-7  | Fluorene               | ND     | 0.10  | 0.046 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.10  | 0.046 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | ND     | 0.20  | 0.14  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | ND     | 0.20  | 0.052 | ug/l  |   |
| 85-01-8  | Phenanthrene           | 0.030  | 0.050 | 0.013 | ug/l  | J |
| 129-00-0 | Pyrene                 | ND     | 0.10  | 0.036 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Limits |         |
|-----------|----------------------|--------|---------|
| 4165-60-0 | Nitrobenzene-d5      | 68%    | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 52%    | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 82%    | 30-130% |

# Blank Spike Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34009-BS | F65709.D | 1  | 07/19/13 | KR | 07/15/13  | OP34009    | MSF3044          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9

| CAS No.   | Compound                    | Spike ug/l | BSP ug/l | BSP % | Limits |
|-----------|-----------------------------|------------|----------|-------|--------|
| 65-85-0   | Benzoic Acid                | 50         | 13.0     | 26* a | 30-130 |
| 95-57-8   | 2-Chlorophenol              | 50         | 27.8     | 56    | 30-130 |
| 59-50-7   | 4-Chloro-3-methyl phenol    | 50         | 36.6     | 73    | 30-130 |
| 120-83-2  | 2,4-Dichlorophenol          | 50         | 34.2     | 68    | 30-130 |
| 105-67-9  | 2,4-Dimethylphenol          | 50         | 32.4     | 65    | 30-130 |
| 51-28-5   | 2,4-Dinitrophenol           | 50         | 30.2     | 60    | 30-130 |
| 534-52-1  | 4,6-Dinitro-o-cresol        | 50         | 38.4     | 77    | 30-130 |
| 95-48-7   | 2-Methylphenol              | 50         | 27.6     | 55    | 30-130 |
|           | 3&4-Methylphenol            | 100        | 48.8     | 49    | 30-130 |
| 88-75-5   | 2-Nitrophenol               | 50         | 34.2     | 68    | 30-130 |
| 100-02-7  | 4-Nitrophenol               | 50         | 16.1     | 32    | 30-130 |
| 87-86-5   | Pentachlorophenol           | 50         | 34.8     | 70    | 30-130 |
| 108-95-2  | Phenol                      | 50         | 13.2     | 26* a | 30-130 |
| 95-95-4   | 2,4,5-Trichlorophenol       | 50         | 37.5     | 75    | 30-130 |
| 88-06-2   | 2,4,6-Trichlorophenol       | 50         | 35.1     | 70    | 30-130 |
| 62-53-3   | Aniline                     | 50         | 27.2     | 54    | 40-140 |
| 101-55-3  | 4-Bromophenyl phenyl ether  | 50         | 45.6     | 91    | 40-140 |
| 85-68-7   | Butyl benzyl phthalate      | 50         | 48.7     | 97    | 40-140 |
| 100-51-6  | Benzyl Alcohol              | 50         | 31.8     | 64    | 40-140 |
| 91-58-7   | 2-Chloronaphthalene         | 50         | 37.1     | 74    | 40-140 |
| 106-47-8  | 4-Chloroaniline             | 50         | 38.2     | 76    | 40-140 |
| 111-91-1  | bis(2-Chloroethoxy)methane  | 50         | 41.4     | 83    | 40-140 |
| 111-44-4  | bis(2-Chloroethyl)ether     | 50         | 37.3     | 75    | 40-140 |
| 108-60-1  | bis(2-Chloroisopropyl)ether | 50         | 42.8     | 86    | 40-140 |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | 50         | 46.4     | 93    | 40-140 |
| 122-66-7  | 1,2-Diphenylhydrazine       | 50         | 45.3     | 91    | 40-140 |
| 121-14-2  | 2,4-Dinitrotoluene          | 50         | 51.9     | 104   | 40-140 |
| 606-20-2  | 2,6-Dinitrotoluene          | 50         | 46.0     | 92    | 40-140 |
| 91-94-1   | 3,3'-Dichlorobenzidine      | 50         | 41.0     | 82    | 40-140 |
| 132-64-9  | Dibenzofuran                | 50         | 42.4     | 85    | 40-140 |
| 84-74-2   | Di-n-butyl phthalate        | 50         | 48.7     | 97    | 40-140 |
| 117-84-0  | Di-n-octyl phthalate        | 50         | 53.2     | 106   | 40-140 |
| 84-66-2   | Diethyl phthalate           | 50         | 39.3     | 79    | 40-140 |
| 131-11-3  | Dimethyl phthalate          | 50         | 22.7     | 45    | 40-140 |
| 117-81-7  | bis(2-Ethylhexyl)phthalate  | 50         | 52.4     | 105   | 40-140 |
| 118-74-1  | Hexachlorobenzene           | 50         | 47.3     | 95    | 40-140 |

\* = Outside of Control Limits.

7.2.1  
7

# Blank Spike Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34009-BS | F65709.D | 1  | 07/19/13 | KR | 07/15/13  | OP34009    | MSF3044          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9

| CAS No.  | Compound                   | Spike ug/l | BSP ug/l | BSP % | Limits |
|----------|----------------------------|------------|----------|-------|--------|
| 77-47-4  | Hexachlorocyclopentadiene  | 50         | 12.8     | 26* a | 40-140 |
| 67-72-1  | Hexachloroethane           | 50         | 17.8     | 36* a | 40-140 |
| 78-59-1  | Isophorone                 | 50         | 43.4     | 87    | 40-140 |
| 88-74-4  | 2-Nitroaniline             | 50         | 47.9     | 96    | 40-140 |
| 99-09-2  | 3-Nitroaniline             | 50         | 45.4     | 91    | 40-140 |
| 100-01-6 | 4-Nitroaniline             | 50         | 47.1     | 94    | 40-140 |
| 98-95-3  | Nitrobenzene               | 50         | 39.0     | 78    | 40-140 |
| 62-75-9  | n-Nitrosodimethylamine     | 50         | 21.4     | 43    | 40-140 |
| 621-64-7 | N-Nitroso-di-n-propylamine | 50         | 43.1     | 86    | 40-140 |
| 86-30-6  | N-Nitrosodiphenylamine     | 50         | 44.1     | 88    | 40-140 |
| 110-86-1 | Pyridine                   | 50         | 17.3     | 35* a | 40-140 |

| CAS No.   | Surrogate Recoveries | BSP | Limits  |
|-----------|----------------------|-----|---------|
| 367-12-4  | 2-Fluorophenol       | 34% | 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      | 72% | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 63% | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 87% | 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: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34099-BS | R32368.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22664-1, MC22664-7

| CAS No.  | Compound                 | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | Limits |
|----------|--------------------------|---------------|-------------|----------|--------|
| 65-85-0  | Benzoic Acid             | 50            | 19.0        | 38       | 30-130 |
| 95-57-8  | 2-Chlorophenol           | 50            | 45.0        | 90       | 30-130 |
| 59-50-7  | 4-Chloro-3-methyl phenol | 50            | 49.4        | 99       | 30-130 |
| 120-83-2 | 2,4-Dichlorophenol       | 50            | 47.1        | 94       | 30-130 |
| 105-67-9 | 2,4-Dimethylphenol       | 50            | 42.5        | 85       | 30-130 |
| 51-28-5  | 2,4-Dinitrophenol        | 50            | 37.2        | 74       | 30-130 |
| 534-52-1 | 4,6-Dinitro-o-cresol     | 50            | 46.6        | 93       | 30-130 |
| 95-48-7  | 2-Methylphenol           | 50            | 40.7        | 81       | 30-130 |
|          | 3&4-Methylphenol         | 100           | 74.6        | 75       | 30-130 |
| 88-75-5  | 2-Nitrophenol            | 50            | 48.9        | 98       | 30-130 |
| 100-02-7 | 4-Nitrophenol            | 50            | 19.9        | 40       | 30-130 |
| 87-86-5  | Pentachlorophenol        | 50            | 43.0        | 86       | 30-130 |
| 108-95-2 | Phenol                   | 50            | 22.8        | 46       | 30-130 |
| 95-95-4  | 2,4,5-Trichlorophenol    | 50            | 52.7        | 105      | 30-130 |
| 88-06-2  | 2,4,6-Trichlorophenol    | 50            | 51.6        | 103      | 30-130 |

| CAS No.   | Surrogate Recoveries | BSP | Limits  |
|-----------|----------------------|-----|---------|
| 367-12-4  | 2-Fluorophenol       | 56% | 15-110% |
| 4165-62-2 | Phenol-d5            | 20% | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 99% | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 81% | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 91% | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 89% | 30-130% |

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34010-BS | W14025.D | 1  | 07/19/13 | KR | 07/15/13  | OP34010    | MSW635           |

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9

| CAS No.  | Compound               | Spike ug/l | BSP ug/l | BSP % | Limits |
|----------|------------------------|------------|----------|-------|--------|
| 83-32-9  | Acenaphthene           | 50         | 41.7     | 83    | 40-140 |
| 208-96-8 | Acenaphthylene         | 50         | 34.8     | 70    | 40-140 |
| 120-12-7 | Anthracene             | 50         | 44.9     | 90    | 40-140 |
| 56-55-3  | Benzo(a)anthracene     | 50         | 50.0     | 100   | 40-140 |
| 50-32-8  | Benzo(a)pyrene         | 50         | 46.9     | 94    | 40-140 |
| 205-99-2 | Benzo(b)fluoranthene   | 50         | 51.4     | 103   | 40-140 |
| 191-24-2 | Benzo(g,h,i)perylene   | 50         | 52.2     | 104   | 40-140 |
| 207-08-9 | Benzo(k)fluoranthene   | 50         | 48.6     | 97    | 40-140 |
| 218-01-9 | Chrysene               | 50         | 46.9     | 94    | 40-140 |
| 53-70-3  | Dibenzo(a,h)anthracene | 50         | 52.0     | 104   | 40-140 |
| 206-44-0 | Fluoranthene           | 50         | 49.1     | 98    | 40-140 |
| 86-73-7  | Fluorene               | 50         | 45.4     | 91    | 40-140 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 50         | 51.1     | 102   | 40-140 |
| 90-12-0  | 1-Methylnaphthalene    | 50         | 33.6     | 67    | 40-140 |
| 91-57-6  | 2-Methylnaphthalene    | 50         | 31.0     | 62    | 40-140 |
| 85-01-8  | Phenanthrene           | 50         | 45.3     | 91    | 40-140 |
| 129-00-0 | Pyrene                 | 50         | 46.8     | 94    | 40-140 |

| CAS No.   | Surrogate Recoveries | BSP | Limits  |
|-----------|----------------------|-----|---------|
| 4165-60-0 | Nitrobenzene-d5      | 70% | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 65% | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 87% | 30-130% |

\* = Outside of Control Limits.

7.2.3  
7



# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| OP34009-MS  | F65710.D | 1  | 07/19/13 | KR | 07/15/13  | OP34009    | MSF3044          |
| OP34009-MSD | F65711.D | 1  | 07/19/13 | KR | 07/15/13  | OP34009    | MSF3044          |
| MC22548-18  | F65712.D | 1  | 07/19/13 | KR | 07/15/13  | OP34009    | MSF3044          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9

| CAS No.   | Compound                    | MC22548-18 Spike |        | MS ug/l | MS %  | Spike ug/l | MSD ug/l | MSD % | RPD   | Limits Rec/RPD |
|-----------|-----------------------------|------------------|--------|---------|-------|------------|----------|-------|-------|----------------|
|           |                             | ug/l             | Q ug/l |         |       |            |          |       |       |                |
| 65-85-0   | Benzoic Acid                | ND               | 50     | 14.6    | 29* a | 50         | 14.8     | 30    | 1     | 30-130/20      |
| 95-57-8   | 2-Chlorophenol              | ND               | 50     | 27.8    | 56    | 50         | 29.8     | 60    | 7     | 30-130/20      |
| 59-50-7   | 4-Chloro-3-methyl phenol    | ND               | 50     | 35.4    | 71    | 50         | 38.1     | 76    | 7     | 30-130/20      |
| 120-83-2  | 2,4-Dichlorophenol          | ND               | 50     | 32.9    | 66    | 50         | 34.7     | 69    | 5     | 30-130/20      |
| 105-67-9  | 2,4-Dimethylphenol          | ND               | 50     | 32.0    | 64    | 50         | 33.8     | 68    | 5     | 30-130/20      |
| 51-28-5   | 2,4-Dinitrophenol           | ND               | 50     | 31.8    | 64    | 50         | 33.2     | 66    | 4     | 30-130/20      |
| 534-52-1  | 4,6-Dinitro-o-cresol        | ND               | 50     | 39.9    | 80    | 50         | 42.3     | 85    | 6     | 30-130/20      |
| 95-48-7   | 2-Methylphenol              | ND               | 50     | 27.7    | 55    | 50         | 29.7     | 59    | 7     | 30-130/20      |
|           | 3&4-Methylphenol            | ND               | 100    | 50.4    | 50    | 100        | 53.7     | 54    | 6     | 30-130/20      |
| 88-75-5   | 2-Nitrophenol               | ND               | 50     | 32.2    | 64    | 50         | 34.6     | 69    | 7     | 30-130/20      |
| 100-02-7  | 4-Nitrophenol               | ND               | 50     | 16.6    | 33    | 50         | 17.4     | 35    | 5     | 30-130/20      |
| 87-86-5   | Pentachlorophenol           | ND               | 50     | 35.4    | 71    | 50         | 37.0     | 74    | 4     | 30-130/20      |
| 108-95-2  | Phenol                      | ND               | 50     | 16.1    | 32    | 50         | 14.7     | 29* a | 9     | 30-130/20      |
| 95-95-4   | 2,4,5-Trichlorophenol       | ND               | 50     | 37.8    | 76    | 50         | 38.9     | 78    | 3     | 30-130/20      |
| 88-06-2   | 2,4,6-Trichlorophenol       | ND               | 50     | 35.2    | 70    | 50         | 36.5     | 73    | 4     | 30-130/20      |
| 62-53-3   | Aniline                     | ND               | 50     | 26.8    | 54    | 50         | 27.2     | 54    | 1     | 40-140/20      |
| 101-55-3  | 4-Bromophenyl phenyl ether  | ND               | 50     | 40.2    | 80    | 50         | 41.6     | 83    | 3     | 40-140/20      |
| 85-68-7   | Butyl benzyl phthalate      | ND               | 50     | 47.1    | 94    | 50         | 49.0     | 98    | 4     | 40-140/20      |
| 100-51-6  | Benzyl Alcohol              | ND               | 50     | 31.8    | 64    | 50         | 34.0     | 68    | 7     | 40-140/20      |
| 91-58-7   | 2-Chloronaphthalene         | ND               | 50     | 20.3    | 41    | 50         | 21.8     | 44    | 7     | 40-140/20      |
| 106-47-8  | 4-Chloroaniline             | ND               | 50     | 36.0    | 72    | 50         | 38.3     | 77    | 6     | 40-140/20      |
| 111-91-1  | bis(2-Chloroethoxy)methane  | ND               | 50     | 38.1    | 76    | 50         | 39.4     | 79    | 3     | 40-140/20      |
| 111-44-4  | bis(2-Chloroethyl)ether     | ND               | 50     | 34.2    | 68    | 50         | 36.1     | 72    | 5     | 40-140/20      |
| 108-60-1  | bis(2-Chloroisopropyl)ether | ND               | 50     | 34.6    | 69    | 50         | 37.1     | 74    | 7     | 40-140/20      |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND               | 50     | 37.0    | 74    | 50         | 37.9     | 76    | 2     | 40-140/20      |
| 122-66-7  | 1,2-Diphenylhydrazine       | ND               | 50     | 39.6    | 79    | 50         | 41.7     | 83    | 5     | 40-140/20      |
| 121-14-2  | 2,4-Dinitrotoluene          | ND               | 50     | 51.7    | 103   | 50         | 51.3     | 103   | 1     | 40-140/20      |
| 606-20-2  | 2,6-Dinitrotoluene          | ND               | 50     | 44.8    | 90    | 50         | 46.3     | 93    | 3     | 40-140/20      |
| 91-94-1   | 3,3'-Dichlorobenzidine      | ND               | 50     | 40.9    | 82    | 50         | 43.0     | 86    | 5     | 40-140/20      |
| 132-64-9  | Dibenzofuran                | ND               | 50     | 31.8    | 64    | 50         | 32.5     | 65    | 2     | 40-140/20      |
| 84-74-2   | Di-n-butyl phthalate        | ND               | 50     | 47.0    | 94    | 50         | 49.3     | 99    | 5     | 40-140/20      |
| 117-84-0  | Di-n-octyl phthalate        | ND               | 50     | 54.0    | 108   | 50         | 55.7     | 111   | 3     | 40-140/20      |
| 84-66-2   | Diethyl phthalate           | ND               | 50     | 35.1    | 70    | 50         | 39.4     | 79    | 12    | 40-140/20      |
| 131-11-3  | Dimethyl phthalate          | ND               | 50     | 16.2    | 32* a | 50         | 22.5     | 45    | 33* b | 40-140/20      |
| 117-81-7  | bis(2-Ethylhexyl)phthalate  | ND               | 50     | 51.7    | 103   | 50         | 53.9     | 108   | 4     | 40-140/20      |
| 118-74-1  | Hexachlorobenzene           | ND               | 50     | 43.8    | 88    | 50         | 46.0     | 92    | 5     | 40-140/20      |

\* = Outside of Control Limits.

7.3.1  
7

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| OP34009-MS  | F65710.D | 1  | 07/19/13 | KR | 07/15/13  | OP34009    | MSF3044          |
| OP34009-MSD | F65711.D | 1  | 07/19/13 | KR | 07/15/13  | OP34009    | MSF3044          |
| MC22548-18  | F65712.D | 1  | 07/19/13 | KR | 07/15/13  | OP34009    | MSF3044          |

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

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9

7.3.1  
7

| CAS No.  | Compound                   | MC22548-18 Spike |        | MS ug/l | MS %  | Spike ug/l | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|----------|----------------------------|------------------|--------|---------|-------|------------|----------|-------|-----|----------------|
|          |                            | ug/l             | Q ug/l |         |       |            |          |       |     |                |
| 77-47-4  | Hexachlorocyclopentadiene  | ND               | 50     | 5.1     | 10* a | 50         | 5.7      | 11* a | 11  | 40-140/20      |
| 67-72-1  | Hexachloroethane           | ND               | 50     | 9.8     | 20* a | 50         | 11.0     | 22* a | 12  | 40-140/20      |
| 78-59-1  | Isophorone                 | ND               | 50     | 39.7    | 79    | 50         | 41.3     | 83    | 4   | 40-140/20      |
| 88-74-4  | 2-Nitroaniline             | ND               | 50     | 47.0    | 94    | 50         | 48.2     | 96    | 3   | 40-140/20      |
| 99-09-2  | 3-Nitroaniline             | ND               | 50     | 45.0    | 90    | 50         | 46.8     | 94    | 4   | 40-140/20      |
| 100-01-6 | 4-Nitroaniline             | ND               | 50     | 47.9    | 96    | 50         | 48.3     | 97    | 1   | 40-140/20      |
| 98-95-3  | Nitrobenzene               | ND               | 50     | 33.7    | 67    | 50         | 36.1     | 72    | 7   | 40-140/20      |
| 62-75-9  | n-Nitrosodimethylamine     | ND               | 50     | 20.7    | 41    | 50         | 21.9     | 44    | 6   | 40-140/20      |
| 621-64-7 | N-Nitroso-di-n-propylamine | ND               | 50     | 41.1    | 82    | 50         | 41.5     | 83    | 1   | 40-140/20      |
| 86-30-6  | N-Nitrosodiphenylamine     | ND               | 50     | 42.2    | 84    | 50         | 43.5     | 87    | 3   | 40-140/20      |
| 110-86-1 | Pyridine                   | ND               | 50     | 16.9    | 34* a | 50         | 18.2     | 36* a | 7   | 40-140/20      |

| CAS No.   | Surrogate Recoveries | MS  | MSD | MC22548-18 Limits |         |
|-----------|----------------------|-----|-----|-------------------|---------|
| 367-12-4  | 2-Fluorophenol       | 35% | 38% | 39%               | 15-110% |
| 4165-62-2 | Phenol-d5            | 26% | 28% | 27%               | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 78% | 85% | 76%               | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 67% | 72% | 73%               | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 52% | 53% | 55%               | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 84% | 88% | 91%               | 30-130% |

- (a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
- (b) High RPD due to possible sample nonhomogeneity.

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| OP34099-MS  | R32369.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |
| OP34099-MSD | R32370.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |
| MC22900-7   | R32371.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |

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

MC22664-1, MC22664-7

| CAS No.  | Compound                 | MC22900-7<br>ug/l | Spike<br>Q<br>ug/l | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|----------|--------------------------|-------------------|--------------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 65-85-0  | Benzoic Acid             | ND                | 50                 | 18.4       | 37      | 50            | 16.5        | 33       | 11  | 30-130/20         |
| 95-57-8  | 2-Chlorophenol           | ND                | 50                 | 43.5       | 87      | 50            | 39.1        | 78       | 11  | 30-130/20         |
| 59-50-7  | 4-Chloro-3-methyl phenol | ND                | 50                 | 45.9       | 92      | 50            | 44.2        | 88       | 4   | 30-130/20         |
| 120-83-2 | 2,4-Dichlorophenol       | ND                | 50                 | 45.5       | 91      | 50            | 42.2        | 84       | 8   | 30-130/20         |
| 105-67-9 | 2,4-Dimethylphenol       | ND                | 50                 | 37.4       | 75      | 50            | 34.6        | 69       | 8   | 30-130/20         |
| 51-28-5  | 2,4-Dinitrophenol        | ND                | 50                 | 36.2       | 72      | 50            | 35.3        | 71       | 3   | 30-130/20         |
| 534-52-1 | 4,6-Dinitro-o-cresol     | ND                | 50                 | 48.0       | 96      | 50            | 45.7        | 91       | 5   | 30-130/20         |
| 95-48-7  | 2-Methylphenol           | ND                | 50                 | 38.9       | 78      | 50            | 35.9        | 72       | 8   | 30-130/20         |
|          | 3&4-Methylphenol         | ND                | 100                | 72.2       | 72      | 100           | 64.7        | 65       | 11  | 30-130/20         |
| 88-75-5  | 2-Nitrophenol            | ND                | 50                 | 46.1       | 92      | 50            | 42.5        | 85       | 8   | 30-130/20         |
| 100-02-7 | 4-Nitrophenol            | ND                | 50                 | 19.5       | 39      | 50            | 19.4        | 39       | 1   | 30-130/20         |
| 87-86-5  | Pentachlorophenol        | ND                | 50                 | 44.2       | 88      | 50            | 43.2        | 86       | 2   | 30-130/20         |
| 108-95-2 | Phenol                   | ND                | 50                 | 18.7       | 37      | 50            | 16.6        | 33       | 12  | 30-130/20         |
| 95-95-4  | 2,4,5-Trichlorophenol    | ND                | 50                 | 50.7       | 101     | 50            | 50.9        | 102      | 0   | 30-130/20         |
| 88-06-2  | 2,4,6-Trichlorophenol    | ND                | 50                 | 49.1       | 98      | 50            | 48.7        | 97       | 1   | 30-130/20         |

| CAS No.   | Surrogate Recoveries | MS   | MSD | MC22900-7 | Limits  |
|-----------|----------------------|------|-----|-----------|---------|
| 367-12-4  | 2-Fluorophenol       | 52%  | 48% | 43%       | 15-110% |
| 4165-62-2 | Phenol-d5            | 19%  | 18% | 15%       | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 100% | 95% | 75%       | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 75%  | 70% | 62%       | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 87%  | 86% | 74%       | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 88%  | 84% | 81%       | 30-130% |

\* = Outside of Control Limits.

7.3.2  
7

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| OP34010-MS  | W14026.D | 1  | 07/19/13 | KR | 07/15/13  | OP34010    | MSW635           |
| OP34010-MSD | W14027.D | 1  | 07/19/13 | KR | 07/15/13  | OP34010    | MSW635           |
| MC22548-19  | W14028.D | 1  | 07/19/13 | KR | 07/15/13  | OP34010    | MSW635           |

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

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9

7.3.3  
7

| CAS No.  | Compound               | MC22548-19 Spike |   | MS ug/l | MS % | Spike ug/l | MSD ug/l | MSD % | RPD   | Limits Rec/RPD |           |
|----------|------------------------|------------------|---|---------|------|------------|----------|-------|-------|----------------|-----------|
|          |                        | ug/l             | Q |         |      |            |          |       |       |                |           |
| 83-32-9  | Acenaphthene           | 0.057            | J | 50      | 28.3 | 56         | 50       | 30.0  | 60    | 6              | 40-140/20 |
| 208-96-8 | Acenaphthylene         | 0.033            | J | 50      | 24.7 | 49         | 50       | 26.0  | 52    | 5              | 40-140/20 |
| 120-12-7 | Anthracene             | ND               |   | 50      | 43.1 | 86         | 50       | 44.1  | 88    | 2              | 40-140/20 |
| 56-55-3  | Benzo(a)anthracene     | ND               |   | 50      | 49.5 | 99         | 50       | 50.6  | 101   | 2              | 40-140/20 |
| 50-32-8  | Benzo(a)pyrene         | ND               |   | 50      | 46.6 | 93         | 50       | 47.2  | 94    | 1              | 40-140/20 |
| 205-99-2 | Benzo(b)fluoranthene   | ND               |   | 50      | 50.9 | 102        | 50       | 53.4  | 107   | 5              | 40-140/20 |
| 191-24-2 | Benzo(g,h,i)perylene   | ND               |   | 50      | 52.0 | 104        | 50       | 52.4  | 105   | 1              | 40-140/20 |
| 207-08-9 | Benzo(k)fluoranthene   | ND               |   | 50      | 47.8 | 96         | 50       | 47.4  | 95    | 1              | 40-140/20 |
| 218-01-9 | Chrysene               | ND               |   | 50      | 46.3 | 93         | 50       | 47.3  | 95    | 2              | 40-140/20 |
| 53-70-3  | Dibenzo(a,h)anthracene | ND               |   | 50      | 52.1 | 104        | 50       | 52.6  | 105   | 1              | 40-140/20 |
| 206-44-0 | Fluoranthene           | ND               |   | 50      | 48.0 | 96         | 50       | 49.7  | 99    | 3              | 40-140/20 |
| 86-73-7  | Fluorene               | 0.047            | J | 50      | 37.7 | 75         | 50       | 39.0  | 78    | 3              | 40-140/20 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND               |   | 50      | 51.1 | 102        | 50       | 51.5  | 103   | 1              | 40-140/20 |
| 90-12-0  | 1-Methylnaphthalene    | ND               |   | 50      | 17.6 | 35* a      | 50       | 19.3  | 39* a | 9              | 40-140/20 |
| 91-57-6  | 2-Methylnaphthalene    | ND               |   | 50      | 16.0 | 32* a      | 50       | 17.6  | 35* a | 10             | 40-140/20 |
| 85-01-8  | Phenanthrene           | 0.045            | J | 50      | 43.1 | 86         | 50       | 44.2  | 88    | 3              | 40-140/20 |
| 129-00-0 | Pyrene                 | ND               |   | 50      | 45.3 | 91         | 50       | 46.7  | 93    | 3              | 40-140/20 |

| CAS No.   | Surrogate Recoveries | MS  | MSD | MC22548-19 Limits |         |
|-----------|----------------------|-----|-----|-------------------|---------|
| 367-12-4  | 2-Fluorophenol       |     |     | 41%               | 15-110% |
| 4165-62-2 | Phenol-d5            |     |     | 29%               | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol |     |     | 85%               | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 66% | 69% | 74%               | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 53% | 53% | 56%               | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 85% | 88% | 88%               | 30-130% |

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

\* = Outside of Control Limits.

# Semivolatile Internal Standard Area Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSF3044-CC3031 | Injection Date: | 07/19/13    |
| Lab File ID:   | F65707.D       | Injection Time: | 07:43       |
| 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                | 62334  | 4.33 | 233280 | 5.46 | 152826 | 7.10 | 281398 | 8.57 | 312945 | 11.38 | 294708 | 12.90 |
| Upper Limit <sup>a</sup> | 124668 | 4.83 | 466560 | 5.96 | 305652 | 7.60 | 562796 | 9.07 | 625890 | 11.88 | 589416 | 13.40 |
| Lower Limit <sup>b</sup> | 31167  | 3.83 | 116640 | 4.96 | 76413  | 6.60 | 140699 | 8.07 | 156473 | 10.88 | 147354 | 12.40 |

| 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    |
| OP34009-MB    | 70905 | 4.33 | 274624 | 5.45 | 178192 | 7.10 | 326856 | 8.57 | 356910 | 11.37 | 340997 | 12.90 |
| OP34009-BS    | 55669 | 4.33 | 206571 | 5.45 | 134851 | 7.10 | 247448 | 8.57 | 273462 | 11.37 | 263813 | 12.90 |
| OP34009-MS    | 68413 | 4.32 | 262271 | 5.46 | 167801 | 7.10 | 315148 | 8.57 | 346869 | 11.37 | 322569 | 12.90 |
| OP34009-MSD   | 71992 | 4.33 | 273376 | 5.45 | 180223 | 7.10 | 331435 | 8.57 | 362118 | 11.38 | 338806 | 12.90 |
| MC22548-18    | 66832 | 4.33 | 257542 | 5.45 | 165695 | 7.10 | 306527 | 8.57 | 329648 | 11.37 | 315104 | 12.90 |
| MC22664-1     | 48281 | 4.33 | 185008 | 5.45 | 120442 | 7.10 | 221566 | 8.57 | 243211 | 11.37 | 232416 | 12.90 |
| MC22664-2     | 58714 | 4.33 | 228181 | 5.46 | 147830 | 7.10 | 270245 | 8.57 | 297865 | 11.37 | 283084 | 12.90 |
| MC22664-3     | 56307 | 4.33 | 218540 | 5.46 | 140006 | 7.10 | 257447 | 8.57 | 285274 | 11.37 | 270999 | 12.90 |
| MC22664-4     | 59414 | 4.33 | 232629 | 5.46 | 148886 | 7.10 | 272444 | 8.57 | 297329 | 11.37 | 284899 | 12.90 |
| MC22664-5     | 59170 | 4.33 | 219207 | 5.46 | 144277 | 7.10 | 264907 | 8.57 | 295952 | 11.37 | 284444 | 12.90 |
| MC22664-6     | 51351 | 4.33 | 200621 | 5.45 | 129489 | 7.10 | 237372 | 8.57 | 269113 | 11.37 | 253633 | 12.90 |
| MC22664-7     | 61213 | 4.33 | 227417 | 5.46 | 149061 | 7.10 | 273556 | 8.57 | 312604 | 11.37 | 294482 | 12.90 |
| MC22664-8     | 59440 | 4.33 | 229822 | 5.46 | 147360 | 7.10 | 270348 | 8.57 | 299376 | 11.37 | 290574 | 12.90 |
| MC22664-9     | 66657 | 4.33 | 257682 | 5.46 | 172650 | 7.10 | 303284 | 8.57 | 337999 | 11.38 | 328441 | 12.90 |
| OP34036-MS    | 44327 | 4.32 | 165058 | 5.46 | 103615 | 7.10 | 190704 | 8.57 | 218106 | 11.37 | 209625 | 12.90 |
| OP34036-MSD   | 64825 | 4.32 | 240425 | 5.46 | 149770 | 7.10 | 277418 | 8.58 | 317900 | 11.37 | 296854 | 12.90 |
| MC22692-3     | 51513 | 4.33 | 193957 | 5.46 | 121865 | 7.10 | 229520 | 8.57 | 258658 | 11.38 | 249167 | 12.90 |
| ZZZZZZ        | 46809 | 4.33 | 181948 | 5.46 | 117501 | 7.10 | 210723 | 8.57 | 237092 | 11.37 | 227439 | 12.90 |
| ZZZZZZ        | 57689 | 4.33 | 221940 | 5.46 | 144683 | 7.10 | 263139 | 8.57 | 296522 | 11.37 | 279295 | 12.90 |
| ZZZZZZ        | 55736 | 4.32 | 214500 | 5.46 | 138092 | 7.10 | 249160 | 8.57 | 280390 | 11.37 | 270793 | 12.90 |
| ZZZZZZ        | 64012 | 4.33 | 256804 | 5.45 | 163312 | 7.10 | 297843 | 8.57 | 330635 | 11.37 | 320252 | 12.90 |
| ZZZZZZ        | 62166 | 4.33 | 244107 | 5.45 | 156475 | 7.10 | 287072 | 8.57 | 319616 | 11.37 | 300279 | 12.90 |
| ZZZZZZ        | 58772 | 4.33 | 224817 | 5.46 | 139248 | 7.10 | 245167 | 8.57 | 299176 | 11.37 | 284327 | 12.90 |
| ZZZZZZ        | 48157 | 4.33 | 181889 | 5.45 | 114635 | 7.10 | 204173 | 8.57 | 241540 | 11.37 | 229174 | 12.90 |
| ZZZZZZ        | 51203 | 4.33 | 200930 | 5.45 | 129962 | 7.10 | 239888 | 8.57 | 265944 | 11.37 | 247545 | 12.90 |
| ZZZZZZ        | 61134 | 4.33 | 237461 | 5.46 | 165387 | 7.11 | 296234 | 8.58 | 294580 | 11.37 | 282702 | 12.90 |
| ZZZZZZ        | 63079 | 4.33 | 244052 | 5.46 | 152431 | 7.10 | 277115 | 8.57 | 309899 | 11.37 | 298790 | 12.90 |
| ZZZZZZ        | 57327 | 4.32 | 226756 | 5.46 | 146389 | 7.10 | 268283 | 8.57 | 300634 | 11.37 | 283917 | 12.90 |

- 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: MC22664  
Account: SHELLWIC Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSF3044-CC3031 | Injection Date: | 07/19/13    |
| Lab File ID:   | F65707.D       | Injection Time: | 07:43       |
| 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 |

- (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: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSR1181-CC1159 | Injection Date: | 07/25/13    |
| Lab File ID:   | R32366.D       | Injection Time: | 09:10       |
| Instrument ID: | GCMSR          | 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                | 91960  | 4.31 | 348159 | 5.37 | 206505 | 6.91 | 380929 | 8.33 | 435773 | 11.31 | 400128 | 12.91 |
| Upper Limit <sup>a</sup> | 183920 | 4.81 | 696318 | 5.87 | 413010 | 7.41 | 761858 | 8.83 | 871546 | 11.81 | 800256 | 13.41 |
| Lower Limit <sup>b</sup> | 45980  | 3.81 | 174080 | 4.87 | 103253 | 6.41 | 190465 | 7.83 | 217887 | 10.81 | 200064 | 12.41 |

| 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    |
| OP34099-MB             | 78660 | 4.31 | 288087 | 5.37 | 172062 | 6.91 | 321141 | 8.32 | 373747 | 11.31 | 418554 | 12.90 |
| OP34099-BS             | 69703 | 4.31 | 259840 | 5.37 | 157973 | 6.91 | 289204 | 8.32 | 323984 | 11.31 | 302608 | 12.90 |
| OP34099-MS             | 79397 | 4.31 | 301780 | 5.37 | 183889 | 6.91 | 326659 | 8.32 | 372602 | 11.31 | 350917 | 12.90 |
| OP34099-MSD            | 79356 | 4.31 | 299801 | 5.37 | 174762 | 6.91 | 328046 | 8.32 | 367379 | 11.31 | 343502 | 12.90 |
| MC22900-7              | 73442 | 4.31 | 273692 | 5.37 | 164607 | 6.91 | 304082 | 8.32 | 347163 | 11.31 | 324634 | 12.90 |
| ZZZZZZ                 | 80186 | 4.31 | 300029 | 5.37 | 181395 | 6.91 | 329218 | 8.32 | 373093 | 11.31 | 358676 | 12.90 |
| ZZZZZZ                 | 87575 | 4.31 | 331612 | 5.37 | 197868 | 6.91 | 358566 | 8.32 | 402336 | 11.31 | 370553 | 12.90 |
| ZZZZZZ                 | 80571 | 4.31 | 302689 | 5.37 | 180475 | 6.91 | 323846 | 8.32 | 361731 | 11.31 | 337354 | 12.90 |
| ZZZZZZ                 | 66848 | 4.31 | 249641 | 5.37 | 154354 | 6.91 | 270360 | 8.32 | 306626 | 11.31 | 283874 | 12.90 |
| ZZZZZZ                 | 83207 | 4.31 | 311706 | 5.37 | 184206 | 6.91 | 344386 | 8.32 | 384883 | 11.31 | 353774 | 12.90 |
| ZZZZZZ                 | 82537 | 4.31 | 303506 | 5.37 | 182883 | 6.91 | 337051 | 8.32 | 379257 | 11.31 | 358102 | 12.90 |
| ZZZZZZ                 | 84436 | 4.31 | 318433 | 5.37 | 190440 | 6.91 | 349582 | 8.32 | 392685 | 11.31 | 367731 | 12.90 |
| MC22664-1 <sup>c</sup> | 63947 | 4.31 | 241663 | 5.37 | 143707 | 6.91 | 262008 | 8.32 | 294635 | 11.31 | 278779 | 12.90 |
| MC22664-7 <sup>c</sup> | 94576 | 4.31 | 352434 | 5.37 | 214088 | 6.91 | 393479 | 8.32 | 433790 | 11.31 | 413556 | 12.90 |
| ZZZZZZ                 | 68290 | 4.31 | 248776 | 5.37 | 151158 | 6.91 | 275847 | 8.32 | 306188 | 11.31 | 289568 | 12.90 |
| ZZZZZZ                 | 85482 | 4.31 | 324823 | 5.37 | 194291 | 6.91 | 361907 | 8.32 | 398334 | 11.31 | 371773 | 12.90 |
| ZZZZZZ                 | 82286 | 4.31 | 301271 | 5.37 | 185069 | 6.91 | 333873 | 8.32 | 379965 | 11.31 | 356403 | 12.90 |
| ZZZZZZ                 | 91686 | 4.31 | 339407 | 5.37 | 205341 | 6.91 | 372050 | 8.32 | 420247 | 11.31 | 388882 | 12.90 |
| ZZZZZZ                 | 83786 | 4.31 | 312905 | 5.37 | 188789 | 6.91 | 344819 | 8.32 | 386848 | 11.31 | 361742 | 12.90 |
| ZZZZZZ                 | 79395 | 4.31 | 291169 | 5.37 | 175498 | 6.91 | 324376 | 8.32 | 360857 | 11.31 | 343127 | 12.90 |

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

- (a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
- (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
- (c) Sample re-extracted beyond recommended holding time.

7.4.2  
7

# Semivolatile Internal Standard Area Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |             |
|----------------|--------------|-----------------|-------------|
| Check Std:     | MSW635-CC633 | Injection Date: | 07/19/13    |
| Lab File ID:   | W14017.D     | Injection Time: | 09:22       |
| 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                | 113387 | 3.65 | 289616 | 4.63 | 140621 | 6.05 | 224190 | 7.32 | 149610 | 10.10 | 377129 | 11.53 |
| Upper Limit <sup>a</sup> | 226774 | 4.15 | 579232 | 5.13 | 281242 | 6.55 | 448380 | 7.82 | 299220 | 10.60 | 754258 | 12.03 |
| Lower Limit <sup>b</sup> | 56694  | 3.15 | 144808 | 4.13 | 70311  | 5.55 | 112095 | 6.82 | 74805  | 9.60  | 188565 | 11.03 |

| Lab Sample ID | IS 1   |      | IS 2   |      | IS 3   |      | IS 4   |      | IS 5    |       | IS 6   |        |
|---------------|--------|------|--------|------|--------|------|--------|------|---------|-------|--------|--------|
|               | AREA   | RT   | AREA   | RT   | AREA   | RT   | AREA   | RT   | AREA    | RT    | AREA   | RT     |
| ZZZZZZ        | 99433  | 3.65 | 259655 | 4.63 | 128406 | 6.05 | 204854 | 7.32 | 139407  | 10.10 | 339886 | 11.53  |
| ZZZZZZ        | 124677 | 3.64 | 326012 | 4.63 | 160730 | 6.05 | 259481 | 7.32 | 174683  | 10.10 | 429346 | 11.53  |
| ZZZZZZ        | 124185 | 3.64 | 321042 | 4.62 | 155481 | 6.05 | 244939 | 7.32 | 163698  | 10.10 | 402103 | 11.53  |
| ZZZZZZ        | 112482 | 3.65 | 287733 | 4.62 | 140626 | 6.05 | 218004 | 7.32 | 151915  | 10.10 | 376156 | 11.53  |
| ZZZZZZ        | 115164 | 3.65 | 310651 | 4.63 | 155534 | 6.05 | 249328 | 7.32 | 165679  | 10.10 | 400380 | 11.53  |
| ZZZZZZ        | 97692  | 3.65 | 257615 | 4.63 | 128269 | 6.05 | 205230 | 7.32 | 139907  | 10.09 | 343688 | 11.53  |
| OP34010-MB    | 115724 | 3.65 | 303728 | 4.63 | 146157 | 6.05 | 228343 | 7.33 | 151535  | 10.10 | 367745 | 11.53  |
| OP34010-BS    | 129889 | 3.64 | 338679 | 4.63 | 164977 | 6.05 | 260771 | 7.33 | 170423  | 10.10 | 426361 | 11.53  |
| OP34010-MS    | 126936 | 3.65 | 327843 | 4.63 | 156010 | 6.05 | 245389 | 7.32 | 161418  | 10.10 | 403367 | 11.53  |
| OP34010-MSD   | 118372 | 3.65 | 308643 | 4.63 | 151532 | 6.05 | 240157 | 7.33 | 155132  | 10.10 | 383440 | 11.53  |
| MC22548-19    | 122874 | 3.65 | 320405 | 4.62 | 157340 | 6.05 | 250882 | 7.32 | 168739  | 10.10 | 405206 | 11.53  |
| MC22664-1     | 131768 | 3.65 | 349573 | 4.63 | 172733 | 6.05 | 270335 | 7.32 | 182826  | 10.10 | 448371 | 11.53  |
| MC22664-2     | 134073 | 3.65 | 354219 | 4.63 | 173498 | 6.05 | 277495 | 7.33 | 182239  | 10.10 | 442481 | 11.53  |
| MC22664-3     | 125126 | 3.65 | 329731 | 4.63 | 161831 | 6.05 | 252032 | 7.32 | 170474  | 10.10 | 417889 | 11.53  |
| MC22664-4     | 122854 | 3.65 | 328865 | 4.63 | 159782 | 6.05 | 250816 | 7.32 | 168555  | 10.10 | 404086 | 11.53  |
| MC22664-5     | 137063 | 3.65 | 357427 | 4.63 | 179208 | 6.05 | 282695 | 7.32 | 187015  | 10.10 | 456562 | 11.53  |
| MC22664-6     | 125573 | 3.65 | 326545 | 4.62 | 165855 | 6.05 | 261367 | 7.32 | 180557  | 10.10 | 427000 | 11.53  |
| MC22664-7     | 126455 | 3.65 | 324416 | 4.63 | 158806 | 6.05 | 250447 | 7.32 | 170965  | 10.10 | 412274 | 11.53  |
| MC22664-8     | 131788 | 3.65 | 355924 | 4.63 | 185476 | 6.05 | 273056 | 7.33 | 181881  | 10.10 | 434604 | 11.53  |
| MC22664-9     | 157738 | 3.65 | 434591 | 4.63 | 221786 | 6.05 | 341491 | 7.33 | 225172  | 10.10 | 539525 | 11.53  |
| OP33952-MB    | 88627  | 3.73 | 331387 | 4.78 | 207718 | 6.30 | 346292 | 7.64 | 370851* | 10.53 | 360453 | 12.10* |

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.4.3

7



# Semivolatile Surrogate Recovery Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 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 |
|---------------|-------------|------|-------|-----|----|----|----|
| MC22664-1     | R32380.D    | 36   | 15    | 76  | 52 | 64 | 83 |
| MC22664-1     | F65713.D    | 7* a | 6* a  | 28  | 76 | 59 | 91 |
| MC22664-2     | F65714.D    | 41   | 29    | 77  | 79 | 61 | 87 |
| MC22664-3     | F65715.D    | 30   | 23    | 68  | 74 | 55 | 85 |
| MC22664-4     | F65716.D    | 39   | 27    | 76  | 72 | 58 | 86 |
| MC22664-5     | F65717.D    | 42   | 32    | 77  | 75 | 50 | 86 |
| MC22664-6     | F65718.D    | 26   | 22    | 71  | 70 | 54 | 92 |
| MC22664-7     | F65719.D    | 2* b | 1* b  | 18  | 67 | 46 | 74 |
| MC22664-7     | R32381.D    | 27   | 14* b | 67  | 64 | 73 | 80 |
| MC22664-8     | F65720.D    | 49   | 35    | 82  | 94 | 71 | 89 |
| MC22664-9     | F65721.D    | 45   | 33    | 80  | 91 | 60 | 88 |
| OP34009-BS    | F65709.D    | 34   | 26    | 80  | 72 | 63 | 87 |
| OP34009-MB    | F65708.D    | 35   | 25    | 72  | 68 | 49 | 83 |
| OP34009-MS    | F65710.D    | 35   | 26    | 78  | 67 | 52 | 84 |
| OP34009-MSD   | F65711.D    | 38   | 28    | 85  | 72 | 53 | 88 |
| OP34099-BS    | R32368.D    | 56   | 20    | 99  | 81 | 91 | 89 |
| OP34099-MB    | R32367.D    | 51   | 18    | 89  | 78 | 91 | 86 |
| OP34099-MS    | R32369.D    | 52   | 19    | 100 | 75 | 87 | 88 |
| OP34099-MSD   | R32370.D    | 48   | 18    | 95  | 70 | 86 | 84 |

| Surrogate Compounds       | Recovery Limits |
|---------------------------|-----------------|
| S1 = 2-Fluorophenol       | 15-110%         |
| S2 = Phenol-d5            | 15-110%         |
| S3 = 2,4,6-Tribromophenol | 15-110%         |
| S4 = Nitrobenzene-d5      | 30-130%         |
| S5 = 2-Fluorobiphenyl     | 30-130%         |
| S6 = Terphenyl-d14        | 30-130%         |

- (a) Outside control limits. Sample re-extracted/reanalyzed.
- (b) Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.

7.5.1  
7

# Semivolatile Surrogate Recovery Summary

Job Number: MC22664

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 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 |
|---------------|-------------|----|----|----|
| MC22664-1     | W14029.D    | 77 | 60 | 91 |
| MC22664-2     | W14030.D    | 78 | 62 | 87 |
| MC22664-3     | W14031.D    | 74 | 55 | 85 |
| MC22664-4     | W14032.D    | 72 | 60 | 85 |
| MC22664-5     | W14033.D    | 71 | 51 | 87 |
| MC22664-6     | W14034.D    | 74 | 55 | 91 |
| MC22664-7     | W14035.D    | 63 | 48 | 74 |
| MC22664-8     | W14036.D    | 85 | 63 | 89 |
| MC22664-9     | W14037.D    | 81 | 57 | 88 |
| OP34010-BS    | W14025.D    | 70 | 65 | 87 |
| OP34010-MB    | W14024.D    | 68 | 52 | 82 |
| OP34010-MS    | W14026.D    | 66 | 53 | 85 |
| OP34010-MSD   | W14027.D    | 69 | 53 | 88 |

| Surrogate Compounds   | Recovery Limits |
|-----------------------|-----------------|
| S1 = Nitrobenzene-d5  | 30-130%         |
| S2 = 2-Fluorobiphenyl | 30-130%         |
| S3 = Terphenyl-d14    | 30-130%         |

7.5.2

7

## GC Volatiles

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## QC Data Summaries



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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

# Method Blank Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| OP34092-MB | BK27073.D | 1  | 07/24/13 | NK | 07/23/13  | OP34092    | GBK929           |

The QC reported here applies to the following samples: Method: SW846 8011

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9, MC22664-11

| CAS No.  | Compound                    | Result | RL    | MDL    | Units | Q |
|----------|-----------------------------|--------|-------|--------|-------|---|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND     | 0.015 | 0.0045 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.015 | 0.0097 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Limits |         |
|----------|------------------------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 141%   | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 143%   | 36-173% |

8.1.1  
8

# Blank Spike Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| OP34092-BS | BK27074.D | 1  | 07/24/13 | NK | 07/23/13  | OP34092    | GBK929           |

The QC reported here applies to the following samples: Method: SW846 8011

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9, MC22664-11

| CAS No.  | Compound                    | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | Limits |
|----------|-----------------------------|---------------|-------------|----------|--------|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | 0.071         | 0.087       | 123      | 60-140 |
| 106-93-4 | 1,2-Dibromoethane           | 0.071         | 0.084       | 118      | 60-140 |

| CAS No.  | Surrogate Recoveries   | BSP  | Limits  |
|----------|------------------------|------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 133% | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 135% | 36-173% |

8.2.1  
8

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|-----------|----|----------|----|-----------|------------|------------------|
| OP34092-MS  | BK27075.D | 1  | 07/24/13 | NK | 07/23/13  | OP34092    | GBK929           |
| OP34092-MSD | BK27076.D | 1  | 07/24/13 | NK | 07/23/13  | OP34092    | GBK929           |
| MC22787-5   | BK27081.D | 1  | 07/24/13 | NK | 07/23/13  | OP34092    | GBK929           |

The QC reported here applies to the following samples: Method: SW846 8011

MC22664-1, MC22664-2, MC22664-3, MC22664-4, MC22664-5, MC22664-6, MC22664-7, MC22664-8, MC22664-9, MC22664-11

| CAS No.  | Compound                    | MC22787-5<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|----------|-----------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND                |            | 0.0681     | 0.082   | 120           | 0.0688      | 0.076    | 8   | 64-141/29         |
| 106-93-4 | 1,2-Dibromoethane           | ND                |            | 0.0681     | 0.069   | 101           | 0.0688      | 0.069    | 0   | 63-163/27         |

| CAS No.  | Surrogate Recoveries   | MS   | MSD  | MC22787-5 | Limits  |
|----------|------------------------|------|------|-----------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 118% | 112% | 133%      | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 123% | 116% | 139%      | 36-173% |

8.3.1  
8

\* = Outside of Control Limits.

# Volatile Surrogate Recovery Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                    |            |
|--------------------|------------|
| Method: SW846 8011 | Matrix: AQ |
|--------------------|------------|

Samples and QC shown here apply to the above method

| Lab Sample ID | Lab File ID | S1 <sup>a</sup> | S1 <sup>b</sup> |
|---------------|-------------|-----------------|-----------------|
| MC22664-1     | BK27086.D   | 106             | 97              |
| MC22664-2     | BK27087.D   | 104             | 91              |
| MC22664-3     | BK27088.D   | 134             | 117             |
| MC22664-4     | BK27089.D   | 108             | 98              |
| MC22664-5     | BK27090.D   | 121             | 126             |
| MC22664-6     | BK27091.D   | 115             | 103             |
| MC22664-7     | BK27092.D   | 114             | 96              |
| MC22664-8     | BK27093.D   | 124             | 90              |
| MC22664-9     | BK27095.D   | 147             | 116             |
| MC22664-11    | BK27096.D   | 118             | 106             |
| OP34092-BS    | BK27074.D   | 133             | 135             |
| OP34092-MB    | BK27073.D   | 141             | 143             |
| OP34092-MS    | BK27075.D   | 118             | 123             |
| OP34092-MSD   | BK27076.D   | 112             | 116             |

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: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |               |                 |            |
|----------------|---------------|-----------------|------------|
| Check Std:     | GBK929-ICC929 | Injection Date: | 07/24/13   |
| Lab File ID:   | BK27068.D     | Injection Time: | 10:36      |
| Instrument ID: | GCBK          | Method:         | SW846 8011 |

|           | S1 <sup>a</sup><br>RT | S1 <sup>b</sup><br>RT |
|-----------|-----------------------|-----------------------|
| Check Std | 4.58                  | 4.94                  |

| Lab<br>Sample ID | Lab<br>File ID | Date<br>Analyzed | Time<br>Analyzed | S1 <sup>a</sup><br>RT | S1 <sup>b</sup><br>RT |
|------------------|----------------|------------------|------------------|-----------------------|-----------------------|
| ZZZZZZ           | BK27071B.D     | 07/24/13         | 11:44            | 4.58                  | 4.94                  |
| ZZZZZZ           | BK27071A.D     | 07/24/13         | 11:44            | 4.58                  | 4.94                  |
| OP34092-MB       | BK27073.D      | 07/24/13         | 12:30            | 4.58                  | 4.94                  |
| OP34092-BS       | BK27074.D      | 07/24/13         | 12:52            | 4.58                  | 4.94                  |
| OP34092-MS       | BK27075.D      | 07/24/13         | 13:15            | 4.58                  | 4.94                  |
| OP34092-MSD      | BK27076.D      | 07/24/13         | 13:38            | 4.58                  | 4.94                  |
| ZZZZZZ           | BK27077.D      | 07/24/13         | 14:00            | 4.58                  | 4.94                  |
| ZZZZZZ           | BK27078.D      | 07/24/13         | 14:23            | 4.58                  | 4.94                  |
| ZZZZZZ           | BK27079.D      | 07/24/13         | 14:46            | 4.58                  | 4.94                  |
| ZZZZZZ           | BK27080.D      | 07/24/13         | 15:08            | 4.58                  | 4.94                  |
| MC22787-5        | BK27081.D      | 07/24/13         | 15:31            | 4.58                  | 4.94                  |
| ZZZZZZ           | BK27082.D      | 07/24/13         | 15:53            | 4.58                  | 4.94                  |

**Surrogate  
Compounds**

S1 = Bromofluorobenzene (S)

- (a) Retention time from GC signal #2
- (b) Retention time from GC signal #1

8.5.1  
8



# GC Surrogate Retention Time Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |            |
|----------------|--------------|-----------------|------------|
| Check Std:     | GBK929-CC929 | Injection Date: | 07/24/13   |
| Lab File ID:   | BK27083.D    | Injection Time: | 16:16      |
| Instrument ID: | GCBK         | Method:         | SW846 8011 |

S1<sup>a</sup>    S1<sup>b</sup>  
 RT      RT

|           |      |      |
|-----------|------|------|
| Check Std | 4.58 | 4.94 |
|-----------|------|------|

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 <sup>a</sup> RT | S1 <sup>b</sup> RT |
|---------------|-------------|---------------|---------------|--------------------|--------------------|
| ZZZZZZ        | BK27084.D   | 07/24/13      | 16:38         | 4.58               | 4.94               |
| ZZZZZZ        | BK27085.D   | 07/24/13      | 17:01         | 4.58               | 4.94               |
| MC22664-1     | BK27086.D   | 07/24/13      | 17:24         | 4.58               | 4.94               |
| MC22664-2     | BK27087.D   | 07/24/13      | 17:46         | 4.58               | 4.94               |
| MC22664-3     | BK27088.D   | 07/24/13      | 18:08         | 4.58               | 4.94               |
| MC22664-4     | BK27089.D   | 07/24/13      | 18:31         | 4.58               | 4.94               |
| MC22664-5     | BK27090.D   | 07/24/13      | 18:54         | 4.58               | 4.94               |
| MC22664-6     | BK27091.D   | 07/24/13      | 19:17         | 4.58               | 4.94               |
| MC22664-7     | BK27092.D   | 07/24/13      | 19:40         | 4.58               | 4.94               |
| MC22664-8     | BK27093.D   | 07/24/13      | 20:03         | 4.58               | 4.94               |

## Surrogate Compounds

S1 = Bromofluorobenzene (S)

- (a) Retention time from GC signal #2
- (b) Retention time from GC signal #1

8.5.2  
8

# GC Surrogate Retention Time Summary

Job Number: MC22664  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |            |
|----------------|--------------|-----------------|------------|
| Check Std:     | GBK929-CC929 | Injection Date: | 07/24/13   |
| Lab File ID:   | BK27094.D    | Injection Time: | 20:26      |
| Instrument ID: | GCBK         | Method:         | SW846 8011 |

S1<sup>a</sup>    S1<sup>b</sup>  
 RT      RT

|           |      |      |
|-----------|------|------|
| Check Std | 4.58 | 4.94 |
|-----------|------|------|

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 <sup>a</sup> RT | S1 <sup>b</sup> RT |
|---------------|-------------|---------------|---------------|--------------------|--------------------|
| MC22664-9     | BK27095.D   | 07/24/13      | 20:48         | 4.58               | 4.94               |
| MC22664-11    | BK27096.D   | 07/24/13      | 21:11         | 4.58               | 4.94               |
| OP34093-MB    | BK27097.D   | 07/24/13      | 21:34         | 4.58               | 4.94               |
| OP34094-MB    | BK27097A.D  | 07/24/13      | 21:34         | 4.58               | 4.94               |
| OP34093-BS    | BK27098.D   | 07/24/13      | 21:58         | 4.58               | 4.94               |
| OP34094-BS    | BK27098A.D  | 07/24/13      | 21:58         | 4.58               | 4.94               |
| OP34094-MS    | BK27099A.D  | 07/24/13      | 22:21         | 4.58               | 4.94               |
| OP34093-MS    | BK27099.D   | 07/24/13      | 22:21         | 4.58               | 4.94               |
| OP34094-MSD   | BK27100A.D  | 07/24/13      | 22:44         | 4.58               | 4.94               |
| OP34093-MSD   | BK27100.D   | 07/24/13      | 22:44         | 4.58               | 4.94               |
| MC23000-1     | BK27101.D   | 07/24/13      | 23:07         | 4.58               | 4.94               |
| MC22702-4     | BK27101A.D  | 07/24/13      | 23:07         | 4.58               | 4.94               |
| ZZZZZZ        | BK27102.D   | 07/24/13      | 23:31         | 4.58               | 4.94               |
| ZZZZZZ        | BK27103.D   | 07/24/13      | 23:54         | 4.58               | 4.94               |
| ZZZZZZ        | BK27104.D   | 07/25/13      | 00:18         | 4.58               | 4.94               |

## Surrogate Compounds

S1 = Bromofluorobenzene (S)

- (a) Retention time from GC signal #2
- (b) Retention time from GC signal #1

8.5.3  
8

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*e-Hardcopy 2.0*  
*Automated Report*

### Technical Report for

### Shell Oil

URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana,

SGS Accutest Job Number: MC22754

Sampling Date: 07/15/13

#### Report to:

AECOM, INC.

Melissa.mansker@aecom.com

ATTN: Melissa Mansker

Total number of pages in report: 84



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.

*H. Madadian*  
H. (Brad) Madadian  
Lab Director

Client Service contact: Jeremy Vienneau 508-481-6200

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

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ACCUTEST

October 25, 2016

AECOM  
1001 Highlands Plaza Drive West Suite 300  
St. Louis, MO 63110

RE: SGS Accutest Job # MC22754

Dear Elizabeth Kunkel

As you are aware, SGS Accutest Inc. - Marlborough has been conducting an extensive review of data associated with some historical Gas Chromatography-Mass Spectroscopy volatiles analyses. As a result of this review it was determined that some revisions of the original test report for this job were needed. These corrections have been incorporated into the revised report.

Please be assured that corrective actions have been put in place to address this matter and prevent a recurrence.

We apologize for any inconvenience that this issue may have caused. Please don't hesitate to contact us if we can be of further assistance.

Sincerely,

**H. (Brad) Madadian**

Regional Laboratory Director  
SGS Accutest Inc. - Marlborough

SGS ACCUTEST IS PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION,  
TESTING AND CERTIFICATION COMPANY.

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## Sample Summary

Shell Oil

Job No: MC22754

URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample Number | Collected |         | Received     | Matrix |                  | Client Sample ID  |
|---------------|-----------|---------|--------------|--------|------------------|-------------------|
|               | Date      | Time By |              | Code   | Type             |                   |
| MC22754-1     | 07/15/13  | 13:35   | DMLR07/17/13 | AQ     | Ground Water     | P56-ROX-071513    |
| MC22754-2     | 07/15/13  | 14:40   | DMLR07/17/13 | AQ     | Ground Water     | P74-ROX-071513    |
| MC22754-3     | 07/15/13  | 00:00   | DMLR07/17/13 | AQ     | Trip Blank Water | TB-ROX-071513-HCL |
| MC22754-4     | 07/15/13  | 00:00   | DMLR07/17/13 | AQ     | Trip Blank Water | TB-ROX-071513-ST  |

## SAMPLE DELIVERY GROUP CASE NARRATIVE

2

**Client:** Shell Oil

**Job No** MC22754

**Site:** URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Centra

**Report Date** 10/25/2016 10:29:03 A

2 Sample(s), 2 Trip Blank(s) and 0 Field Blank(s) were collected on 07/15/2013 and were received at SGS Accutest New England on 07/17/2013 properly preserved, at 0.8 Deg. C and intact. These Samples received a job number of MC22754. 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

|                   |                          |
|-------------------|--------------------------|
| <b>Matrix:</b> AQ | <b>Batch ID:</b> MSK2359 |
|-------------------|--------------------------|

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC22730-2MS, MC22730-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for Acrolein are outside control limits.
- Matrix Spike Recovery(s) for 2-Chloroethyl vinyl ether, Acrolein, Dichlorodifluoromethane are outside control limits. Outside control limits due to possible matrix interference.
- Matrix Spike Duplicate Recovery(s) for 1,2,3-Trichlorobenzene, 2-Chloroethyl vinyl ether, Dichlorodifluoromethane, Naphthalene, tert-Butylbenzene are outside control limits due to possible matrix interference and/or sample non-homogeneity.
- RPD(s) for MSD for tert-Butylbenzene are outside control limits for sample MC22730-2MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- Acrolein: Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low.
- Acetone: Initial Calibration Verification outside of acceptance criteria. Sample result may be biased high.

|                   |                          |
|-------------------|--------------------------|
| <b>Matrix:</b> AQ | <b>Batch ID:</b> MSK2360 |
|-------------------|--------------------------|

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC22966-2MS, MC22966-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

|                   |                         |
|-------------------|-------------------------|
| <b>Matrix:</b> AQ | <b>Batch ID:</b> MSV821 |
|-------------------|-------------------------|

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC22692-3MS, MC22692-3MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for 2-Chloroethyl vinyl ether, Hexachlorobutadiene, Carbon tetrachloride, Dichlorodifluoromethane, Vinyl Acetate are outside control limits.
- Matrix Spike Recovery(s) for 1,4-Dioxane, 2-Butanone (MEK), 2-Chloroethyl vinyl ether, Acetone, Hexachlorobutadiene, Methyl Tert Butyl Ether, Tetrachloroethene are outside control limits. Outside control limits due to possible matrix interference.
- Matrix Spike Duplicate Recovery(s) for 1,1,1,2-Tetrachloroethane, 1,4-Dioxane, 2-Butanone (MEK), Acetone, Acrolein, Hexachlorobutadiene, Methyl Tert Butyl Ether, Tetrachloroethene, 2-Chloroethyl vinyl ether are outside control limits. High RPD due to possible matrix interference and/or sample non-homogeneity.
- MS/MSD Recovery(s) for n-Propylbenzene, Benzene, Iso propyl benzene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- RPD(s) for MSD for 2-Chloroethyl vinyl ether are outside control limits for sample MC22692-3MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- MSV821-BS for Hexachlorobutadiene, 2-Chloroethyl vinyl ether: Outside control limits. Associated samples are non-detect for this compound.

Tuesday, October 25, 2016

Page 1 of 2

### Extractables by GCMS By Method SW846 8270C

|                   |                          |
|-------------------|--------------------------|
| <b>Matrix:</b> AQ | <b>Batch ID:</b> OP34082 |
|-------------------|--------------------------|

- 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) MC22900-3MS, MC22900-3MSD were used as the QC samples indicated.
- Blank Spike Recovery(s) for Hexachlorocyclopentadiene are outside control limits.
- Matrix Spike Duplicate Recovery(s) for Hexachlorocyclopentadiene are outside control limits. Probable cause due to matrix interference.

### Extractables by GCMS By Method SW846 8270C BY SIM

|                   |                          |
|-------------------|--------------------------|
| <b>Matrix:</b> AQ | <b>Batch ID:</b> OP34084 |
|-------------------|--------------------------|

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC22900-4MS, MC22900-4MSD were used as the QC samples indicated.
- MC22754-2 have compounds reported with "B" qualifier, indicating analyte is found in the associated method blank.

### Volatiles by GC By Method SW846 8011

|                   |                          |
|-------------------|--------------------------|
| <b>Matrix:</b> AQ | <b>Batch ID:</b> OP34095 |
|-------------------|--------------------------|

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC22692-3MS, MC22692-3MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Continuing Calibration Verification standard for 4-Bromofluorobenzene exceeded criteria. Target recovery satisfactory.

SGS Accutest 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 Laboratory Director for SGS Accutest New England or assignee as verified by the signature on the cover page has authorized the release of this report(MC22754).



# Summary of Hits

Job Number: MC22754  
 Account: Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
 Collected: 07/15/13



| Lab Sample ID | Client Sample ID | Result/<br>Analyte | RL | MDL | Units | Method |
|---------------|------------------|--------------------|----|-----|-------|--------|
|---------------|------------------|--------------------|----|-----|-------|--------|

**MC22754-1 P56-ROX-071513**

|                        |        |       |       |      |                    |
|------------------------|--------|-------|-------|------|--------------------|
| Acetone <sup>a</sup>   | 156    | 10    | 2.8   | ug/l | SW846 8260B        |
| Benzene                | 131    | 0.50  | 0.45  | ug/l | SW846 8260B        |
| n-Butylbenzene         | 14.1   | 5.0   | 0.54  | ug/l | SW846 8260B        |
| sec-Butylbenzene       | 7.2    | 5.0   | 0.58  | ug/l | SW846 8260B        |
| tert-Butylbenzene      | 3.8 J  | 5.0   | 0.87  | ug/l | SW846 8260B        |
| Chloroethane           | 4.7    | 2.0   | 0.84  | ug/l | SW846 8260B        |
| Ethylbenzene           | 2000   | 10    | 3.8   | ug/l | SW846 8260B        |
| Isopropylbenzene       | 96.8   | 5.0   | 0.64  | ug/l | SW846 8260B        |
| p-Isopropyltoluene     | 6.1    | 5.0   | 0.55  | ug/l | SW846 8260B        |
| Naphthalene            | 316    | 5.0   | 0.79  | ug/l | SW846 8260B        |
| n-Propylbenzene        | 145    | 5.0   | 0.59  | ug/l | SW846 8260B        |
| Toluene                | 311    | 1.0   | 0.46  | ug/l | SW846 8260B        |
| 1,2,4-Trimethylbenzene | 551    | 50    | 4.7   | ug/l | SW846 8260B        |
| 1,3,5-Trimethylbenzene | 134    | 5.0   | 1.1   | ug/l | SW846 8260B        |
| m,p-Xylene             | 2670   | 10    | 7.0   | ug/l | SW846 8260B        |
| o-Xylene               | 210    | 1.0   | 0.41  | ug/l | SW846 8260B        |
| Xylene (total)         | 2850   | 10    | 4.1   | ug/l | SW846 8260B        |
| 2,4-Dimethylphenol     | 8.6 J  | 11    | 1.3   | ug/l | SW846 8270C        |
| 3&4-Methylphenol       | 6.4 J  | 11    | 2.2   | ug/l | SW846 8270C        |
| Dibenzofuran           | 0.75 J | 2.2   | 0.17  | ug/l | SW846 8270C        |
| Acenaphthene           | 0.65   | 0.11  | 0.015 | ug/l | SW846 8270C BY SIM |
| Acenaphthylene         | 0.13   | 0.11  | 0.015 | ug/l | SW846 8270C BY SIM |
| Anthracene             | 0.14   | 0.11  | 0.019 | ug/l | SW846 8270C BY SIM |
| Fluorene               | 0.59   | 0.11  | 0.051 | ug/l | SW846 8270C BY SIM |
| 1-Methylnaphthalene    | 31.5   | 0.22  | 0.15  | ug/l | SW846 8270C BY SIM |
| 2-Methylnaphthalene    | 43.1   | 0.22  | 0.057 | ug/l | SW846 8270C BY SIM |
| Phenanthrene           | 1.5    | 0.055 | 0.014 | ug/l | SW846 8270C BY SIM |

**MC22754-2 P74-ROX-071513**

|                        |       |      |      |      |             |
|------------------------|-------|------|------|------|-------------|
| Acetone <sup>a</sup>   | 4.6 J | 10   | 2.8  | ug/l | SW846 8260B |
| Benzene                | 117   | 0.50 | 0.45 | ug/l | SW846 8260B |
| n-Butylbenzene         | 8.8   | 5.0  | 0.54 | ug/l | SW846 8260B |
| sec-Butylbenzene       | 2.0 J | 5.0  | 0.58 | ug/l | SW846 8260B |
| Ethylbenzene           | 30.6  | 1.0  | 0.38 | ug/l | SW846 8260B |
| Isopropylbenzene       | 3.1 J | 5.0  | 0.64 | ug/l | SW846 8260B |
| p-Isopropyltoluene     | 1.7 J | 5.0  | 0.55 | ug/l | SW846 8260B |
| Naphthalene            | 24.0  | 5.0  | 0.79 | ug/l | SW846 8260B |
| n-Propylbenzene        | 5.4   | 5.0  | 0.59 | ug/l | SW846 8260B |
| Toluene                | 6.4   | 1.0  | 0.46 | ug/l | SW846 8260B |
| 1,2,4-Trimethylbenzene | 101   | 5.0  | 0.47 | ug/l | SW846 8260B |
| 1,3,5-Trimethylbenzene | 36.5  | 5.0  | 1.1  | ug/l | SW846 8260B |
| m,p-Xylene             | 109   | 1.0  | 0.70 | ug/l | SW846 8260B |

# Summary of Hits

**Job Number:** MC22754  
**Account:** Shell Oil  
**Project:** URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
**Collected:** 07/15/13



| Lab Sample ID | Client Sample ID | Result/<br>Qual | RL    | MDL   | Units | Method             |
|---------------|------------------|-----------------|-------|-------|-------|--------------------|
|               |                  | 27.0            | 1.0   | 0.41  | ug/l  | SW846 8260B        |
|               |                  | 136             | 1.0   | 0.41  | ug/l  | SW846 8260B        |
|               |                  | 1.3 J           | 11    | 0.36  | ug/l  | SW846 8270C        |
|               |                  | 8.0             | 5.4   | 0.56  | ug/l  | SW846 8270C        |
|               |                  | 0.063 J         | 0.11  | 0.015 | ug/l  | SW846 8270C BY SIM |
|               |                  | 0.032 J         | 0.11  | 0.019 | ug/l  | SW846 8270C BY SIM |
|               |                  | 0.14            | 0.11  | 0.035 | ug/l  | SW846 8270C BY SIM |
|               |                  | 0.11            | 0.11  | 0.050 | ug/l  | SW846 8270C BY SIM |
|               |                  | 1.9             | 0.22  | 0.15  | ug/l  | SW846 8270C BY SIM |
|               |                  | 0.19 J          | 0.22  | 0.056 | ug/l  | SW846 8270C BY SIM |
|               |                  | 0.080 B         | 0.054 | 0.014 | ug/l  | SW846 8270C BY SIM |
|               |                  | 0.074 J         | 0.11  | 0.039 | ug/l  | SW846 8270C BY SIM |

MC22754-3 TB-ROX-071513-HCL

No hits reported in this sample.

MC22754-4 TB-ROX-071513-ST

No hits reported in this sample.

(a) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased high.

**Sample Results**

---

**Report of Analysis**

---

## Report of Analysis

|                   |                   |   |          |
|-------------------|-------------------|---|----------|
| Client Sample ID: | P56-ROX-071513    | Date Sampled:   | 07/15/13 |
| Lab Sample ID:    | MC22754-1         | Date Received:  | 07/17/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | K72447.D | 1  | 07/26/13 | GK | n/a       | n/a        | MSK2359          |
| Run #2 | K72460.D | 10 | 07/26/13 | GK | n/a       | n/a        | MSK2360          |

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

## VOA Special List

| CAS No.  | Compound                  | Result | RL   | MDL  | Units | Q |
|----------|---------------------------|--------|------|------|-------|---|
| 67-64-1  | Acetone <sup>a</sup>      | 156    | 10   | 2.8  | ug/l  |   |
| 107-02-8 | Acrolein <sup>b</sup>     | ND     | 25   | 6.3  | ug/l  |   |
| 107-13-1 | Acrylonitrile             | ND     | 5.0  | 3.5  | ug/l  |   |
| 71-43-2  | Benzene                   | 131    | 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            | 14.1   | 5.0  | 0.54 | ug/l  |   |
| 135-98-8 | sec-Butylbenzene          | 7.2    | 5.0  | 0.58 | ug/l  |   |
| 98-06-6  | tert-Butylbenzene         | 3.8    | 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              | 4.7    | 2.0  | 0.84 | ug/l  |   |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND     | 5.0  | 1.1  | 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-071513    | Date Sampled:   | 07/15/13 |
| Lab Sample ID:    | MC22754-1         | Date Received:  | 07/17/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result            | RL   | MDL  | Units | Q |
|------------|-----------------------------|-------------------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND                | 2.0  | 0.45 | 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                | 2000 <sup>c</sup> | 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            | 96.8              | 5.0  | 0.64 | ug/l  |   |
| 99-87-6    | p-Isopropyltoluene          | 6.1               | 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                 | 316               | 5.0  | 0.79 | ug/l  |   |
| 103-65-1   | n-Propylbenzene             | 145               | 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                     | 311               | 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      | 551 <sup>c</sup>  | 50   | 4.7  | ug/l  |   |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 134               | 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                  | 2670 <sup>c</sup> | 10   | 7.0  | ug/l  |   |
| 95-47-6    | o-Xylene                    | 210               | 1.0  | 0.41 | ug/l  |   |
| 1330-20-7  | Xylene (total)              | 2850 <sup>c</sup> | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> P56-ROX-071513  |  | <b>Date Sampled:</b> 07/15/13  |
| <b>Lab Sample ID:</b> MC22754-1  |  | <b>Date Received:</b> 07/17/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 98%    | 103%   | 70-130% |
| 2037-26-5 | Toluene-D8           | 101%   | 99%    | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 93%    | 95%    | 70-130% |

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

- (a) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased high.
- (b) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low.
- (c) Result is from Run# 2

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P56-ROX-071513  | <b>Date Sampled:</b> 07/15/13  |
| <b>Lab Sample ID:</b> MC22754-1  | <b>Date Received:</b> 07/17/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #1 | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14275.D | 1  | 07/31/13 | KR | 07/22/13  | OP34082    | MSW645           |
| Run #2 |          |    |          |    |           |            |                  |

| Run #1 | 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          | 8.6    | 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            | 6.4    | 11  | 2.2  | ug/l  | J |
| 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                | 0.75   | 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

|   |  |                                |
|---|--|--------------------------------|
| <b>Client Sample ID:</b> P56-ROX-071513   |  | <b>Date Sampled:</b> 07/15/13  |
| <b>Lab Sample ID:</b> MC22754-1   |  | <b>Date Received:</b> 07/17/13 |
| <b>Matrix:</b> AQ - Ground Water  |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C  |  |                                |
| <b>Project:</b> URMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

**ABN Special List**

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.5 | 0.55 | 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       | 60%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 32%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 87%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 72%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 75%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 79%    |        | 30-130% |

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

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

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## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P56-ROX-071513  | <b>Date Sampled:</b> 07/15/13  |
| <b>Lab Sample ID:</b> MC22754-1  | <b>Date Received:</b> 07/17/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14235.D | 1  | 07/31/13 | KR | 07/22/13  | OP34084    | MSW643           |
| Run #2 |          |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 910 ml         | 1.0 ml       |
| Run #2 |                |              |

## BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | 0.65   | 0.11  | 0.015 | ug/l  |   |
| 208-96-8 | Acenaphthylene         | 0.13   | 0.11  | 0.015 | ug/l  |   |
| 120-12-7 | Anthracene             | 0.14   | 0.11  | 0.019 | ug/l  |   |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.055 | 0.033 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.11  | 0.019 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.055 | 0.026 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.11  | 0.041 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.064 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.080 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.11  | 0.046 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.11  | 0.036 | ug/l  |   |
| 86-73-7  | Fluorene               | 0.59   | 0.11  | 0.051 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.11  | 0.051 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | 31.5   | 0.22  | 0.15  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | 43.1   | 0.22  | 0.057 | ug/l  |   |
| 85-01-8  | Phenanthrene           | 1.5    | 0.055 | 0.014 | ug/l  |   |
| 129-00-0 | Pyrene                 | ND     | 0.11  | 0.039 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 4165-60-0 | Nitrobenzene-d5      | 79%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 80%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 80%    |        | 30-130% |

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

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P56-ROX-071513  | <b>Date Sampled:</b> 07/15/13  |
| <b>Lab Sample ID:</b> MC22754-1  | <b>Date Received:</b> 07/17/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27132.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |
| 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 | 0.0043 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.014 | 0.0092 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 105%   |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 82%    |        | 36-173% |

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

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

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## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P74-ROX-071513  | <b>Date Sampled:</b> 07/15/13  |
| <b>Lab Sample ID:</b> MC22754-2  | <b>Date Received:</b> 07/17/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | K72448.D | 1  | 07/26/13 | GK | n/a       | n/a        | MSK2359          |
| Run #2 |          |    |          |    |           |            |                  |

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

## VOA Special List

| CAS No.  | Compound                  | Result | RL   | MDL  | Units | Q |
|----------|---------------------------|--------|------|------|-------|---|
| 67-64-1  | Acetone <sup>a</sup>      | 4.6    | 10   | 2.8  | ug/l  | J |
| 107-02-8 | Acrolein <sup>b</sup>     | ND     | 25   | 6.3  | ug/l  |   |
| 107-13-1 | Acrylonitrile             | ND     | 5.0  | 3.5  | ug/l  |   |
| 71-43-2  | Benzene                   | 117    | 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          | 2.0    | 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  | 1.1  | 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-071513    | Date Sampled:   | 07/15/13 |
| Lab Sample ID:    | MC22754-2         | Date Received:  | 07/17/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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                | 30.6   | 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            | 3.1    | 5.0  | 0.64 | ug/l  | J |
| 99-87-6    | p-Isopropyltoluene          | 1.7    | 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                 | 24.0   | 5.0  | 0.79 | ug/l  |   |
| 103-65-1   | n-Propylbenzene             | 5.4    | 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                     | 6.4    | 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      | 101    | 5.0  | 0.47 | ug/l  |   |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 36.5   | 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                  | 109    | 1.0  | 0.70 | ug/l  |   |
| 95-47-6    | o-Xylene                    | 27.0   | 1.0  | 0.41 | ug/l  |   |
| 1330-20-7  | Xylene (total)              | 136    | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> P74-ROX-071513  |  | <b>Date Sampled:</b> 07/15/13  |
| <b>Lab Sample ID:</b> MC22754-2  |  | <b>Date Received:</b> 07/17/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 102%   |        | 70-130% |
| 2037-26-5 | Toluene-D8           | 99%    |        | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 95%    |        | 70-130% |

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

- (a) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased high.
- (b) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low.

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P74-ROX-071513  | <b>Date Sampled:</b> 07/15/13  |
| <b>Lab Sample ID:</b> MC22754-2  | <b>Date Received:</b> 07/17/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #1 | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14276.D | 1  | 07/31/13 | KR | 07/22/13  | OP34082    | MSW645           |
| Run #2 |          |    |          |    |           |            |                  |

| Run #1 | 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          | 1.3    | 11  | 0.36 | ug/l  | J |
| 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                      | 8.0    | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> P74-ROX-071513  |  | <b>Date Sampled:</b> 07/15/13  |
| <b>Lab Sample ID:</b> MC22754-2  |  | <b>Date Received:</b> 07/17/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

4.2  
4

**ABN Special List**

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.4 | 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       | 59%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 23%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 97%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 79%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 80%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 84%    |        | 30-130% |

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

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P74-ROX-071513  | <b>Date Sampled:</b> 07/15/13  |
| <b>Lab Sample ID:</b> MC22754-2  | <b>Date Received:</b> 07/17/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14236.D | 1  | 07/31/13 | KR | 07/22/13  | OP34084    | MSW643           |
| Run #2 |          |    |          |    |           |            |                  |

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

## BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | 0.063  | 0.11  | 0.015 | ug/l  | J |
| 208-96-8 | Acenaphthylene         | ND     | 0.11  | 0.014 | ug/l  |   |
| 120-12-7 | Anthracene             | 0.032  | 0.11  | 0.019 | ug/l  | J |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.054 | 0.033 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.11  | 0.019 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.054 | 0.026 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.11  | 0.041 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.064 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.079 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.11  | 0.045 | ug/l  |   |
| 206-44-0 | Fluoranthene           | 0.14   | 0.11  | 0.035 | ug/l  |   |
| 86-73-7  | Fluorene               | 0.11   | 0.11  | 0.050 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.11  | 0.050 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | 1.9    | 0.22  | 0.15  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | 0.19   | 0.22  | 0.056 | ug/l  | J |
| 85-01-8  | Phenanthrene           | 0.080  | 0.054 | 0.014 | ug/l  | B |
| 129-00-0 | Pyrene                 | 0.074  | 0.11  | 0.039 | ug/l  | J |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 4165-60-0 | Nitrobenzene-d5      | 83%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 85%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 86%    |        | 30-130% |

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

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



## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P74-ROX-071513  | <b>Date Sampled:</b> 07/15/13  |
| <b>Lab Sample ID:</b> MC22754-2  | <b>Date Received:</b> 07/17/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27133.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |
| Run #2 |           |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 36.6 ml        | 2.0 ml       |
| Run #2 |                |              |

### VOA Special List

| CAS No.  | Compound                    | Result | RL    | MDL    | Units | Q |
|----------|-----------------------------|--------|-------|--------|-------|---|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND     | 0.014 | 0.0043 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.014 | 0.0092 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 101%   |        | 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

4.2  
4

## Report of Analysis

|                          |                       |  |          |
|--------------------------|-----------------------|--|----------|
| <b>Client Sample ID:</b> | TB-ROX-071513-HCL     | <b>Date Sampled:</b>   | 07/15/13 |
| <b>Lab Sample ID:</b>    | MC22754-3             | <b>Date Received:</b>  | 07/17/13 |
| <b>Matrix:</b>           | AQ - Trip Blank Water | <b>Percent Solids:</b>   | n/a      |
| <b>Method:</b>           | SW846 8260B           | <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|-----|-----------|------------|------------------|
| Run #1 | V21163.D | 1  | 07/24/13 | AMY | n/a       | n/a        | MSV821           |
| Run #2 |          |    |          |     |           |            |                  |

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

## VOA Special List

| CAS No.  | Compound                  | Result | RL   | MDL  | Units | Q |
|----------|---------------------------|--------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND     | 10   | 2.8  | 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  | 1.1  | 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-071513-HCL     | Date Sampled:   | 07/15/13 |
| Lab Sample ID:    | MC22754-3             | Date Received:  | 07/17/13 |
| Matrix:           | AQ - Trip Blank Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B           | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> TB-ROX-071513-HCL   |  | <b>Date Sampled:</b> 07/15/13  |
| <b>Lab Sample ID:</b> MC22754-3  |  | <b>Date Received:</b> 07/17/13 |
| <b>Matrix:</b> AQ - Trip Blank Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

4.3  
4

**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 100%   |        | 70-130% |
| 2037-26-5 | Toluene-D8           | 99%    |        | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 98%    |        | 70-130% |

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

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> TB-ROX-071513-ST  | <b>Date Sampled:</b> 07/15/13  |
| <b>Lab Sample ID:</b> MC22754-4  | <b>Date Received:</b> 07/17/13 |
| <b>Matrix:</b> AQ - Trip Blank Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27134.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |
| 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 | 0.0044 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.014 | 0.0093 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 90%    |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 81%    |        | 36-173% |

---

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

4.4  
4

Misc. Forms

Custody Documents and Other Forms

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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  
 CALSCE  
 OTHER (Marlborough, MA 01752 (508-481-6200))  
 SPL  
 Lab Vendor #

Please Check Appropriate Box:

|   |  |                                       |
|---|--|---------------------------------------|
| <input checked="" type="checkbox"/> ENV. SERVICES | <input type="checkbox"/> MOTIVA RETAIL | <input type="checkbox"/> SHELL RETAIL |
| <input type="checkbox"/> MOTIVA SDBCM             | <input type="checkbox"/> CONSULTANT    | <input type="checkbox"/> LUBES        |
| <input type="checkbox"/> SHELL PIPELINE           | <input type="checkbox"/> OTHER         |                                       |

Print Bill To Contact Name: Bob Billman  
 INCIDENT # (ENV SERVICES) 9 7 2 1 8 6 4 0  
 CHECK IF NO INCIDENT # APPLIES  
 DATE: 7/15/13  
 PAGE: 1 of 1

LABORING COMPANY: URS CORPORATION  
 ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110  
 PROJECT CONTACT (Name) or PDF Report to: Elizabeth Kunkel, Wendy Pennington, Bob Billman

SITE ADDRESS: Street and City: 900 South Central Ave; ROXANA  
 STATE: IL  
 COUNTY: ILLINOIS  
 URS PROJECT NO: Roxana Quarterly GW / 21562850.03003

TELEPHONE: 314-429-0100  
 FAX: 314-429-0462  
 E-MAIL TO CONTACT NAME: bob.billman@urs.com, elizabeth.kunkel@urs.com, wendy.pennington@urs.com

SHIPPER NAME(S) (Print): D Mattingly, L Rathnow  
 LAB USE ONLY: MC22754

TURNAROUND TIME (CALENDAR DAYS):  
 STANDARD (10 DAY)  5 DAYS  3 DAYS  2 DAYS  24 HOURS  RESULTS NEEDED ON WEE-END

REQUESTED ANALYSIS

DELIVERABLES:  LEVEL 1  LEVEL 2  LEVEL 3  LEVEL 4  OTHER (SPECIFY) EDD  
 TEMPERATURE ON RECEIPT C°: Cooler #1, Cooler #2, Cooler #3

FIELD NOTES:  
 TEMPERATURE ON RECEIPT C°

SPECIAL INSTRUCTIONS OR NOTES:  
 Please include "J" values on Reports.  
 Please provide sample receipt upon login.

Container PID Readings or Laboratory Notes

| LAB USE ONLY | Field Sample Identification | SAMPLING |      | MATRIX | PRESERVATIVE |      |       |      |       | NO. OF CONT. | VOC 8011 SL | SVOC 8270C SL+TICS | PAH 8270LL | PID (ppm) |
|--------------|-----------------------------|----------|------|--------|--------------|------|-------|------|-------|--------------|-------------|--------------------|------------|-----------|
|              |                             | DATE     | TIME |        | HCL          | HNO3 | H2SO4 | NONE | OTHER |              |             |                    |            |           |
| -1           | P56-ROX-071513              | 7/5/13   | 1335 | water  | 2            | 2    | 2     | 2    | 6     | X            | X           | X                  | 0          |           |
| -2           | P74-ROX-071513              | ↓        | 1440 | ↓      | 2            |      | 2     | 2    | 6     | X            | X           | X                  | ↓          |           |
| -3           | TB-ROX-071513-HCI           | ↓        | 0000 | ↓      | 2            |      |       |      | 2     | X            |             |                    | ↓          |           |
| -4           | TB-ROX-071513-ST            | ↓        | 0000 | ↓      |              |      |       | 2    | 2     | X            |             |                    | ↓          |           |

|         |  |  |  |  |  |  |  |  |  |  |  |  |
|---------|--|--|--|--|--|--|--|--|--|--|--|--|
| 564,180 |  |  |  |  |  |  |  |  |  |  |  |  |
|---------|--|--|--|--|--|--|--|--|--|--|--|--|

Requested by (Signature): [Signature]  
 Received by (Signature): [Signature]

FED EX  
 Date: 7/15/13 Time: 1800  
 Date: 7-17-13 Time: 930

0.8%

MC22754: Chain of Custody  
 Page 1 of 2

5.1  
 5

## Accutest Laboratories Sample Receipt Summary

**Accutest Job Number:** MC22754      **Client:** URS      **Immediate Client Services Action Required:** No  
**Date / Time Received:** 7/17/2013      **Delivery Method:** \_\_\_\_\_      **Client Service Action Required at Login:** No  
**Project:** 900 SOUTH CENTRAL AVE      **No. Coolers:** 1      **Airbill #'s:** \_\_\_\_\_

**Cooler Security**      Y or N      Y or N  
 1. Custody Seals Present:        3. COC Present:    
 2. Custody Seals Intact:        4. Smpl Dates/Time OK:

**Cooler Temperature**      Y or N  
 1. Temp criteria achieved:    
 2. Cooler temp verification: Infrared gun \_\_\_\_\_  
 3. Cooler media: Ice (bag) \_\_\_\_\_

**Quality Control Preservation**      Y      or      N      N/A  
 1. Trip Blank present / cooler:     
 2. Trip Blank listed on COC:     
 3. Samples preserved properly:    
 4. VOCs headspace free:

**Sample Integrity - Documentation**      Y      or      N  
 1. Sample labels present on bottles:    
 2. Container labeling complete:    
 3. Sample container label / COC agree:

**Sample Integrity - Condition**      Y      or      N  
 1. Sample recvd within HT:    
 2. All containers accounted for:    
 3. Condition of sample: Intact \_\_\_\_\_

**Sample Integrity - Instructions**      Y      or      N      N/A  
 1. Analysis requested is clear:    
 2. Bottles received for unspecified tests:    
 3. Sufficient volume recvd for analysis:    
 4. Compositing instructions clear:     
 5. Filtering instructions clear:

Comments

5.1  
**5**



### Internal Sample Tracking Chronicle

Shell Oil

Job No: MC22754

URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

5.2  
5

| Sample Number   | Method             | Analyzed        | By  | Prepped   | By  | Test Codes |
|---|--------------------|-----------------|-----|-----------|-----|------------|
| MC22754-1 Collected: 15-JUL-13 13:35 By: DMLR Received: 17-JUL-13 By: P56-ROX-071513    |                    |                 |     |           |     |            |
| MC22754-1   | SW846 8011         | 25-JUL-13 11:37 | NK  | 23-JUL-13 | BJ  | V8011SL    |
| MC22754-1   | SW846 8260B        | 26-JUL-13 12:55 | GK  |           |     | V8260SL +  |
| MC22754-1   | SW846 8260B        | 26-JUL-13 19:06 | GK  |           |     | V8260SL +  |
| MC22754-1   | SW846 8270C BY SIM | 31-JUL-13 01:39 | KR  | 22-JUL-13 | MEW | B8270SIMSL |
| MC22754-1   | SW846 8270C        | 31-JUL-13 22:01 | KR  | 22-JUL-13 | MEW | AB8270SL + |
| MC22754-2 Collected: 15-JUL-13 14:40 By: DMLR Received: 17-JUL-13 By: P74-ROX-071513    |                    |                 |     |           |     |            |
| MC22754-2   | SW846 8011         | 25-JUL-13 12:01 | NK  | 23-JUL-13 | BJ  | V8011SL    |
| MC22754-2   | SW846 8260B        | 26-JUL-13 13:23 | GK  |           |     | V8260SL +  |
| MC22754-2   | SW846 8270C BY SIM | 31-JUL-13 02:01 | KR  | 22-JUL-13 | MEW | B8270SIMSL |
| MC22754-2   | SW846 8270C        | 31-JUL-13 22:24 | KR  | 22-JUL-13 | MEW | AB8270SL + |
| MC22754-3 Collected: 15-JUL-13 00:00 By: DMLR Received: 17-JUL-13 By: TB-ROX-071513-HCL |                    |                 |     |           |     |            |
| MC22754-3   | SW846 8260B        | 24-JUL-13 14:54 | AMY |           |     | V8260SL +  |
| MC22754-4 Collected: 15-JUL-13 00:00 By: DMLR Received: 17-JUL-13 By: TB-ROX-071513-ST  |                    |                 |     |           |     |            |
| MC22754-4   | SW846 8011         | 25-JUL-13 12:25 | NK  | 23-JUL-13 | BJ  | V8011SL    |

# SGS Accutest Internal Chain of Custody

**Job Number:** MC22754  
**Account:** SHELLWIC Shell Oil  
**Project:** URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
**Received:** 07/17/13

| Sample.Bottle Number | Transfer FROM    | Transfer TO      | Date/Time      | Reason                 |
|----------------------|------------------|------------------|----------------|------------------------|
| MC22754-1.1          | Walk In Ref #22  | Thomas Abruzzise | 07/22/13 15:39 | Retrieve from Storage  |
| MC22754-1.1          | Thomas Abruzzise |                  | 07/30/13 14:35 | Depleted               |
| MC22754-1.3          | VOC Ref #5       | Amy Min Yang     | 07/24/13 13:15 | Retrieve from Storage  |
| MC22754-1.3          | Amy Min Yang     | GCMSV            | 07/24/13 13:16 | Load on Instrument     |
| MC22754-1.3          | GCMSV            | Amy Min Yang     | 07/26/13 15:01 | Unload from Instrument |
| MC22754-1.3          | Amy Min Yang     | VOC Ref #5       | 07/26/13 15:01 | Return to Storage      |
| MC22754-1.3          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22754-1.4          | VOC Ref #5       | Gary Krasinski   | 07/26/13 09:45 | Retrieve from Storage  |
| MC22754-1.4          | Gary Krasinski   | GCMSK            | 07/26/13 09:45 | Load on Instrument     |
| MC22754-1.4          | GCMSK            | Gary Krasinski   | 07/26/13 14:55 | Unload from Instrument |
| MC22754-1.4          | Gary Krasinski   | VOC Ref #5       | 07/26/13 14:55 | Return to Storage      |
| MC22754-1.4          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22754-1.5          | VOC Ref #5       | Bijan Jafari     | 07/23/13 10:47 | Retrieve from Storage  |
| MC22754-1.5          | Bijan Jafari     |                  | 07/23/13 18:13 | Depleted               |
| MC22754-1.6          | VOC Ref #5       | Gary Krasinski   | 07/26/13 15:02 | Retrieve from Storage  |
| MC22754-1.6          | Gary Krasinski   | GCMSK            | 07/26/13 15:02 | Load on Instrument     |
| MC22754-1.6          | GCMSK            | Gary Krasinski   | 07/26/13 15:14 | Unload from Instrument |
| MC22754-1.6          | Gary Krasinski   | VOC Ref #5       | 07/26/13 15:14 | Return to Storage      |
| MC22754-1.6          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22754-2.2          | Walk In Ref #22  | Thomas Abruzzise | 07/22/13 15:39 | Retrieve from Storage  |
| MC22754-2.2          | Thomas Abruzzise |                  | 07/30/13 14:35 | Depleted               |
| MC22754-2.3          | VOC Ref #5       | Gary Krasinski   | 07/26/13 09:45 | Retrieve from Storage  |
| MC22754-2.3          | Gary Krasinski   | GCMSK            | 07/26/13 09:45 | Load on Instrument     |
| MC22754-2.3          | GCMSK            | Gary Krasinski   | 07/26/13 14:55 | Unload from Instrument |
| MC22754-2.3          | Gary Krasinski   | VOC Ref #5       | 07/26/13 14:55 | Return to Storage      |
| MC22754-2.3          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22754-2.4          | VOC Ref #5       | Amy Min Yang     | 07/24/13 13:15 | Retrieve from Storage  |
| MC22754-2.4          | Amy Min Yang     | GCMSV            | 07/24/13 13:16 | Load on Instrument     |
| MC22754-2.4          | GCMSV            | Amy Min Yang     | 07/26/13 15:01 | Unload from Instrument |
| MC22754-2.4          | Amy Min Yang     | VOC Ref #5       | 07/26/13 15:01 | Return to Storage      |
| MC22754-2.4          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22754-2.6          | VOC Ref #5       | Bijan Jafari     | 07/23/13 10:47 | Retrieve from Storage  |
| MC22754-2.6          | Bijan Jafari     |                  | 07/23/13 18:13 | Depleted               |
| MC22754-3.1          | VOC Ref #5       | Amy Min Yang     | 07/24/13 13:15 | Retrieve from Storage  |
| MC22754-3.1          | Amy Min Yang     | GCMSV            | 07/24/13 13:16 | Load on Instrument     |

5.3

5

# SGS Accutest Internal Chain of Custody

**Job Number:** MC22754  
**Account:** SHELLWIC Shell Oil  
**Project:** URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
**Received:** 07/17/13

| Sample.Bottle Number | Transfer FROM | Transfer TO  | Date/Time      | Reason                 |
|----------------------|---------------|--------------|----------------|------------------------|
| MC22754-3.1          | GCMSV         | Amy Min Yang | 07/26/13 15:01 | Unload from Instrument |
| MC22754-3.1          | Amy Min Yang  | VOC Ref #5   | 07/26/13 15:01 | Return to Storage      |
| MC22754-3.1          | Scott Parsick |              | 10/04/13 13:49 | Disposed               |
| MC22754-4.1          | VOC Ref #5    | Bijan Jafari | 07/23/13 10:47 | Retrieve from Storage  |
| MC22754-4.1          | Bijan Jafari  |              | 07/23/13 18:13 | Depleted               |

5.3

5

## GC/MS Volatiles

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## QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

# Method Blank Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample    | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|-----------|----------|----|----------|-----|-----------|------------|------------------|
| MSV821-MB | V21160.D | 1  | 07/24/13 | AMY | n/a       | n/a        | MSV821           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-3

| 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  | 1.1  | 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: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample    | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|-----------|----------|----|----------|-----|-----------|------------|------------------|
| MSV821-MB | V21160.D | 1  | 07/24/13 | AMY | n/a       | n/a        | MSV821           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-3

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

# Method Blank Summary

Job Number: MC22754  
Account: SHELLWIC Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample    | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|-----------|----------|----|----------|-----|-----------|------------|------------------|
| MSV821-MB | V21160.D | 1  | 07/24/13 | AMY | n/a       | n/a        | MSV821           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-3

| CAS No.   | Surrogate Recoveries | Limits      |
|-----------|----------------------|-------------|
| 1868-53-7 | Dibromofluoromethane | 97% 70-130% |
| 2037-26-5 | Toluene-D8           | 99% 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 97% 70-130% |

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

6.1.1  
6

# Method Blank Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2359-MB | K72441.D | 1  | 07/26/13 | GK | n/a       | n/a        | MSK2359          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-1, MC22754-2

| 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  | 1.1  | 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: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2359-MB | K72441.D | 1  | 07/26/13 | GK | n/a       | n/a        | MSK2359          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-1, MC22754-2

| 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: MC22754  
Account: SHELLWIC Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2359-MB | K72441.D | 1  | 07/26/13 | GK | n/a       | n/a        | MSK2359          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-1, MC22754-2

| CAS No.   | Surrogate Recoveries | Limits       |
|-----------|----------------------|--------------|
| 1868-53-7 | Dibromofluoromethane | 109% 70-130% |
| 2037-26-5 | Toluene-D8           | 97% 70-130%  |
| 460-00-4  | 4-Bromofluorobenzene | 95% 70-130%  |

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

# Method Blank Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2360-MB | K72455.D | 1  | 07/26/13 | GK | n/a       | n/a        | MSK2360          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-1

| CAS No.   | Compound               | Result | RL  | MDL  | Units | Q |
|-----------|------------------------|--------|-----|------|-------|---|
| 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  |   |
|           | m,p-Xylene             | ND     | 1.0 | 0.70 | ug/l  |   |
| 1330-20-7 | Xylene (total)         | ND     | 1.0 | 0.41 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Limits       |
|-----------|----------------------|--------------|
| 1868-53-7 | Dibromofluoromethane | 105% 70-130% |
| 2037-26-5 | Toluene-D8           | 95% 70-130%  |
| 460-00-4  | 4-Bromofluorobenzene | 94% 70-130%  |

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

# Blank Spike Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample    | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|-----------|----------|----|----------|-----|-----------|------------|------------------|
| MSV821-BS | V21158.D | 1  | 07/24/13 | AMY | n/a       | n/a        | MSV821           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-3

| CAS No.  | Compound                  | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | Limits |
|----------|---------------------------|---------------|-------------|----------|--------|
| 67-64-1  | Acetone                   | 50            | 41.7        | 83       | 70-130 |
| 107-02-8 | Acrolein                  | 250           | 238         | 95       | 70-130 |
| 107-13-1 | Acrylonitrile             | 50            | 48.4        | 97       | 70-130 |
| 71-43-2  | Benzene                   | 50            | 45.3        | 91       | 70-130 |
| 108-86-1 | Bromobenzene              | 50            | 54.6        | 109      | 70-130 |
| 74-97-5  | Bromochloromethane        | 50            | 46.6        | 93       | 70-130 |
| 75-27-4  | Bromodichloromethane      | 50            | 56.3        | 113      | 70-130 |
| 75-25-2  | Bromoform                 | 50            | 59.1        | 118      | 70-130 |
| 74-83-9  | Bromomethane              | 50            | 59.0        | 118      | 70-130 |
| 78-93-3  | 2-Butanone (MEK)          | 50            | 42.4        | 85       | 70-130 |
| 104-51-8 | n-Butylbenzene            | 50            | 54.1        | 108      | 70-130 |
| 135-98-8 | sec-Butylbenzene          | 50            | 58.1        | 116      | 70-130 |
| 98-06-6  | tert-Butylbenzene         | 50            | 60.0        | 120      | 70-130 |
| 75-15-0  | Carbon disulfide          | 50            | 60.2        | 120      | 70-130 |
| 56-23-5  | Carbon tetrachloride      | 50            | 65.6        | 131* a   | 70-130 |
| 108-90-7 | Chlorobenzene             | 50            | 56.6        | 113      | 70-130 |
| 75-00-3  | Chloroethane              | 50            | 52.4        | 105      | 70-130 |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50            | 178         | 356* b   | 70-130 |
| 67-66-3  | Chloroform                | 50            | 47.7        | 95       | 70-130 |
| 74-87-3  | Chloromethane             | 50            | 50.3        | 101      | 70-130 |
| 95-49-8  | o-Chlorotoluene           | 50            | 54.0        | 108      | 70-130 |
| 106-43-4 | p-Chlorotoluene           | 50            | 56.1        | 112      | 70-130 |
| 124-48-1 | Dibromochloromethane      | 50            | 59.2        | 118      | 70-130 |
| 95-50-1  | 1,2-Dichlorobenzene       | 50            | 57.1        | 114      | 70-130 |
| 541-73-1 | 1,3-Dichlorobenzene       | 50            | 57.8        | 116      | 70-130 |
| 106-46-7 | 1,4-Dichlorobenzene       | 50            | 53.3        | 107      | 70-130 |
| 75-71-8  | Dichlorodifluoromethane   | 50            | 67.0        | 134* a   | 70-130 |
| 75-34-3  | 1,1-Dichloroethane        | 50            | 42.7        | 85       | 70-130 |
| 107-06-2 | 1,2-Dichloroethane        | 50            | 52.4        | 105      | 70-130 |
| 75-35-4  | 1,1-Dichloroethene        | 50            | 48.8        | 98       | 70-130 |
| 156-59-2 | cis-1,2-Dichloroethene    | 50            | 41.4        | 83       | 70-130 |
| 156-60-5 | trans-1,2-Dichloroethene  | 50            | 43.7        | 87       | 70-130 |
| 78-87-5  | 1,2-Dichloropropane       | 50            | 43.7        | 87       | 70-130 |
| 142-28-9 | 1,3-Dichloropropane       | 50            | 47.7        | 95       | 70-130 |
| 594-20-7 | 2,2-Dichloropropane       | 50            | 60.8        | 122      | 70-130 |
| 563-58-6 | 1,1-Dichloropropene       | 50            | 54.4        | 109      | 70-130 |

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample    | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|-----------|----------|----|----------|-----|-----------|------------|------------------|
| MSV821-BS | V21158.D | 1  | 07/24/13 | AMY | n/a       | n/a        | MSV821           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-3

| CAS No.    | Compound                    | Spike ug/l | BSP ug/l | BSP %  | Limits |
|------------|-----------------------------|------------|----------|--------|--------|
| 10061-01-5 | cis-1,3-Dichloropropene     | 50         | 47.1     | 94     | 70-130 |
| 10061-02-6 | trans-1,3-Dichloropropene   | 50         | 53.1     | 106    | 70-130 |
| 123-91-1   | 1,4-Dioxane                 | 250        | 185      | 74     | 70-130 |
| 97-63-2    | Ethyl methacrylate          | 50         | 45.8     | 92     | 77-137 |
| 100-41-4   | Ethylbenzene                | 50         | 55.7     | 111    | 70-130 |
| 87-68-3    | Hexachlorobutadiene         | 50         | 78.1     | 156* b | 70-130 |
| 591-78-6   | 2-Hexanone                  | 50         | 49.0     | 98     | 70-130 |
| 98-82-8    | Isopropylbenzene            | 50         | 57.7     | 115    | 70-130 |
| 99-87-6    | p-Isopropyltoluene          | 50         | 59.8     | 120    | 70-130 |
| 1634-04-4  | Methyl Tert Butyl Ether     | 50         | 42.2     | 84     | 70-130 |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | 50         | 38.0     | 76     | 70-130 |
| 74-95-3    | Methylene bromide           | 50         | 49.2     | 98     | 70-130 |
| 75-09-2    | Methylene chloride          | 50         | 39.1     | 78     | 70-130 |
| 91-20-3    | Naphthalene                 | 50         | 49.2     | 98     | 70-130 |
| 103-65-1   | n-Propylbenzene             | 50         | 54.5     | 109    | 70-130 |
| 100-42-5   | Styrene                     | 50         | 52.8     | 106    | 70-130 |
| 630-20-6   | 1,1,1,2-Tetrachloroethane   | 50         | 64.2     | 128    | 70-130 |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | 50         | 46.8     | 94     | 70-130 |
| 127-18-4   | Tetrachloroethene           | 50         | 63.5     | 127    | 70-130 |
| 108-88-3   | Toluene                     | 50         | 49.0     | 98     | 70-130 |
| 87-61-6    | 1,2,3-Trichlorobenzene      | 50         | 57.2     | 114    | 70-130 |
| 120-82-1   | 1,2,4-Trichlorobenzene      | 50         | 58.0     | 116    | 70-130 |
| 71-55-6    | 1,1,1-Trichloroethane       | 50         | 52.2     | 104    | 70-130 |
| 79-00-5    | 1,1,2-Trichloroethane       | 50         | 48.1     | 96     | 70-130 |
| 79-01-6    | Trichloroethene             | 50         | 52.8     | 106    | 70-130 |
| 75-69-4    | Trichlorofluoromethane      | 50         | 57.7     | 115    | 70-130 |
| 96-18-4    | 1,2,3-Trichloropropane      | 50         | 42.6     | 85     | 70-130 |
| 95-63-6    | 1,2,4-Trimethylbenzene      | 50         | 53.2     | 106    | 70-130 |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 50         | 53.3     | 107    | 70-130 |
| 108-05-4   | Vinyl Acetate               | 50         | 31.5     | 63* a  | 70-130 |
| 75-01-4    | Vinyl chloride              | 50         | 41.0     | 82     | 70-130 |
|            | m,p-Xylene                  | 100        | 113      | 113    | 70-130 |
| 95-47-6    | o-Xylene                    | 50         | 57.9     | 116    | 70-130 |
| 1330-20-7  | Xylene (total)              | 150        | 171      | 114    | 70-130 |

\* = Outside of Control Limits.

## Blank Spike Summary

Job Number: MC22754

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample    | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|-----------|----------|----|----------|-----|-----------|------------|------------------|
| MSV821-BS | V21158.D | 1  | 07/24/13 | AMY | n/a       | n/a        | MSV821           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-3

| CAS No.   | Surrogate Recoveries | BSP | Limits  |
|-----------|----------------------|-----|---------|
| 1868-53-7 | Dibromofluoromethane | 97% | 70-130% |
| 2037-26-5 | Toluene-D8           | 99% | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 97% | 70-130% |

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

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2359-BS | K72438.D | 1  | 07/26/13 | GK | n/a       | n/a        | MSK2359          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-1, MC22754-2

| CAS No.  | Compound                  | Spike ug/l | BSP ug/l | BSP % | Limits |
|----------|---------------------------|------------|----------|-------|--------|
| 67-64-1  | Acetone                   | 50         | 63.0     | 126   | 70-130 |
| 107-02-8 | Acrolein                  | 250        | 71.9     | 29* a | 70-130 |
| 107-13-1 | Acrylonitrile             | 50         | 51.6     | 103   | 70-130 |
| 71-43-2  | Benzene                   | 50         | 51.6     | 103   | 70-130 |
| 108-86-1 | Bromobenzene              | 50         | 49.4     | 99    | 70-130 |
| 74-97-5  | Bromochloromethane        | 50         | 50.8     | 102   | 70-130 |
| 75-27-4  | Bromodichloromethane      | 50         | 48.3     | 97    | 70-130 |
| 75-25-2  | Bromoform                 | 50         | 50.3     | 101   | 70-130 |
| 74-83-9  | Bromomethane              | 50         | 57.1     | 114   | 70-130 |
| 78-93-3  | 2-Butanone (MEK)          | 50         | 56.5     | 113   | 70-130 |
| 104-51-8 | n-Butylbenzene            | 50         | 50.0     | 100   | 70-130 |
| 135-98-8 | sec-Butylbenzene          | 50         | 53.3     | 107   | 70-130 |
| 98-06-6  | tert-Butylbenzene         | 50         | 52.6     | 105   | 70-130 |
| 75-15-0  | Carbon disulfide          | 50         | 49.3     | 99    | 70-130 |
| 56-23-5  | Carbon tetrachloride      | 50         | 52.1     | 104   | 70-130 |
| 108-90-7 | Chlorobenzene             | 50         | 57.3     | 115   | 70-130 |
| 75-00-3  | Chloroethane              | 50         | 53.8     | 108   | 70-130 |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50         | 39.0     | 78    | 70-130 |
| 67-66-3  | Chloroform                | 50         | 53.6     | 107   | 70-130 |
| 74-87-3  | Chloromethane             | 50         | 56.4     | 113   | 70-130 |
| 95-49-8  | o-Chlorotoluene           | 50         | 50.0     | 100   | 70-130 |
| 106-43-4 | p-Chlorotoluene           | 50         | 52.3     | 105   | 70-130 |
| 124-48-1 | Dibromochloromethane      | 50         | 52.2     | 104   | 70-130 |
| 95-50-1  | 1,2-Dichlorobenzene       | 50         | 53.3     | 107   | 70-130 |
| 541-73-1 | 1,3-Dichlorobenzene       | 50         | 52.4     | 105   | 70-130 |
| 106-46-7 | 1,4-Dichlorobenzene       | 50         | 49.0     | 98    | 70-130 |
| 75-71-8  | Dichlorodifluoromethane   | 50         | 49.6     | 99    | 70-130 |
| 75-34-3  | 1,1-Dichloroethane        | 50         | 53.1     | 106   | 70-130 |
| 107-06-2 | 1,2-Dichloroethane        | 50         | 46.5     | 93    | 70-130 |
| 75-35-4  | 1,1-Dichloroethene        | 50         | 52.5     | 105   | 70-130 |
| 156-59-2 | cis-1,2-Dichloroethene    | 50         | 53.5     | 107   | 70-130 |
| 156-60-5 | trans-1,2-Dichloroethene  | 50         | 53.9     | 108   | 70-130 |
| 78-87-5  | 1,2-Dichloropropane       | 50         | 46.7     | 93    | 70-130 |
| 142-28-9 | 1,3-Dichloropropane       | 50         | 52.0     | 104   | 70-130 |
| 594-20-7 | 2,2-Dichloropropane       | 50         | 57.2     | 114   | 70-130 |
| 563-58-6 | 1,1-Dichloropropene       | 50         | 50.1     | 100   | 70-130 |

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2359-BS | K72438.D | 1  | 07/26/13 | GK | n/a       | n/a        | MSK2359          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-1, MC22754-2

| CAS No.    | Compound                    | Spike ug/l | BSP ug/l | BSP % | Limits |
|------------|-----------------------------|------------|----------|-------|--------|
| 10061-01-5 | cis-1,3-Dichloropropene     | 50         | 46.3     | 93    | 70-130 |
| 10061-02-6 | trans-1,3-Dichloropropene   | 50         | 50.2     | 100   | 70-130 |
| 123-91-1   | 1,4-Dioxane                 | 250        | 265      | 106   | 70-130 |
| 97-63-2    | Ethyl methacrylate          | 50         | 48.9     | 98    | 77-137 |
| 100-41-4   | Ethylbenzene                | 50         | 50.2     | 100   | 70-130 |
| 87-68-3    | Hexachlorobutadiene         | 50         | 51.3     | 103   | 70-130 |
| 591-78-6   | 2-Hexanone                  | 50         | 51.4     | 103   | 70-130 |
| 98-82-8    | Isopropylbenzene            | 50         | 52.4     | 105   | 70-130 |
| 99-87-6    | p-Isopropyltoluene          | 50         | 52.1     | 104   | 70-130 |
| 1634-04-4  | Methyl Tert Butyl Ether     | 50         | 49.3     | 99    | 70-130 |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | 50         | 44.6     | 89    | 70-130 |
| 74-95-3    | Methylene bromide           | 50         | 48.6     | 97    | 70-130 |
| 75-09-2    | Methylene chloride          | 50         | 53.2     | 106   | 70-130 |
| 91-20-3    | Naphthalene                 | 50         | 59.3     | 119   | 70-130 |
| 103-65-1   | n-Propylbenzene             | 50         | 52.0     | 104   | 70-130 |
| 100-42-5   | Styrene                     | 50         | 52.7     | 105   | 70-130 |
| 630-20-6   | 1,1,1,2-Tetrachloroethane   | 50         | 52.8     | 106   | 70-130 |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | 50         | 51.2     | 102   | 70-130 |
| 127-18-4   | Tetrachloroethene           | 50         | 56.8     | 114   | 70-130 |
| 108-88-3   | Toluene                     | 50         | 49.1     | 98    | 70-130 |
| 87-61-6    | 1,2,3-Trichlorobenzene      | 50         | 63.8     | 128   | 70-130 |
| 120-82-1   | 1,2,4-Trichlorobenzene      | 50         | 56.0     | 112   | 70-130 |
| 71-55-6    | 1,1,1-Trichloroethane       | 50         | 51.2     | 102   | 70-130 |
| 79-00-5    | 1,1,2-Trichloroethane       | 50         | 48.5     | 97    | 70-130 |
| 79-01-6    | Trichloroethene             | 50         | 48.6     | 97    | 70-130 |
| 75-69-4    | Trichlorofluoromethane      | 50         | 50.0     | 100   | 70-130 |
| 96-18-4    | 1,2,3-Trichloropropane      | 50         | 45.6     | 91    | 70-130 |
| 95-63-6    | 1,2,4-Trimethylbenzene      | 50         | 48.6     | 97    | 70-130 |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 50         | 47.6     | 95    | 70-130 |
| 108-05-4   | Vinyl Acetate               | 50         | 35.3     | 71    | 70-130 |
| 75-01-4    | Vinyl chloride              | 50         | 41.3     | 83    | 70-130 |
|            | m,p-Xylene                  | 100        | 104      | 104   | 70-130 |
| 95-47-6    | o-Xylene                    | 50         | 53.1     | 106   | 70-130 |
| 1330-20-7  | Xylene (total)              | 150        | 157      | 105   | 70-130 |

\* = Outside of Control Limits.



# Blank Spike Summary

Job Number: MC22754  
Account: SHELLWIC Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2359-BS | K72438.D | 1  | 07/26/13 | GK | n/a       | n/a        | MSK2359          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-1, MC22754-2

| CAS No.   | Surrogate Recoveries | BSP  | Limits  |
|-----------|----------------------|------|---------|
| 1868-53-7 | Dibromofluoromethane | 103% | 70-130% |
| 2037-26-5 | Toluene-D8           | 99%  | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 97%  | 70-130% |

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

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2360-BS | K72453.D | 1  | 07/26/13 | GK | n/a       | n/a        | MSK2360          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-1

| CAS No.   | Compound               | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | Limits |
|-----------|------------------------|---------------|-------------|----------|--------|
| 100-41-4  | Ethylbenzene           | 50            | 51.8        | 104      | 70-130 |
| 95-63-6   | 1,2,4-Trimethylbenzene | 50            | 47.5        | 95       | 70-130 |
|           | m,p-Xylene             | 100           | 108         | 108      | 70-130 |
| 1330-20-7 | Xylene (total)         | 150           | 163         | 109      | 70-130 |

| CAS No.   | Surrogate Recoveries | BSP | Limits  |
|-----------|----------------------|-----|---------|
| 1868-53-7 | Dibromofluoromethane | 98% | 70-130% |
| 2037-26-5 | Toluene-D8           | 98% | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 92% | 70-130% |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|-----|-----------|------------|------------------|
| MC22692-3MS  | V21181.D | 1  | 07/24/13 | AMY | n/a       | n/a        | MSV821           |
| MC22692-3MSD | V21182.D | 1  | 07/24/13 | AMY | n/a       | n/a        | MSV821           |
| MC22692-3    | V21165.D | 1  | 07/24/13 | AMY | n/a       | n/a        | MSV821           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-3

| CAS No.  | Compound                  | MC22692-3<br>ug/l | Spike<br>Q<br>ug/l | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD    | Limits<br>Rec/RPD |
|----------|---------------------------|-------------------|--------------------|------------|---------|---------------|-------------|----------|--------|-------------------|
| 67-64-1  | Acetone                   | ND                | 50                 | 30.1       | 60* a   | 50            | 27.2        | 54* a    | 10     | 70-130/30         |
| 107-02-8 | Acrolein                  | ND                | 250                | 174        | 70      | 250           | 173         | 69* a    | 1      | 70-130/30         |
| 107-13-1 | Acrylonitrile             | ND                | 50                 | 42.4       | 85      | 50            | 41.7        | 83       | 2      | 70-130/30         |
| 71-43-2  | Benzene                   | 187               | 50                 | 209        | 44* b   | 50            | 204         | 34* b    | 2      | 70-130/30         |
| 108-86-1 | Bromobenzene              | ND                | 50                 | 56.0       | 112     | 50            | 56.4        | 113      | 1      | 70-130/30         |
| 74-97-5  | Bromochloromethane        | ND                | 50                 | 46.3       | 93      | 50            | 45.6        | 91       | 2      | 70-130/30         |
| 75-27-4  | Bromodichloromethane      | ND                | 50                 | 53.3       | 107     | 50            | 52.8        | 106      | 1      | 70-130/30         |
| 75-25-2  | Bromoform                 | ND                | 50                 | 59.3       | 119     | 50            | 59.5        | 119      | 0      | 70-130/30         |
| 74-83-9  | Bromomethane              | ND                | 50                 | 53.7       | 107     | 50            | 52.9        | 106      | 2      | 70-130/30         |
| 78-93-3  | 2-Butanone (MEK)          | ND                | 50                 | 29.4       | 59* a   | 50            | 29.9        | 60* a    | 2      | 70-130/30         |
| 104-51-8 | n-Butylbenzene            | 14.6              | 50                 | 64.4       | 100     | 50            | 64.3        | 99       | 0      | 70-130/30         |
| 135-98-8 | sec-Butylbenzene          | 22.1              | 50                 | 76.5       | 109     | 50            | 76.2        | 108      | 0      | 70-130/30         |
| 98-06-6  | tert-Butylbenzene         | 6.0               | 50                 | 61.9       | 112     | 50            | 61.9        | 112      | 0      | 70-130/30         |
| 75-15-0  | Carbon disulfide          | ND                | 50                 | 60.7       | 121     | 50            | 59.5        | 119      | 2      | 70-130/30         |
| 56-23-5  | Carbon tetrachloride      | ND                | 50                 | 60.5       | 121     | 50            | 59.6        | 119      | 1      | 70-130/30         |
| 108-90-7 | Chlorobenzene             | 0.59              | J 50               | 60.7       | 120     | 50            | 60.6        | 120      | 0      | 70-130/30         |
| 75-00-3  | Chloroethane              | ND                | 50                 | 46.0       | 92      | 50            | 45.1        | 90       | 2      | 70-130/30         |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND                | 50                 | ND         | 0* a    | 50            | 8.6         | 17* a    | 200* c | 70-130/30         |
| 67-66-3  | Chloroform                | ND                | 50                 | 44.4       | 89      | 50            | 43.9        | 88       | 1      | 70-130/30         |
| 74-87-3  | Chloromethane             | ND                | 50                 | 43.5       | 87      | 50            | 42.0        | 84       | 4      | 70-130/30         |
| 95-49-8  | o-Chlorotoluene           | ND                | 50                 | 52.6       | 105     | 50            | 52.7        | 105      | 0      | 70-130/30         |
| 106-43-4 | p-Chlorotoluene           | ND                | 50                 | 54.2       | 108     | 50            | 54.3        | 109      | 0      | 70-130/30         |
| 124-48-1 | Dibromochloromethane      | ND                | 50                 | 58.2       | 116     | 50            | 58.1        | 116      | 0      | 70-130/30         |
| 95-50-1  | 1,2-Dichlorobenzene       | ND                | 50                 | 56.9       | 114     | 50            | 57.3        | 115      | 1      | 70-130/30         |
| 541-73-1 | 1,3-Dichlorobenzene       | ND                | 50                 | 59.1       | 118     | 50            | 58.9        | 118      | 0      | 70-130/30         |
| 106-46-7 | 1,4-Dichlorobenzene       | ND                | 50                 | 54.1       | 108     | 50            | 53.9        | 108      | 0      | 70-130/30         |
| 75-71-8  | Dichlorodifluoromethane   | ND                | 50                 | 60.8       | 122     | 50            | 57.7        | 115      | 5      | 70-130/30         |
| 75-34-3  | 1,1-Dichloroethane        | ND                | 50                 | 40.7       | 81      | 50            | 40.1        | 80       | 1      | 70-130/30         |
| 107-06-2 | 1,2-Dichloroethane        | ND                | 50                 | 45.5       | 91      | 50            | 44.3        | 89       | 3      | 70-130/30         |
| 75-35-4  | 1,1-Dichloroethene        | ND                | 50                 | 49.3       | 99      | 50            | 48.3        | 97       | 2      | 70-130/30         |
| 156-59-2 | cis-1,2-Dichloroethene    | ND                | 50                 | 41.8       | 84      | 50            | 41.3        | 83       | 1      | 70-130/30         |
| 156-60-5 | trans-1,2-Dichloroethene  | ND                | 50                 | 43.0       | 86      | 50            | 42.6        | 85       | 1      | 70-130/30         |
| 78-87-5  | 1,2-Dichloropropane       | ND                | 50                 | 47.4       | 95      | 50            | 46.3        | 93       | 2      | 70-130/30         |
| 142-28-9 | 1,3-Dichloropropane       | ND                | 50                 | 47.4       | 95      | 50            | 46.8        | 94       | 1      | 70-130/30         |
| 594-20-7 | 2,2-Dichloropropane       | ND                | 50                 | 55.9       | 112     | 50            | 55.3        | 111      | 1      | 70-130/30         |
| 563-58-6 | 1,1-Dichloropropene       | ND                | 50                 | 53.9       | 108     | 50            | 52.7        | 105      | 2      | 70-130/30         |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|-----|-----------|------------|------------------|
| MC22692-3MS  | V21181.D | 1  | 07/24/13 | AMY | n/a       | n/a        | MSV821           |
| MC22692-3MSD | V21182.D | 1  | 07/24/13 | AMY | n/a       | n/a        | MSV821           |
| MC22692-3    | V21165.D | 1  | 07/24/13 | AMY | n/a       | n/a        | MSV821           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-3

| CAS No.    | Compound                    | MC22692-3<br>ug/l | Spike<br>Q<br>ug/l | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|------------|-----------------------------|-------------------|--------------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 10061-01-5 | cis-1,3-Dichloropropene     | ND                | 50                 | 46.1       | 92      | 50            | 45.7        | 91       | 1   | 70-130/30         |
| 10061-02-6 | trans-1,3-Dichloropropene   | ND                | 50                 | 50.6       | 101     | 50            | 50.3        | 101      | 1   | 70-130/30         |
| 123-91-1   | 1,4-Dioxane                 | ND                | 250                | 166        | 66* a   | 250           | 154         | 62* a    | 8   | 70-130/30         |
| 97-63-2    | Ethyl methacrylate          | ND                | 50                 | 53.8       | 108     | 50            | 53.3        | 107      | 1   | 72-139/30         |
| 100-41-4   | Ethylbenzene                | 2.2               | 50                 | 59.2       | 114     | 50            | 58.6        | 113      | 1   | 70-130/30         |
| 87-68-3    | Hexachlorobutadiene         | ND                | 50                 | 77.4       | 155* a  | 50            | 79.3        | 159* a   | 2   | 70-130/30         |
| 591-78-6   | 2-Hexanone                  | ND                | 50                 | 43.6       | 87      | 50            | 43.7        | 87       | 0   | 70-130/30         |
| 98-82-8    | Isopropylbenzene            | 191               | 50                 | 213        | 44* b   | 50            | 212         | 42* b    | 0   | 70-130/30         |
| 99-87-6    | p-Isopropyltoluene          | ND                | 50                 | 59.6       | 119     | 50            | 59.2        | 118      | 1   | 70-130/30         |
| 1634-04-4  | Methyl Tert Butyl Ether     | ND                | 50                 | 87.0       | 174* a  | 50            | 86.6        | 173* a   | 0   | 70-130/30         |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | ND                | 50                 | 36.6       | 73      | 50            | 36.1        | 72       | 1   | 70-130/30         |
| 74-95-3    | Methylene bromide           | ND                | 50                 | 47.0       | 94      | 50            | 46.1        | 92       | 2   | 70-130/30         |
| 75-09-2    | Methylene chloride          | ND                | 50                 | 39.9       | 80      | 50            | 39.4        | 79       | 1   | 70-130/30         |
| 91-20-3    | Naphthalene                 | ND                | 50                 | 49.4       | 99      | 50            | 55.2        | 110      | 11  | 70-130/30         |
| 103-65-1   | n-Propylbenzene             | 229               | 50                 | 240        | 22* b   | 50            | 239         | 20* b    | 0   | 70-130/30         |
| 100-42-5   | Styrene                     | ND                | 50                 | 56.5       | 113     | 50            | 56.1        | 112      | 1   | 70-130/30         |
| 630-20-6   | 1,1,1,2-Tetrachloroethane   | ND                | 50                 | 65.2       | 130     | 50            | 65.6        | 131* a   | 1   | 70-130/30         |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | ND                | 50                 | 47.3       | 95      | 50            | 46.9        | 94       | 1   | 70-130/30         |
| 127-18-4   | Tetrachloroethene           | ND                | 50                 | 69.4       | 139* a  | 50            | 68.5        | 137* a   | 1   | 70-130/30         |
| 108-88-3   | Toluene                     | 1.8               | 50                 | 52.1       | 101     | 50            | 50.9        | 98       | 2   | 70-130/30         |
| 87-61-6    | 1,2,3-Trichlorobenzene      | ND                | 50                 | 53.4       | 107     | 50            | 58.5        | 117      | 9   | 70-130/30         |
| 120-82-1   | 1,2,4-Trichlorobenzene      | ND                | 50                 | 56.7       | 113     | 50            | 59.2        | 118      | 4   | 70-130/30         |
| 71-55-6    | 1,1,1-Trichloroethane       | ND                | 50                 | 50.2       | 100     | 50            | 49.6        | 99       | 1   | 70-130/30         |
| 79-00-5    | 1,1,2-Trichloroethane       | ND                | 50                 | 48.8       | 98      | 50            | 47.9        | 96       | 2   | 70-130/30         |
| 79-01-6    | Trichloroethene             | ND                | 50                 | 54.1       | 108     | 50            | 52.6        | 105      | 3   | 70-130/30         |
| 75-69-4    | Trichlorofluoromethane      | ND                | 50                 | 49.4       | 99      | 50            | 48.4        | 97       | 2   | 70-130/30         |
| 96-18-4    | 1,2,3-Trichloropropane      | ND                | 50                 | 36.1       | 72      | 50            | 42.9        | 86       | 17  | 70-130/30         |
| 95-63-6    | 1,2,4-Trimethylbenzene      | ND                | 50                 | 52.4       | 105     | 50            | 52.4        | 105      | 0   | 70-130/30         |
| 108-67-8   | 1,3,5-Trimethylbenzene      | ND                | 50                 | 52.6       | 105     | 50            | 52.6        | 105      | 0   | 70-130/30         |
| 108-05-4   | Vinyl Acetate               | ND                | 50                 | 50.8       | 102     | 50            | 50.1        | 100      | 1   | 70-130/30         |
| 75-01-4    | Vinyl chloride              | ND                | 50                 | 36.8       | 74      | 50            | 35.8        | 72       | 3   | 70-130/30         |
|            | m,p-Xylene                  | ND                | 100                | 122        | 122     | 100           | 120         | 120      | 2   | 70-130/30         |
| 95-47-6    | o-Xylene                    | 1.0               | 50                 | 62.9       | 124     | 50            | 62.9        | 124      | 0   | 70-130/30         |
| 1330-20-7  | Xylene (total)              | 1.5               | 150                | 185        | 122     | 150           | 183         | 121      | 1   | 70-130/30         |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|-----|-----------|------------|------------------|
| MC22692-3MS  | V21181.D | 1  | 07/24/13 | AMY | n/a       | n/a        | MSV821           |
| MC22692-3MSD | V21182.D | 1  | 07/24/13 | AMY | n/a       | n/a        | MSV821           |
| MC22692-3    | V21165.D | 1  | 07/24/13 | AMY | n/a       | n/a        | MSV821           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-3

| CAS No.   | Surrogate Recoveries | MS   | MSD  | MC22692-3 | Limits  |
|-----------|----------------------|------|------|-----------|---------|
| 1868-53-7 | Dibromofluoromethane | 90%  | 90%  | 94%       | 70-130% |
| 2037-26-5 | Toluene-D8           | 100% | 100% | 105%      | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 95%  | 95%  | 96%       | 70-130% |

- (a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
- (b) Outside control limits due to high level in sample relative to spike amount.
- (c) High RPD due to possible matrix interference and/or sample non-homogeneity.

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|----|-----------|------------|------------------|
| MC22730-2MS  | K72449.D | 5  | 07/26/13 | GK | n/a       | n/a        | MSK2359          |
| MC22730-2MSD | K72450.D | 5  | 07/26/13 | GK | n/a       | n/a        | MSK2359          |
| MC22730-2    | K72443.D | 1  | 07/26/13 | GK | n/a       | n/a        | MSK2359          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-1, MC22754-2

| CAS No.  | Compound                  | MC22730-2 |   | MS ug/l | MS % | Spike ug/l | MSD ug/l | MSD % | RPD   | Limits Rec/RPD |           |
|----------|---------------------------|-----------|---|---------|------|------------|----------|-------|-------|----------------|-----------|
|          |                           | ug/l      | Q |         |      |            |          |       |       |                |           |
| 67-64-1  | Acetone                   | ND        |   | 250     | 185  | 74         | 250      | 186   | 74    | 1              | 70-130/30 |
| 107-02-8 | Acrolein                  | ND        |   | 1250    | 835  | 67* a      | 1250     | 930   | 74    | 11             | 70-130/30 |
| 107-13-1 | Acrylonitrile             | ND        |   | 250     | 254  | 102        | 250      | 262   | 105   | 3              | 70-130/30 |
| 71-43-2  | Benzene                   | ND        |   | 250     | 259  | 104        | 250      | 253   | 101   | 2              | 70-130/30 |
| 108-86-1 | Bromobenzene              | ND        |   | 250     | 253  | 101        | 250      | 250   | 100   | 1              | 70-130/30 |
| 74-97-5  | Bromochloromethane        | ND        |   | 250     | 253  | 101        | 250      | 252   | 101   | 0              | 70-130/30 |
| 75-27-4  | Bromodichloromethane      | ND        |   | 250     | 236  | 94         | 250      | 235   | 94    | 0              | 70-130/30 |
| 75-25-2  | Bromoform                 | ND        |   | 250     | 268  | 107        | 250      | 274   | 110   | 2              | 70-130/30 |
| 74-83-9  | Bromomethane              | ND        |   | 250     | 252  | 101        | 250      | 238   | 95    | 6              | 70-130/30 |
| 78-93-3  | 2-Butanone (MEK)          | ND        |   | 250     | 243  | 97         | 250      | 251   | 100   | 3              | 70-130/30 |
| 104-51-8 | n-Butylbenzene            | ND        |   | 250     | 245  | 98         | 250      | 240   | 96    | 2              | 70-130/30 |
| 135-98-8 | sec-Butylbenzene          | ND        |   | 250     | 247  | 99         | 250      | 243   | 97    | 2              | 70-130/30 |
| 98-06-6  | tert-Butylbenzene         | ND        |   | 250     | 240  | 96         | 250      | 45.7  | 18* a | 136* b         | 70-130/30 |
| 75-15-0  | Carbon disulfide          | ND        |   | 250     | 207  | 83         | 250      | 195   | 78    | 6              | 70-130/30 |
| 56-23-5  | Carbon tetrachloride      | ND        |   | 250     | 237  | 95         | 250      | 227   | 91    | 4              | 70-130/30 |
| 108-90-7 | Chlorobenzene             | ND        |   | 250     | 287  | 115        | 250      | 283   | 113   | 1              | 70-130/30 |
| 75-00-3  | Chloroethane              | ND        |   | 250     | 238  | 95         | 250      | 230   | 92    | 3              | 70-130/30 |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND        |   | 250     | 5.9  | 2* a       | 250      | 5.6   | 2* a  | 5              | 70-130/30 |
| 67-66-3  | Chloroform                | 0.86      | J | 250     | 254  | 101        | 250      | 250   | 100   | 2              | 70-130/30 |
| 74-87-3  | Chloromethane             | ND        |   | 250     | 204  | 82         | 250      | 193   | 77    | 6              | 70-130/30 |
| 95-49-8  | o-Chlorotoluene           | ND        |   | 250     | 232  | 93         | 250      | 228   | 91    | 2              | 70-130/30 |
| 106-43-4 | p-Chlorotoluene           | ND        |   | 250     | 236  | 94         | 250      | 232   | 93    | 2              | 70-130/30 |
| 124-48-1 | Dibromochloromethane      | ND        |   | 250     | 270  | 108        | 250      | 272   | 109   | 1              | 70-130/30 |
| 95-50-1  | 1,2-Dichlorobenzene       | ND        |   | 250     | 255  | 102        | 250      | 253   | 101   | 1              | 70-130/30 |
| 541-73-1 | 1,3-Dichlorobenzene       | ND        |   | 250     | 250  | 100        | 250      | 245   | 98    | 2              | 70-130/30 |
| 106-46-7 | 1,4-Dichlorobenzene       | ND        |   | 250     | 245  | 98         | 250      | 245   | 98    | 0              | 70-130/30 |
| 75-71-8  | Dichlorodifluoromethane   | ND        |   | 250     | 167  | 67* a      | 250      | 152   | 61* a | 9              | 70-130/30 |
| 75-34-3  | 1,1-Dichloroethane        | ND        |   | 250     | 245  | 98         | 250      | 236   | 94    | 4              | 70-130/30 |
| 107-06-2 | 1,2-Dichloroethane        | ND        |   | 250     | 227  | 91         | 250      | 227   | 91    | 0              | 70-130/30 |
| 75-35-4  | 1,1-Dichloroethene        | ND        |   | 250     | 233  | 93         | 250      | 225   | 90    | 3              | 70-130/30 |
| 156-59-2 | cis-1,2-Dichloroethene    | ND        |   | 250     | 263  | 105        | 250      | 254   | 102   | 3              | 70-130/30 |
| 156-60-5 | trans-1,2-Dichloroethene  | ND        |   | 250     | 263  | 105        | 250      | 253   | 101   | 4              | 70-130/30 |
| 78-87-5  | 1,2-Dichloropropane       | ND        |   | 250     | 232  | 93         | 250      | 228   | 91    | 2              | 70-130/30 |
| 142-28-9 | 1,3-Dichloropropane       | ND        |   | 250     | 270  | 108        | 250      | 275   | 110   | 2              | 70-130/30 |
| 594-20-7 | 2,2-Dichloropropane       | ND        |   | 250     | 261  | 104        | 250      | 248   | 99    | 5              | 70-130/30 |
| 563-58-6 | 1,1-Dichloropropene       | ND        |   | 250     | 245  | 98         | 250      | 238   | 95    | 3              | 70-130/30 |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|----|-----------|------------|------------------|
| MC22730-2MS  | K72449.D | 5  | 07/26/13 | GK | n/a       | n/a        | MSK2359          |
| MC22730-2MSD | K72450.D | 5  | 07/26/13 | GK | n/a       | n/a        | MSK2359          |
| MC22730-2    | K72443.D | 1  | 07/26/13 | GK | n/a       | n/a        | MSK2359          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-1, MC22754-2

| CAS No.    | Compound                    | MC22730-2<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|------------|-----------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 10061-01-5 | cis-1,3-Dichloropropene     | ND                | 250        | 223        | 89      | 250           | 220         | 88       | 1   | 70-130/30         |
| 10061-02-6 | trans-1,3-Dichloropropene   | ND                | 250        | 225        | 90      | 250           | 226         | 90       | 0   | 70-130/30         |
| 123-91-1   | 1,4-Dioxane                 | ND                | 1250       | 1290       | 103     | 1250          | 1400        | 112      | 8   | 70-130/30         |
| 97-63-2    | Ethyl methacrylate          | ND                | 250        | 259        | 104     | 250           | 265         | 106      | 2   | 72-139/30         |
| 100-41-4   | Ethylbenzene                | ND                | 250        | 265        | 106     | 250           | 259         | 104      | 2   | 70-130/30         |
| 87-68-3    | Hexachlorobutadiene         | ND                | 250        | 245        | 98      | 250           | 243         | 97       | 1   | 70-130/30         |
| 591-78-6   | 2-Hexanone                  | ND                | 250        | 236        | 94      | 250           | 242         | 97       | 3   | 70-130/30         |
| 98-82-8    | Isopropylbenzene            | ND                | 250        | 245        | 98      | 250           | 239         | 96       | 2   | 70-130/30         |
| 99-87-6    | p-Isopropyltoluene          | ND                | 250        | 247        | 99      | 250           | 242         | 97       | 2   | 70-130/30         |
| 1634-04-4  | Methyl Tert Butyl Ether     | 4.0               | 250        | 258        | 102     | 250           | 254         | 100      | 2   | 70-130/30         |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | ND                | 250        | 236        | 94      | 250           | 241         | 96       | 2   | 70-130/30         |
| 74-95-3    | Methylene bromide           | ND                | 250        | 247        | 99      | 250           | 244         | 98       | 1   | 70-130/30         |
| 75-09-2    | Methylene chloride          | ND                | 250        | 254        | 102     | 250           | 246         | 98       | 3   | 70-130/30         |
| 91-20-3    | Naphthalene                 | ND                | 250        | 322        | 129     | 250           | 331         | 132* a   | 3   | 70-130/30         |
| 103-65-1   | n-Propylbenzene             | ND                | 250        | 243        | 97      | 250           | 235         | 94       | 3   | 70-130/30         |
| 100-42-5   | Styrene                     | ND                | 250        | 284        | 114     | 250           | 284         | 114      | 0   | 70-130/30         |
| 630-20-6   | 1,1,1,2-Tetrachloroethane   | ND                | 250        | 276        | 110     | 250           | 274         | 110      | 1   | 70-130/30         |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | ND                | 250        | 257        | 103     | 250           | 264         | 106      | 3   | 70-130/30         |
| 127-18-4   | Tetrachloroethene           | ND                | 250        | 299        | 120     | 250           | 294         | 118      | 2   | 70-130/30         |
| 108-88-3   | Toluene                     | ND                | 250        | 251        | 100     | 250           | 243         | 97       | 3   | 70-130/30         |
| 87-61-6    | 1,2,3-Trichlorobenzene      | ND                | 250        | 319        | 128     | 250           | 340         | 136* a   | 6   | 70-130/30         |
| 120-82-1   | 1,2,4-Trichlorobenzene      | ND                | 250        | 280        | 112     | 250           | 285         | 114      | 2   | 70-130/30         |
| 71-55-6    | 1,1,1-Trichloroethane       | ND                | 250        | 239        | 96      | 250           | 233         | 93       | 3   | 70-130/30         |
| 79-00-5    | 1,1,2-Trichloroethane       | ND                | 250        | 249        | 100     | 250           | 252         | 101      | 1   | 70-130/30         |
| 79-01-6    | Trichloroethene             | ND                | 250        | 245        | 98      | 250           | 239         | 96       | 2   | 70-130/30         |
| 75-69-4    | Trichlorofluoromethane      | ND                | 250        | 234        | 94      | 250           | 225         | 90       | 4   | 70-130/30         |
| 96-18-4    | 1,2,3-Trichloropropane      | ND                | 250        | 206        | 82      | 250           | 216         | 86       | 5   | 70-130/30         |
| 95-63-6    | 1,2,4-Trimethylbenzene      | ND                | 250        | 249        | 100     | 250           | 242         | 97       | 3   | 70-130/30         |
| 108-67-8   | 1,3,5-Trimethylbenzene      | ND                | 250        | 243        | 97      | 250           | 236         | 94       | 3   | 70-130/30         |
| 108-05-4   | Vinyl Acetate               | ND                | 250        | 234        | 94      | 250           | 239         | 96       | 2   | 70-130/30         |
| 75-01-4    | Vinyl chloride              | ND                | 250        | 216        | 86      | 250           | 206         | 82       | 5   | 70-130/30         |
|            | m,p-Xylene                  | ND                | 500        | 537        | 107     | 500           | 526         | 105      | 2   | 70-130/30         |
| 95-47-6    | o-Xylene                    | ND                | 250        | 261        | 104     | 250           | 257         | 103      | 2   | 70-130/30         |
| 1330-20-7  | Xylene (total)              | ND                | 750        | 798        | 106     | 750           | 783         | 104      | 2   | 70-130/30         |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|----|-----------|------------|------------------|
| MC22730-2MS  | K72449.D | 5  | 07/26/13 | GK | n/a       | n/a        | MSK2359          |
| MC22730-2MSD | K72450.D | 5  | 07/26/13 | GK | n/a       | n/a        | MSK2359          |
| MC22730-2    | K72443.D | 1  | 07/26/13 | GK | n/a       | n/a        | MSK2359          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-1, MC22754-2

| CAS No.   | Surrogate Recoveries | MS  | MSD | MC22730-2 | Limits  |
|-----------|----------------------|-----|-----|-----------|---------|
| 1868-53-7 | Dibromofluoromethane | 96% | 97% | 106%      | 70-130% |
| 2037-26-5 | Toluene-D8           | 98% | 99% | 97%       | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 94% | 92% | 98%       | 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: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|----|-----------|------------|------------------|
| MC22966-2MS  | K72458.D | 5  | 07/26/13 | GK | n/a       | n/a        | MSK2360          |
| MC22966-2MSD | K72459.D | 5  | 07/26/13 | GK | n/a       | n/a        | MSK2360          |
| MC22966-2    | K72457.D | 1  | 07/26/13 | GK | n/a       | n/a        | MSK2360          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22754-1

| CAS No.   | Compound               | MC22966-2<br>ug/l | Spike<br>Q<br>ug/l | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|-----------|------------------------|-------------------|--------------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 100-41-4  | Ethylbenzene           | ND                | 250                | 267        | 107     | 250           | 257         | 103      | 4   | 70-130/30         |
| 95-63-6   | 1,2,4-Trimethylbenzene | ND                | 250                | 245        | 98      | 250           | 238         | 95       | 3   | 70-130/30         |
|           | m,p-Xylene             | ND                | 500                | 548        | 110     | 500           | 531         | 106      | 3   | 70-130/30         |
| 1330-20-7 | Xylene (total)         | ND                | 750                | 832        | 111     | 750           | 805         | 107      | 3   | 70-130/30         |

| CAS No.   | Surrogate Recoveries | MS   | MSD | MC22966-2 | Limits  |
|-----------|----------------------|------|-----|-----------|---------|
| 1868-53-7 | Dibromofluoromethane | 99%  | 99% | 106%      | 70-130% |
| 2037-26-5 | Toluene-D8           | 100% | 99% | 96%       | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 94%  | 94% | 94%       | 70-130% |

\* = Outside of Control Limits.

# Volatile Internal Standard Area Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSK2359-CC2349 | Injection Date: | 07/26/13    |
| Lab File ID:   | K72437.D       | Injection Time: | 08:17       |
| Instrument ID: | GCMSK          | Method:         | SW846 8260B |

|                          | IS 1   |      | IS 2   |       | IS 3   |       | IS 4   |       | IS 5   |      |
|--------------------------|--------|------|--------|-------|--------|-------|--------|-------|--------|------|
|                          | AREA   | RT   | AREA   | RT    | AREA   | RT    | AREA   | RT    | AREA   | RT   |
| Check Std                | 322098 | 8.84 | 482285 | 9.69  | 215685 | 12.94 | 232121 | 15.51 | 65586  | 6.42 |
| Upper Limit <sup>a</sup> | 644196 | 9.34 | 964570 | 10.19 | 431370 | 13.44 | 464242 | 16.01 | 131172 | 6.92 |
| Lower Limit <sup>b</sup> | 161049 | 8.34 | 241143 | 9.19  | 107843 | 12.44 | 116061 | 15.01 | 32793  | 5.92 |

| Lab          | IS 1   |      | IS 2   |      | IS 3   |       | IS 4   |       | IS 5  |      |
|--------------|--------|------|--------|------|--------|-------|--------|-------|-------|------|
| Sample ID    | AREA   | RT   | AREA   | RT   | AREA   | RT    | AREA   | RT    | AREA  | RT   |
| MSK2359-BS   | 332836 | 8.84 | 503959 | 9.69 | 223248 | 12.94 | 240772 | 15.51 | 67657 | 6.42 |
| MSK2359-MB   | 332692 | 8.84 | 508097 | 9.69 | 210173 | 12.95 | 225928 | 15.51 | 68559 | 6.42 |
| ZZZZZZ       | 340133 | 8.84 | 524216 | 9.69 | 223614 | 12.95 | 239769 | 15.51 | 68941 | 6.42 |
| MC22730-2    | 349212 | 8.84 | 530351 | 9.69 | 222369 | 12.95 | 238662 | 15.51 | 70028 | 6.42 |
| ZZZZZZ       | 349157 | 8.84 | 537256 | 9.69 | 226961 | 12.95 | 244328 | 15.51 | 72394 | 6.42 |
| ZZZZZZ       | 340063 | 8.84 | 517548 | 9.69 | 216190 | 12.95 | 238468 | 15.51 | 73101 | 6.42 |
| ZZZZZZ       | 342406 | 8.84 | 527710 | 9.69 | 219111 | 12.95 | 243346 | 15.51 | 75388 | 6.42 |
| MC22754-1    | 338044 | 8.85 | 517971 | 9.69 | 235001 | 12.95 | 264912 | 15.51 | 77627 | 6.42 |
| MC22754-2    | 384841 | 8.84 | 569327 | 9.69 | 243594 | 12.95 | 278122 | 15.51 | 84419 | 6.43 |
| MC22730-2MS  | 387291 | 8.84 | 562510 | 9.69 | 240820 | 12.95 | 270405 | 15.50 | 80148 | 6.42 |
| MC22730-2MSD | 394556 | 8.84 | 573317 | 9.69 | 243786 | 12.95 | 275209 | 15.51 | 85559 | 6.42 |

- 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

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# Volatile Internal Standard Area Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSK2360-CC2349 | Injection Date: | 07/26/13    |
| Lab File ID:   | K72452.D       | Injection Time: | 15:27       |
| Instrument ID: | GCMSK          | Method:         | SW846 8260B |

|                          | IS 1   |      | IS 2    |       | IS 3   |       | IS 4   |       | IS 5   |      |
|--------------------------|--------|------|---------|-------|--------|-------|--------|-------|--------|------|
|                          | AREA   | RT   | AREA    | RT    | AREA   | RT    | AREA   | RT    | AREA   | RT   |
| Check Std                | 371662 | 8.84 | 544089  | 9.69  | 232115 | 12.94 | 263293 | 15.50 | 70738  | 6.42 |
| Upper Limit <sup>a</sup> | 743324 | 9.34 | 1088178 | 10.19 | 464230 | 13.44 | 526586 | 16.00 | 141476 | 6.92 |
| Lower Limit <sup>b</sup> | 185831 | 8.34 | 272045  | 9.19  | 116058 | 12.44 | 131647 | 15.00 | 35369  | 5.92 |

| Lab          | IS 1   |      | IS 2   |      | IS 3   |       | IS 4   |       | IS 5  |      |
|--------------|--------|------|--------|------|--------|-------|--------|-------|-------|------|
| Sample ID    | AREA   | RT   | AREA   | RT   | AREA   | RT    | AREA   | RT    | AREA  | RT   |
| MSK2360-BS   | 367916 | 8.84 | 537563 | 9.69 | 229320 | 12.95 | 261656 | 15.50 | 71035 | 6.42 |
| MSK2360-MB   | 379033 | 8.84 | 573492 | 9.69 | 231592 | 12.95 | 257791 | 15.51 | 72399 | 6.42 |
| ZZZZZZ       | 364564 | 8.84 | 553542 | 9.69 | 226122 | 12.95 | 248686 | 15.51 | 71361 | 6.42 |
| MC22966-2    | 352469 | 8.84 | 538247 | 9.69 | 218239 | 12.95 | 240296 | 15.51 | 65848 | 6.42 |
| MC22966-2MS  | 350911 | 8.84 | 515116 | 9.69 | 224033 | 12.94 | 249354 | 15.50 | 62213 | 6.42 |
| MC22966-2MSD | 353046 | 8.84 | 517023 | 9.69 | 225952 | 12.94 | 251547 | 15.50 | 64425 | 6.42 |
| MC22754-1    | 360257 | 8.84 | 541504 | 9.69 | 230929 | 12.95 | 257268 | 15.50 | 69207 | 6.43 |
| ZZZZZZ       | 365266 | 8.84 | 558119 | 9.69 | 229744 | 12.95 | 258643 | 15.50 | 67395 | 6.42 |
| ZZZZZZ       | 376724 | 8.84 | 566871 | 9.69 | 231529 | 12.95 | 258361 | 15.51 | 68707 | 6.42 |
| ZZZZZZ       | 360370 | 8.84 | 541573 | 9.69 | 225339 | 12.95 | 257263 | 15.50 | 75700 | 6.42 |
| ZZZZZZ       | 377687 | 8.84 | 574130 | 9.69 | 235310 | 12.95 | 258830 | 15.50 | 72306 | 6.42 |
| ZZZZZZ       | 370404 | 8.84 | 562885 | 9.69 | 228598 | 12.95 | 248672 | 15.51 | 76250 | 6.42 |
| ZZZZZZ       | 354302 | 8.84 | 536937 | 9.69 | 222255 | 12.95 | 242360 | 15.51 | 76027 | 6.42 |
| ZZZZZZ       | 343814 | 8.84 | 522484 | 9.69 | 216691 | 12.95 | 237476 | 15.51 | 75783 | 6.42 |
| ZZZZZZ       | 332571 | 8.84 | 505679 | 9.69 | 213004 | 12.95 | 229888 | 15.51 | 71292 | 6.42 |
| ZZZZZZ       | 346088 | 8.84 | 526310 | 9.69 | 218144 | 12.95 | 236744 | 15.50 | 73175 | 6.42 |
| ZZZZZZ       | 325726 | 8.84 | 496611 | 9.69 | 209632 | 12.95 | 226124 | 15.51 | 68680 | 6.42 |
| ZZZZZZ       | 334099 | 8.84 | 509954 | 9.69 | 210541 | 12.95 | 230513 | 15.51 | 69751 | 6.42 |
| ZZZZZZ       | 322396 | 8.84 | 497247 | 9.69 | 205044 | 12.95 | 222499 | 15.50 | 64879 | 6.42 |
| ZZZZZZ       | 324628 | 8.84 | 484900 | 9.69 | 207910 | 12.95 | 227188 | 15.50 | 65351 | 6.43 |
| ZZZZZZ       | 318165 | 8.84 | 478756 | 9.69 | 211603 | 12.95 | 231472 | 15.51 | 62861 | 6.42 |
| ZZZZZZ       | 325092 | 8.84 | 493854 | 9.69 | 208669 | 12.95 | 223922 | 15.51 | 62546 | 6.42 |
| ZZZZZZ       | 318310 | 8.84 | 480275 | 9.69 | 203501 | 12.95 | 218409 | 15.51 | 58606 | 6.42 |
| ZZZZZZ       | 314669 | 8.84 | 484522 | 9.69 | 199596 | 12.95 | 221728 | 15.51 | 70071 | 6.42 |

- 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: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |             |
|----------------|--------------|-----------------|-------------|
| Check Std:     | MSV821-CC776 | Injection Date: | 07/24/13    |
| Lab File ID:   | V21157.D     | Injection Time: | 12:14       |
| Instrument ID: | GCMSV        | Method:         | SW846 8260B |

|                          | IS 1   |      | IS 2   |      | IS 3   |       | IS 4   |       | IS 5   |      |
|--------------------------|--------|------|--------|------|--------|-------|--------|-------|--------|------|
|                          | AREA   | RT   | AREA   | RT   | AREA   | RT    | AREA   | RT    | AREA   | RT   |
| Check Std                | 266854 | 6.59 | 369435 | 7.77 | 189496 | 11.10 | 203236 | 13.31 | 60077  | 3.52 |
| Upper Limit <sup>a</sup> | 533708 | 7.09 | 738870 | 8.27 | 378992 | 11.60 | 406472 | 13.81 | 120154 | 4.02 |
| Lower Limit <sup>b</sup> | 133427 | 6.09 | 184718 | 7.27 | 94748  | 10.60 | 101618 | 12.81 | 30039  | 3.02 |

| Lab          | IS 1   |      | IS 2   |      | IS 3   |       | IS 4   |       | IS 5                |      |
|--------------|--------|------|--------|------|--------|-------|--------|-------|---------------------|------|
| Sample ID    | AREA   | RT   | AREA   | RT   | AREA   | RT    | AREA   | RT    | AREA                | RT   |
| MSV821-BS    | 272318 | 6.59 | 374510 | 7.77 | 190485 | 11.10 | 205257 | 13.31 | 64667               | 3.52 |
| MSV821-MB    | 259369 | 6.60 | 360407 | 7.77 | 186786 | 11.10 | 195103 | 13.31 | 56752               | 3.53 |
| ZZZZZZ       | 253995 | 6.60 | 356631 | 7.77 | 183542 | 11.10 | 191408 | 13.31 | 57217               | 3.53 |
| ZZZZZZ       | 248014 | 6.59 | 347981 | 7.77 | 179447 | 11.10 | 187068 | 13.31 | 56079               | 3.53 |
| MC22754-3    | 239746 | 6.60 | 337596 | 7.77 | 174885 | 11.10 | 181634 | 13.31 | 53686               | 3.53 |
| ZZZZZZ       | 240601 | 6.59 | 336878 | 7.77 | 175108 | 11.10 | 184422 | 13.31 | 60707               | 3.53 |
| MC22692-3    | 251626 | 6.59 | 337348 | 7.77 | 181190 | 11.09 | 194466 | 13.30 | 58534               | 3.52 |
| ZZZZZZ       | 266675 | 6.59 | 372892 | 7.77 | 191431 | 11.09 | 210034 | 13.30 | 57293               | 3.52 |
| ZZZZZZ       | 278589 | 6.59 | 377396 | 7.77 | 194603 | 11.09 | 209048 | 13.30 | 68305               | 3.53 |
| ZZZZZZ       | 273858 | 6.59 | 383835 | 7.77 | 194823 | 11.09 | 205664 | 13.30 | 60599               | 3.53 |
| ZZZZZZ       | 276696 | 6.59 | 384208 | 7.77 | 200854 | 11.09 | 210912 | 13.30 | 87182               | 3.53 |
| ZZZZZZ       | 287703 | 6.59 | 397104 | 7.77 | 206698 | 11.09 | 219355 | 13.30 | 140500 <sup>c</sup> | 3.55 |
| ZZZZZZ       | 291812 | 6.60 | 407754 | 7.77 | 209420 | 11.10 | 222711 | 13.30 | 120538 <sup>c</sup> | 3.55 |
| ZZZZZZ       | 293703 | 6.69 | 394523 | 7.81 | 210525 | 11.10 | 216899 | 13.30 | 146454 <sup>c</sup> | 3.57 |
| ZZZZZZ       | 291129 | 6.74 | 403084 | 7.83 | 213277 | 11.10 | 222216 | 13.30 | 92242               | 3.53 |
| MC22692-3MS  | 322586 | 6.58 | 435313 | 7.76 | 213929 | 11.09 | 239324 | 13.30 | 76589               | 3.52 |
| MC22692-3MSD | 319923 | 6.58 | 436016 | 7.76 | 211471 | 11.09 | 236373 | 13.30 | 74228               | 3.52 |

- IS 1 = Pentafluorobenzene
- IS 2 = 1,4-Difluorobenzene
- IS 3 = Chlorobenzene-D5
- IS 4 = 1,4-Dichlorobenzene-d4
- IS 5 = Tert Butyl Alcohol-D9

- (a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
- (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
- (c) Outside control limits. Target analytes not associated with this internal standard.

6.4.3  
6

# Volatile Surrogate Recovery Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 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 |
|---------------|-------------|-----|-----|----|
| MC22754-1     | K72460.D    | 103 | 99  | 95 |
| MC22754-1     | K72447.D    | 98  | 101 | 93 |
| MC22754-2     | K72448.D    | 102 | 99  | 95 |
| MC22754-3     | V21163.D    | 100 | 99  | 98 |
| MC22692-3MS   | V21181.D    | 90  | 100 | 95 |
| MC22692-3MSD  | V21182.D    | 90  | 100 | 95 |
| MC22730-2MS   | K72449.D    | 96  | 98  | 94 |
| MC22730-2MSD  | K72450.D    | 97  | 99  | 92 |
| MC22966-2MS   | K72458.D    | 99  | 100 | 94 |
| MC22966-2MSD  | K72459.D    | 99  | 99  | 94 |
| MSK2359-BS    | K72438.D    | 103 | 99  | 97 |
| MSK2359-MB    | K72441.D    | 109 | 97  | 95 |
| MSK2360-BS    | K72453.D    | 98  | 98  | 92 |
| MSK2360-MB    | K72455.D    | 105 | 95  | 94 |
| MSV821-BS     | V21158.D    | 97  | 99  | 97 |
| MSV821-MB     | V21160.D    | 97  | 99  | 97 |

**Surrogate Compounds**                      **Recovery Limits**

|                           |         |
|---------------------------|---------|
| S1 = Dibromofluoromethane | 70-130% |
| S2 = Toluene-D8           | 70-130% |
| S3 = 4-Bromofluorobenzene | 70-130% |

6.5.1  
6

**GC/MS Semi-volatiles****QC Data Summaries****7**

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

# Method Blank Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34082-MB | R32331.D | 1  | 07/23/13 | KR | 07/22/13  | OP34082    | MSR1179          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22754-1, MC22754-2

| 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  |   |

7.1.1  
7

# Method Blank Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34082-MB | R32331.D | 1  | 07/23/13 | KR | 07/22/13  | OP34082    | MSR1179          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22754-1, MC22754-2

| 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       | 48%    | 15-110% |
| 4165-62-2 | Phenol-d5            | 18%    | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 73%    | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 67%    | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 77%    | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 77%    | 30-130% |

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

7.1.1  
7



# Method Blank Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34084-MB | W14109.D | 1  | 07/23/13 | KR | 07/22/13  | OP34084    | MSW638           |

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

MC22754-1, MC22754-2

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | 0.019  | 0.10  | 0.014 | ug/l  | J |
| 208-96-8 | Acenaphthylene         | ND     | 0.10  | 0.013 | ug/l  |   |
| 120-12-7 | Anthracene             | ND     | 0.10  | 0.018 | ug/l  |   |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.050 | 0.030 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.10  | 0.017 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.050 | 0.024 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.10  | 0.038 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.10  | 0.059 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.10  | 0.073 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.10  | 0.042 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.10  | 0.033 | ug/l  |   |
| 86-73-7  | Fluorene               | ND     | 0.10  | 0.046 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.10  | 0.046 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | ND     | 0.20  | 0.14  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | ND     | 0.20  | 0.052 | ug/l  |   |
| 85-01-8  | Phenanthrene           | 0.034  | 0.050 | 0.013 | ug/l  | J |
| 129-00-0 | Pyrene                 | ND     | 0.10  | 0.036 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Limits |         |
|-----------|----------------------|--------|---------|
| 367-12-4  | 2-Fluorophenol       | 48%    | 15-110% |
| 4165-62-2 | Phenol-d5            | 18%    | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 85%    | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 76%    | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 73%    | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 81%    | 30-130% |

7.1.2  
7

# Blank Spike Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34082-BS | R32332.D | 1  | 07/23/13 | KR | 07/22/13  | OP34082    | MSR1179          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22754-1, MC22754-2

| CAS No.   | Compound                    | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | Limits |
|-----------|-----------------------------|---------------|-------------|----------|--------|
| 65-85-0   | Benzoic Acid                | 50            | 20.7        | 41       | 30-130 |
| 95-57-8   | 2-Chlorophenol              | 50            | 42.4        | 85       | 30-130 |
| 59-50-7   | 4-Chloro-3-methyl phenol    | 50            | 43.2        | 86       | 30-130 |
| 120-83-2  | 2,4-Dichlorophenol          | 50            | 42.4        | 85       | 30-130 |
| 105-67-9  | 2,4-Dimethylphenol          | 50            | 39.3        | 79       | 30-130 |
| 51-28-5   | 2,4-Dinitrophenol           | 50            | 41.1        | 82       | 30-130 |
| 534-52-1  | 4,6-Dinitro-o-cresol        | 50            | 45.1        | 90       | 30-130 |
| 95-48-7   | 2-Methylphenol              | 50            | 39.3        | 79       | 30-130 |
|           | 3&4-Methylphenol            | 100           | 72.2        | 72       | 30-130 |
| 88-75-5   | 2-Nitrophenol               | 50            | 44.1        | 88       | 30-130 |
| 100-02-7  | 4-Nitrophenol               | 50            | 18.0        | 36       | 30-130 |
| 87-86-5   | Pentachlorophenol           | 50            | 43.7        | 87       | 30-130 |
| 108-95-2  | Phenol                      | 50            | 19.6        | 39       | 30-130 |
| 95-95-4   | 2,4,5-Trichlorophenol       | 50            | 46.9        | 94       | 30-130 |
| 88-06-2   | 2,4,6-Trichlorophenol       | 50            | 45.7        | 91       | 30-130 |
| 62-53-3   | Aniline                     | 50            | 33.4        | 67       | 40-140 |
| 101-55-3  | 4-Bromophenyl phenyl ether  | 50            | 43.5        | 87       | 40-140 |
| 85-68-7   | Butyl benzyl phthalate      | 50            | 40.8        | 82       | 40-140 |
| 100-51-6  | Benzyl Alcohol              | 50            | 34.7        | 69       | 40-140 |
| 91-58-7   | 2-Chloronaphthalene         | 50            | 40.2        | 80       | 40-140 |
| 106-47-8  | 4-Chloroaniline             | 50            | 36.9        | 74       | 40-140 |
| 111-91-1  | bis(2-Chloroethoxy)methane  | 50            | 36.3        | 73       | 40-140 |
| 111-44-4  | bis(2-Chloroethyl)ether     | 50            | 36.3        | 73       | 40-140 |
| 108-60-1  | bis(2-Chloroisopropyl)ether | 50            | 37.4        | 75       | 40-140 |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | 50            | 45.7        | 91       | 40-140 |
| 122-66-7  | 1,2-Diphenylhydrazine       | 50            | 35.9        | 72       | 40-140 |
| 121-14-2  | 2,4-Dinitrotoluene          | 50            | 44.0        | 88       | 40-140 |
| 606-20-2  | 2,6-Dinitrotoluene          | 50            | 42.5        | 85       | 40-140 |
| 91-94-1   | 3,3'-Dichlorobenzidine      | 50            | 40.9        | 82       | 40-140 |
| 132-64-9  | Dibenzofuran                | 50            | 42.4        | 85       | 40-140 |
| 84-74-2   | Di-n-butyl phthalate        | 50            | 41.8        | 84       | 40-140 |
| 117-84-0  | Di-n-octyl phthalate        | 50            | 45.2        | 90       | 40-140 |
| 84-66-2   | Diethyl phthalate           | 50            | 40.0        | 80       | 40-140 |
| 131-11-3  | Dimethyl phthalate          | 50            | 30.5        | 61       | 40-140 |
| 117-81-7  | bis(2-Ethylhexyl)phthalate  | 50            | 41.0        | 82       | 40-140 |
| 118-74-1  | Hexachlorobenzene           | 50            | 42.4        | 85       | 40-140 |

\* = Outside of Control Limits.

7.2.1  
7

# Blank Spike Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34082-BS | R32332.D | 1  | 07/23/13 | KR | 07/22/13  | OP34082    | MSR1179          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22754-1, MC22754-2

| CAS No.  | Compound                   | Spike ug/l | BSP ug/l | BSP % | Limits |
|----------|----------------------------|------------|----------|-------|--------|
| 77-47-4  | Hexachlorocyclopentadiene  | 50         | 18.8     | 38* a | 40-140 |
| 67-72-1  | Hexachloroethane           | 50         | 31.9     | 64    | 40-140 |
| 78-59-1  | Isophorone                 | 50         | 36.4     | 73    | 40-140 |
| 88-74-4  | 2-Nitroaniline             | 50         | 45.9     | 92    | 40-140 |
| 99-09-2  | 3-Nitroaniline             | 50         | 41.8     | 84    | 40-140 |
| 100-01-6 | 4-Nitroaniline             | 50         | 44.5     | 89    | 40-140 |
| 98-95-3  | Nitrobenzene               | 50         | 33.7     | 67    | 40-140 |
| 62-75-9  | n-Nitrosodimethylamine     | 50         | 23.5     | 47    | 40-140 |
| 621-64-7 | N-Nitroso-di-n-propylamine | 50         | 38.3     | 77    | 40-140 |
| 86-30-6  | N-Nitrosodiphenylamine     | 50         | 40.2     | 80    | 40-140 |
| 110-86-1 | Pyridine                   | 50         | 22.4     | 45    | 40-140 |

| CAS No.   | Surrogate Recoveries | BSP | Limits  |
|-----------|----------------------|-----|---------|
| 367-12-4  | 2-Fluorophenol       | 57% | 15-110% |
| 4165-62-2 | Phenol-d5            | 21% | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 93% | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 76% | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 87% | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 80% | 30-130% |

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

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34084-BS | W14110.D | 1  | 07/23/13 | KR | 07/22/13  | OP34084    | MSW638           |

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

MC22754-1, MC22754-2

| CAS No.  | Compound               | Spike ug/l | BSP ug/l | BSP % | Limits |
|----------|------------------------|------------|----------|-------|--------|
| 83-32-9  | Acenaphthene           | 50         | 40.2     | 80    | 40-140 |
| 208-96-8 | Acenaphthylene         | 50         | 33.2     | 66    | 40-140 |
| 120-12-7 | Anthracene             | 50         | 39.3     | 79    | 40-140 |
| 56-55-3  | Benzo(a)anthracene     | 50         | 42.6     | 85    | 40-140 |
| 50-32-8  | Benzo(a)pyrene         | 50         | 42.1     | 84    | 40-140 |
| 205-99-2 | Benzo(b)fluoranthene   | 50         | 47.5     | 95    | 40-140 |
| 191-24-2 | Benzo(g,h,i)perylene   | 50         | 39.6     | 79    | 40-140 |
| 207-08-9 | Benzo(k)fluoranthene   | 50         | 43.5     | 87    | 40-140 |
| 218-01-9 | Chrysene               | 50         | 39.3     | 79    | 40-140 |
| 53-70-3  | Dibenzo(a,h)anthracene | 50         | 41.5     | 83    | 40-140 |
| 206-44-0 | Fluoranthene           | 50         | 42.4     | 85    | 40-140 |
| 86-73-7  | Fluorene               | 50         | 41.1     | 82    | 40-140 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 50         | 40.3     | 81    | 40-140 |
| 90-12-0  | 1-Methylnaphthalene    | 50         | 39.0     | 78    | 40-140 |
| 91-57-6  | 2-Methylnaphthalene    | 50         | 37.1     | 74    | 40-140 |
| 85-01-8  | Phenanthrene           | 50         | 38.9     | 78    | 40-140 |
| 129-00-0 | Pyrene                 | 50         | 40.2     | 80    | 40-140 |

| CAS No.   | Surrogate Recoveries | BSP | Limits  |
|-----------|----------------------|-----|---------|
| 367-12-4  | 2-Fluorophenol       | 56% | 15-110% |
| 4165-62-2 | Phenol-d5            | 20% | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 97% | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 88% | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 84% | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 85% | 30-130% |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| OP34082-MS  | R32333.D | 1  | 07/23/13 | KR | 07/22/13  | OP34082    | MSR1179          |
| OP34082-MSD | R32334.D | 1  | 07/23/13 | KR | 07/22/13  | OP34082    | MSR1179          |
| MC22900-3   | R32335.D | 1  | 07/23/13 | KR | 07/22/13  | OP34082    | MSR1179          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22754-1, MC22754-2

| CAS No.   | Compound                    | MC22900-3<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|-----------|-----------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 65-85-0   | Benzoic Acid                | ND                | 50         | 22.6       | 45      | 50            | 21.9        | 44       | 3   | 30-130/20         |
| 95-57-8   | 2-Chlorophenol              | ND                | 50         | 43.8       | 88      | 50            | 41.4        | 83       | 6   | 30-130/20         |
| 59-50-7   | 4-Chloro-3-methyl phenol    | ND                | 50         | 45.7       | 91      | 50            | 43.7        | 87       | 4   | 30-130/20         |
| 120-83-2  | 2,4-Dichlorophenol          | ND                | 50         | 45.6       | 91      | 50            | 43.8        | 88       | 4   | 30-130/20         |
| 105-67-9  | 2,4-Dimethylphenol          | ND                | 50         | 41.5       | 83      | 50            | 39.1        | 78       | 6   | 30-130/20         |
| 51-28-5   | 2,4-Dinitrophenol           | ND                | 50         | 44.6       | 89      | 50            | 43.4        | 87       | 3   | 30-130/20         |
| 534-52-1  | 4,6-Dinitro-o-cresol        | ND                | 50         | 46.9       | 94      | 50            | 45.8        | 92       | 2   | 30-130/20         |
| 95-48-7   | 2-Methylphenol              | ND                | 50         | 40.3       | 81      | 50            | 39.1        | 78       | 3   | 30-130/20         |
|           | 3&4-Methylphenol            | ND                | 100        | 74.8       | 75      | 100           | 73.0        | 73       | 2   | 30-130/20         |
| 88-75-5   | 2-Nitrophenol               | ND                | 50         | 46.2       | 92      | 50            | 44.3        | 89       | 4   | 30-130/20         |
| 100-02-7  | 4-Nitrophenol               | ND                | 50         | 20.0       | 40      | 50            | 19.0        | 38       | 5   | 30-130/20         |
| 87-86-5   | Pentachlorophenol           | ND                | 50         | 46.7       | 93      | 50            | 43.9        | 88       | 6   | 30-130/20         |
| 108-95-2  | Phenol                      | ND                | 50         | 20.2       | 40      | 50            | 19.3        | 39       | 5   | 30-130/20         |
| 95-95-4   | 2,4,5-Trichlorophenol       | ND                | 50         | 49.8       | 100     | 50            | 48.4        | 97       | 3   | 30-130/20         |
| 88-06-2   | 2,4,6-Trichlorophenol       | ND                | 50         | 48.2       | 96      | 50            | 46.7        | 93       | 3   | 30-130/20         |
| 62-53-3   | Aniline                     | ND                | 50         | 34.9       | 70      | 50            | 34.3        | 69       | 2   | 40-140/20         |
| 101-55-3  | 4-Bromophenyl phenyl ether  | ND                | 50         | 44.7       | 89      | 50            | 44.4        | 89       | 1   | 40-140/20         |
| 85-68-7   | Butyl benzyl phthalate      | ND                | 50         | 42.5       | 85      | 50            | 42.3        | 85       | 0   | 40-140/20         |
| 100-51-6  | Benzyl Alcohol              | ND                | 50         | 36.5       | 73      | 50            | 36.1        | 72       | 1   | 40-140/20         |
| 91-58-7   | 2-Chloronaphthalene         | ND                | 50         | 42.7       | 85      | 50            | 43.2        | 86       | 1   | 40-140/20         |
| 106-47-8  | 4-Chloroaniline             | ND                | 50         | 39.3       | 79      | 50            | 38.7        | 77       | 2   | 40-140/20         |
| 111-91-1  | bis(2-Chloroethoxy)methane  | ND                | 50         | 38.3       | 77      | 50            | 38.8        | 78       | 1   | 40-140/20         |
| 111-44-4  | bis(2-Chloroethyl)ether     | ND                | 50         | 37.2       | 74      | 50            | 37.5        | 75       | 1   | 40-140/20         |
| 108-60-1  | bis(2-Chloroisopropyl)ether | ND                | 50         | 38.1       | 76      | 50            | 37.9        | 76       | 1   | 40-140/20         |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND                | 50         | 48.4       | 97      | 50            | 48.4        | 97       | 0   | 40-140/20         |
| 122-66-7  | 1,2-Diphenylhydrazine       | ND                | 50         | 37.4       | 75      | 50            | 37.8        | 76       | 1   | 40-140/20         |
| 121-14-2  | 2,4-Dinitrotoluene          | ND                | 50         | 47.3       | 95      | 50            | 46.9        | 94       | 1   | 40-140/20         |
| 606-20-2  | 2,6-Dinitrotoluene          | ND                | 50         | 44.6       | 89      | 50            | 45.6        | 91       | 2   | 40-140/20         |
| 91-94-1   | 3,3'-Dichlorobenzidine      | ND                | 50         | 41.9       | 84      | 50            | 42.5        | 85       | 1   | 40-140/20         |
| 132-64-9  | Dibenzofuran                | ND                | 50         | 44.6       | 89      | 50            | 44.1        | 88       | 1   | 40-140/20         |
| 84-74-2   | Di-n-butyl phthalate        | ND                | 50         | 43.1       | 86      | 50            | 42.8        | 86       | 1   | 40-140/20         |
| 117-84-0  | Di-n-octyl phthalate        | ND                | 50         | 46.7       | 93      | 50            | 46.9        | 94       | 0   | 40-140/20         |
| 84-66-2   | Diethyl phthalate           | ND                | 50         | 42.1       | 84      | 50            | 43.1        | 86       | 2   | 40-140/20         |
| 131-11-3  | Dimethyl phthalate          | ND                | 50         | 32.5       | 65      | 50            | 34.9        | 70       | 7   | 40-140/20         |
| 117-81-7  | bis(2-Ethylhexyl)phthalate  | ND                | 50         | 42.5       | 85      | 50            | 42.2        | 84       | 1   | 40-140/20         |
| 118-74-1  | Hexachlorobenzene           | ND                | 50         | 42.9       | 86      | 50            | 42.9        | 86       | 0   | 40-140/20         |

\* = Outside of Control Limits.

7.3.1  
 7

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| OP34082-MS  | R32333.D | 1  | 07/23/13 | KR | 07/22/13  | OP34082    | MSR1179          |
| OP34082-MSD | R32334.D | 1  | 07/23/13 | KR | 07/22/13  | OP34082    | MSR1179          |
| MC22900-3   | R32335.D | 1  | 07/23/13 | KR | 07/22/13  | OP34082    | MSR1179          |

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

MC22754-1, MC22754-2

7.3.1  
7

| CAS No.  | Compound                   | MC22900-3<br>ug/l | Spike<br>Q<br>ug/l | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|----------|----------------------------|-------------------|--------------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 77-47-4  | Hexachlorocyclopentadiene  | ND                | 50                 | 20.4       | 41      | 50            | 18.9        | 38* a    | 8   | 40-140/20         |
| 67-72-1  | Hexachloroethane           | ND                | 50                 | 32.4       | 65      | 50            | 32.3        | 65       | 0   | 40-140/20         |
| 78-59-1  | Isophorone                 | ND                | 50                 | 39.3       | 79      | 50            | 38.7        | 77       | 2   | 40-140/20         |
| 88-74-4  | 2-Nitroaniline             | ND                | 50                 | 50.0       | 100     | 50            | 49.7        | 99       | 1   | 40-140/20         |
| 99-09-2  | 3-Nitroaniline             | ND                | 50                 | 44.2       | 88      | 50            | 44.6        | 89       | 1   | 40-140/20         |
| 100-01-6 | 4-Nitroaniline             | ND                | 50                 | 48.5       | 97      | 50            | 46.7        | 93       | 4   | 40-140/20         |
| 98-95-3  | Nitrobenzene               | ND                | 50                 | 35.4       | 71      | 50            | 34.3        | 69       | 3   | 40-140/20         |
| 62-75-9  | n-Nitrosodimethylamine     | ND                | 50                 | 25.3       | 51      | 50            | 24.5        | 49       | 3   | 40-140/20         |
| 621-64-7 | N-Nitroso-di-n-propylamine | ND                | 50                 | 38.7       | 77      | 50            | 38.7        | 77       | 0   | 40-140/20         |
| 86-30-6  | N-Nitrosodiphenylamine     | ND                | 50                 | 40.8       | 82      | 50            | 40.9        | 82       | 0   | 40-140/20         |
| 110-86-1 | Pyridine                   | ND                | 50                 | 23.1       | 46      | 50            | 21.1        | 42       | 9   | 40-140/20         |

| CAS No.   | Surrogate Recoveries | MS  | MSD | MC22900-3 | Limits  |
|-----------|----------------------|-----|-----|-----------|---------|
| 367-12-4  | 2-Fluorophenol       | 57% | 54% | 55%       | 15-110% |
| 4165-62-2 | Phenol-d5            | 21% | 21% | 20%       | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 92% | 89% | 83%       | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 80% | 79% | 74%       | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 91% | 92% | 87%       | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 81% | 82% | 85%       | 30-130% |

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

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| OP34084-MS  | W14111.D | 1  | 07/23/13 | KR | 07/22/13  | OP34084    | MSW638           |
| OP34084-MSD | W14112.D | 1  | 07/23/13 | KR | 07/22/13  | OP34084    | MSW638           |
| MC22900-4   | W14113.D | 1  | 07/23/13 | KR | 07/22/13  | OP34084    | MSW638           |

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

MC22754-1, MC22754-2

| CAS No.  | Compound               | MC22900-4<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|----------|------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 83-32-9  | Acenaphthene           | ND                | 50         | 41.6       | 83      | 50            | 42.2        | 84       | 1   | 40-140/20         |
| 208-96-8 | Acenaphthylene         | ND                | 50         | 34.8       | 70      | 50            | 34.9        | 70       | 0   | 40-140/20         |
| 120-12-7 | Anthracene             | ND                | 50         | 40.4       | 81      | 50            | 41.2        | 82       | 2   | 40-140/20         |
| 56-55-3  | Benzo(a)anthracene     | ND                | 50         | 44.6       | 89      | 50            | 44.8        | 90       | 0   | 40-140/20         |
| 50-32-8  | Benzo(a)pyrene         | ND                | 50         | 43.4       | 87      | 50            | 44.1        | 88       | 2   | 40-140/20         |
| 205-99-2 | Benzo(b)fluoranthene   | ND                | 50         | 49.1       | 98      | 50            | 49.2        | 98       | 0   | 40-140/20         |
| 191-24-2 | Benzo(g,h,i)perylene   | ND                | 50         | 41.1       | 82      | 50            | 42.0        | 84       | 2   | 40-140/20         |
| 207-08-9 | Benzo(k)fluoranthene   | ND                | 50         | 44.4       | 89      | 50            | 46.3        | 93       | 4   | 40-140/20         |
| 218-01-9 | Chrysene               | ND                | 50         | 41.1       | 82      | 50            | 41.3        | 83       | 0   | 40-140/20         |
| 53-70-3  | Dibenzo(a,h)anthracene | ND                | 50         | 42.9       | 86      | 50            | 43.7        | 87       | 2   | 40-140/20         |
| 206-44-0 | Fluoranthene           | ND                | 50         | 44.2       | 88      | 50            | 43.9        | 88       | 1   | 40-140/20         |
| 86-73-7  | Fluorene               | ND                | 50         | 42.3       | 85      | 50            | 43.0        | 86       | 2   | 40-140/20         |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND                | 50         | 41.3       | 83      | 50            | 42.3        | 85       | 2   | 40-140/20         |
| 90-12-0  | 1-Methylnaphthalene    | ND                | 50         | 41.1       | 82      | 50            | 40.6        | 81       | 1   | 40-140/20         |
| 91-57-6  | 2-Methylnaphthalene    | ND                | 50         | 38.9       | 78      | 50            | 38.8        | 78       | 0   | 40-140/20         |
| 85-01-8  | Phenanthrene           | 0.026             | J 50       | 40.0       | 80      | 50            | 41.4        | 83       | 3   | 40-140/20         |
| 129-00-0 | Pyrene                 | ND                | 50         | 41.8       | 84      | 50            | 41.5        | 83       | 1   | 40-140/20         |

| CAS No.   | Surrogate Recoveries | MS   | MSD | MC22900-4 | Limits  |
|-----------|----------------------|------|-----|-----------|---------|
| 367-12-4  | 2-Fluorophenol       | 57%  | 54% |           | 15-110% |
| 4165-62-2 | Phenol-d5            | 21%  | 20% |           | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 100% | 99% |           | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 90%  | 90% | 87%       | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 86%  | 87% | 82%       | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 87%  | 87% | 87%       | 30-130% |

\* = Outside of Control Limits.

7.3.2  
7

# Semivolatile Internal Standard Area Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSR1179-CC1159 | Injection Date: | 07/23/13    |
| Lab File ID:   | R32324.D       | Injection Time: | 11:40       |
| Instrument ID: | GCMSR          | 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                | 76980  | 4.31 | 284275 | 5.37 | 178259 | 6.91 | 309710 | 8.32 | 356647 | 11.31 | 330501 | 12.90 |
| Upper Limit <sup>a</sup> | 153960 | 4.81 | 568550 | 5.87 | 356518 | 7.41 | 619420 | 8.82 | 713294 | 11.81 | 661002 | 13.40 |
| Lower Limit <sup>b</sup> | 38490  | 3.81 | 142138 | 4.87 | 89130  | 6.41 | 154855 | 7.82 | 178324 | 10.81 | 165251 | 12.40 |

| Lab Sample ID | IS 1   |      | IS 2   |      | IS 3   |      | IS 4   |      | IS 5   |       | IS 6   |       |
|---------------|--------|------|--------|------|--------|------|--------|------|--------|-------|--------|-------|
|               | AREA   | RT   | AREA   | RT   | AREA   | RT   | AREA   | RT   | AREA   | RT    | AREA   | RT    |
| ZZZZZZ        | 90139  | 4.31 | 332191 | 5.37 | 199647 | 6.91 | 359456 | 8.32 | 413652 | 11.31 | 388344 | 12.90 |
| ZZZZZZ        | 97620  | 4.31 | 366536 | 5.37 | 218947 | 6.91 | 393783 | 8.32 | 433912 | 11.31 | 405931 | 12.90 |
| ZZZZZZ        | 111842 | 4.31 | 420997 | 5.37 | 258497 | 6.91 | 477849 | 8.32 | 537374 | 11.31 | 498751 | 12.90 |
| OP34082-MB    | 101685 | 4.31 | 392549 | 5.37 | 241136 | 6.91 | 448433 | 8.32 | 502615 | 11.31 | 463400 | 12.90 |
| OP34082-BS    | 97361  | 4.31 | 376246 | 5.37 | 228589 | 6.91 | 413741 | 8.32 | 468013 | 11.31 | 429704 | 12.90 |
| OP34082-MS    | 97244  | 4.31 | 367656 | 5.37 | 222273 | 6.91 | 410899 | 8.32 | 458195 | 11.31 | 423812 | 12.90 |
| OP34082-MSD   | 91413  | 4.31 | 351479 | 5.37 | 213138 | 6.91 | 393915 | 8.32 | 440020 | 11.31 | 401259 | 12.90 |
| MC22900-3     | 93519  | 4.31 | 359279 | 5.37 | 216730 | 6.91 | 409341 | 8.32 | 456193 | 11.31 | 422669 | 12.90 |
| ZZZZZZ        | 100825 | 4.31 | 380769 | 5.37 | 232915 | 6.91 | 428455 | 8.32 | 483203 | 11.31 | 447809 | 12.90 |
| OP34083-MB    | 99233  | 4.31 | 372747 | 5.37 | 229869 | 6.91 | 422841 | 8.32 | 463738 | 11.31 | 400551 | 12.90 |
| OP34083-BS    | 88760  | 4.31 | 333984 | 5.37 | 204423 | 6.91 | 373144 | 8.32 | 407105 | 11.31 | 360533 | 12.90 |
| ZZZZZZ        | 90436  | 4.31 | 347779 | 5.37 | 215813 | 6.91 | 389451 | 8.32 | 428320 | 11.31 | 380729 | 12.90 |
| ZZZZZZ        | 81259  | 4.31 | 314145 | 5.37 | 188126 | 6.90 | 347518 | 8.32 | 386157 | 11.31 | 353482 | 12.90 |
| ZZZZZZ        | 84804  | 4.31 | 319554 | 5.37 | 194654 | 6.91 | 358864 | 8.32 | 396199 | 11.31 | 367243 | 12.90 |

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.4.1  
7



# Semivolatile Internal Standard Area Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |                    |
|----------------|--------------|-----------------|--------------------|
| Check Std:     | MSW638-CC633 | Injection Date: | 07/23/13           |
| Lab File ID:   | W14092.D     | Injection Time: | 08:11              |
| Instrument ID: | GCMSW        | 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                | 193102 | 3.63 | 502863  | 4.61 | 249930 | 6.03 | 404799 | 7.30 | 268740 | 10.08 | 644563  | 11.51 |
| Upper Limit <sup>a</sup> | 386204 | 4.13 | 1005726 | 5.11 | 499860 | 6.53 | 809598 | 7.80 | 537480 | 10.58 | 1289126 | 12.01 |
| Lower Limit <sup>b</sup> | 96551  | 3.13 | 251432  | 4.11 | 124965 | 5.53 | 202400 | 6.80 | 134370 | 9.58  | 322282  | 11.01 |

| 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    |
| OP34059-MB    | 227441 | 3.63 | 594659 | 4.61 | 290205 | 6.03 | 460865 | 7.30 | 296043 | 10.08 | 693169  | 11.51 |
| OP34059-BS    | 247653 | 3.63 | 633787 | 4.61 | 308659 | 6.03 | 495635 | 7.31 | 313466 | 10.08 | 718454  | 11.51 |
| OP34059-MS    | 199896 | 3.63 | 517447 | 4.61 | 256506 | 6.03 | 409986 | 7.30 | 267440 | 10.08 | 626882  | 11.51 |
| OP34059-MSD   | 197570 | 3.63 | 513947 | 4.61 | 254707 | 6.03 | 401500 | 7.30 | 261986 | 10.08 | 616051  | 11.51 |
| MC22780-2A    | 205158 | 3.63 | 524572 | 4.61 | 262105 | 6.03 | 416845 | 7.30 | 272931 | 10.08 | 628663  | 11.51 |
| ZZZZZZ        | 223423 | 3.63 | 568670 | 4.61 | 281800 | 6.03 | 439385 | 7.30 | 271509 | 10.08 | 631337  | 11.51 |
| ZZZZZZ        | 204734 | 3.63 | 527019 | 4.61 | 258101 | 6.03 | 406500 | 7.30 | 262023 | 10.08 | 613670  | 11.51 |
| ZZZZZZ        | 199557 | 3.63 | 508799 | 4.61 | 252964 | 6.03 | 404531 | 7.30 | 259465 | 10.08 | 607928  | 11.51 |
| ZZZZZZ        | 237633 | 3.63 | 597335 | 4.61 | 292539 | 6.03 | 455016 | 7.31 | 280495 | 10.08 | 668282  | 11.51 |
| ZZZZZZ        | 212837 | 3.63 | 539459 | 4.61 | 264515 | 6.03 | 414826 | 7.31 | 265236 | 10.08 | 616273  | 11.51 |
| ZZZZZZ        | 213783 | 3.63 | 531745 | 4.61 | 252444 | 6.03 | 388139 | 7.31 | 252172 | 10.09 | 591767  | 11.51 |
| ZZZZZZ        | 194809 | 3.63 | 501228 | 4.61 | 251199 | 6.03 | 392673 | 7.31 | 257965 | 10.09 | 592241  | 11.51 |
| ZZZZZZ        | 217940 | 3.63 | 552841 | 4.61 | 271603 | 6.04 | 428731 | 7.31 | 281977 | 10.09 | 635272  | 11.52 |
| ZZZZZZ        | 213390 | 3.63 | 550600 | 4.61 | 266240 | 6.03 | 419457 | 7.31 | 276414 | 10.09 | 607733  | 11.52 |
| ZZZZZZ        | 219145 | 3.63 | 560134 | 4.61 | 276938 | 6.03 | 433502 | 7.31 | 286472 | 10.08 | 631560  | 11.51 |
| OP34084-MB    | 217687 | 3.63 | 568133 | 4.61 | 284906 | 6.03 | 455578 | 7.31 | 298780 | 10.08 | 675248  | 11.51 |
| OP34084-BS    | 210003 | 3.63 | 542202 | 4.61 | 273649 | 6.03 | 446118 | 7.31 | 282638 | 10.09 | 636862  | 11.52 |
| OP34084-MS    | 212301 | 3.63 | 543439 | 4.61 | 273490 | 6.04 | 447051 | 7.31 | 277522 | 10.09 | 629588  | 11.52 |
| OP34084-MSD   | 201352 | 3.63 | 513546 | 4.61 | 257097 | 6.03 | 413036 | 7.31 | 268466 | 10.09 | 607255  | 11.51 |
| MC22900-4     | 197277 | 3.63 | 511587 | 4.61 | 255686 | 6.03 | 411341 | 7.31 | 273525 | 10.08 | 615810  | 11.51 |
| ZZZZZZ        | 365554 | 3.63 | 926319 | 4.61 | 464462 | 6.04 | 739852 | 7.31 | 490313 | 10.09 | 1068505 | 11.52 |
| ZZZZZZ        | 193545 | 3.63 | 494930 | 4.61 | 245614 | 6.03 | 387318 | 7.31 | 260187 | 10.09 | 563524  | 11.51 |
| ZZZZZZ        | 211425 | 3.63 | 542503 | 4.61 | 266401 | 6.03 | 422599 | 7.31 | 275534 | 10.09 | 607089  | 11.52 |
| ZZZZZZ        | 196096 | 3.63 | 500770 | 4.61 | 248864 | 6.03 | 392632 | 7.31 | 256143 | 10.08 | 574069  | 11.51 |

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.4.2  
7

# Semivolatile Internal Standard Area Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |                    |
|----------------|--------------|-----------------|--------------------|
| Check Std:     | MSW643-CC633 | Injection Date: | 07/30/13           |
| Lab File ID:   | W14207A.D    | Injection Time: | 15:33              |
| Instrument ID: | GCMSW        | Method:         | SW846 8270C BY SIM |

|                          | IS 1   | IS 2 | IS 3   | IS 4 | IS 5   | IS 6 |
|--------------------------|--------|------|--------|------|--------|------|
|                          | AREA   | RT   | AREA   | RT   | AREA   | RT   |
| Check Std                | 158670 | 3.60 | 414604 | 4.58 | 205242 | 6.01 |
| Upper Limit <sup>a</sup> | 317340 | 4.10 | 829208 | 5.08 | 410484 | 6.51 |
| Lower Limit <sup>b</sup> | 79335  | 3.10 | 207302 | 4.08 | 102621 | 5.51 |

| Lab         | IS 1   | IS 2 | IS 3   | IS 4 | IS 5   | IS 6 |
|-------------|--------|------|--------|------|--------|------|
| Sample ID   | AREA   | RT   | AREA   | RT   | AREA   | RT   |
| OP34122-MB  | 177072 | 3.60 | 476666 | 4.58 | 233161 | 6.01 |
| OP34122-BS  | 86204  | 3.60 | 224730 | 4.58 | 112496 | 6.01 |
| OP34122-MS  | 200445 | 3.60 | 526942 | 4.58 | 259369 | 6.01 |
| OP34122-MSD | 199009 | 3.60 | 517416 | 4.58 | 257014 | 6.01 |
| MC22900-21  | 204035 | 3.60 | 533372 | 4.58 | 262921 | 6.01 |
| ZZZZZZ      | 165567 | 3.60 | 436255 | 4.58 | 215659 | 6.01 |
| OP34127-MS  | 195199 | 3.60 | 507089 | 4.58 | 246484 | 6.01 |
| OP34127-MSD | 182910 | 3.60 | 475096 | 4.58 | 232124 | 6.01 |
| MC22903-2A  | 179648 | 3.60 | 467941 | 4.58 | 228940 | 6.01 |
| ZZZZZZ      | 182587 | 3.60 | 480516 | 4.58 | 235233 | 6.01 |
| ZZZZZZ      | 190527 | 3.60 | 499057 | 4.58 | 243646 | 6.01 |
| ZZZZZZ      | 176566 | 3.60 | 459107 | 4.58 | 224949 | 6.01 |
| ZZZZZZ      | 165626 | 3.60 | 436959 | 4.58 | 215852 | 6.01 |
| ZZZZZZ      | 154296 | 3.60 | 412769 | 4.58 | 202099 | 6.01 |
| ZZZZZZ      | 196363 | 3.60 | 514698 | 4.58 | 249726 | 6.01 |
| ZZZZZZ      | 165068 | 3.60 | 445394 | 4.58 | 220168 | 6.01 |
| ZZZZZZ      | 187999 | 3.60 | 488456 | 4.58 | 243372 | 6.01 |
| ZZZZZZ      | 162810 | 3.60 | 431416 | 4.58 | 214458 | 6.01 |
| ZZZZZZ      | 205999 | 3.60 | 549592 | 4.58 | 271893 | 6.01 |
| OP34127-MB  | 204307 | 3.60 | 540423 | 4.58 | 262877 | 6.01 |
| OP34127-BS  | 177000 | 3.60 | 458929 | 4.58 | 227785 | 6.01 |
| ZZZZZZ      | 205717 | 3.60 | 545746 | 4.58 | 268305 | 6.01 |
| ZZZZZZ      | 164765 | 3.60 | 431320 | 4.58 | 217212 | 6.01 |
| ZZZZZZ      | 192284 | 3.60 | 507740 | 4.58 | 248417 | 6.01 |
| ZZZZZZ      | 178904 | 3.60 | 473610 | 4.58 | 234631 | 6.01 |
| ZZZZZZ      | 178748 | 3.60 | 466955 | 4.58 | 231068 | 6.01 |
| ZZZZZZ      | 192154 | 3.60 | 515855 | 4.58 | 254486 | 6.01 |
| MC22754-1   | 163260 | 3.60 | 431624 | 4.58 | 217873 | 6.01 |
| MC22754-2   | 151221 | 3.60 | 400891 | 4.58 | 200150 | 6.01 |

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12

7.4.3  
7

# Semivolatile Internal Standard Area Summary

Job Number: MC22754  
Account: SHELLWIC Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |                    |
|----------------|--------------|-----------------|--------------------|
| Check Std:     | MSW643-CC633 | Injection Date: | 07/30/13           |
| Lab File ID:   | W14207A.D    | Injection Time: | 15:33              |
| 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 |

IS 6 = Perylene-d12

- (a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
- (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.4.3  
7

# Semivolatile Internal Standard Area Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |             |
|----------------|--------------|-----------------|-------------|
| Check Std:     | MSW646-CC633 | Injection Date: | 07/31/13    |
| Lab File ID:   | W14262.D     | Injection Time: | 17:03       |
| 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                | 279952 | 3.59 | 738324  | 4.57 | 370376 | 5.99 | 583458  | 7.26 | 372922 | 10.03 | 859175  | 11.45 |
| Upper Limit <sup>a</sup> | 559904 | 4.09 | 1476648 | 5.07 | 740752 | 6.49 | 1166916 | 7.76 | 745844 | 10.53 | 1718350 | 11.95 |
| Lower Limit <sup>b</sup> | 139976 | 3.09 | 369162  | 4.07 | 185188 | 5.49 | 291729  | 6.76 | 186461 | 9.53  | 429588  | 10.95 |

| 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     |
| OP34211-MB    | 140801  | 3.68 | 564115 | 4.73 | 352961 | 6.24 | 591071 | 7.57 | 611115 | 10.46 | 574573 | 12.03* |
| OP34202-MB    | 140801  | 3.68 | 564115 | 4.73 | 352961 | 6.24 | 591071 | 7.57 | 611115 | 10.46 | 574573 | 12.03* |
| OP34211-BS    | 160225  | 3.68 | 634919 | 4.73 | 392657 | 6.24 | 665835 | 7.57 | 647082 | 10.47 | 635978 | 12.03* |
| OP34202-BS    | 160225  | 3.68 | 634919 | 4.73 | 392657 | 6.24 | 665835 | 7.57 | 647082 | 10.47 | 635978 | 12.03* |
| OP34202-MS    | 145729  | 3.68 | 582949 | 4.73 | 363057 | 6.24 | 620214 | 7.57 | 603623 | 10.46 | 589831 | 12.03* |
| OP34202-MSD   | 145829  | 3.68 | 584815 | 4.73 | 360489 | 6.24 | 614454 | 7.57 | 598399 | 10.46 | 597719 | 12.03* |
| MC23100-2     | 139860* | 3.68 | 558470 | 4.73 | 351045 | 6.24 | 594952 | 7.57 | 588691 | 10.46 | 557155 | 12.03* |
| ZZZZZZ        | 138252* | 3.68 | 556022 | 4.73 | 347601 | 6.24 | 581874 | 7.57 | 592400 | 10.46 | 567722 | 12.03* |
| ZZZZZZ        | 131650* | 3.68 | 517184 | 4.73 | 322347 | 6.24 | 557014 | 7.57 | 560337 | 10.46 | 541625 | 12.03* |
| ZZZZZZ        | 120517* | 3.68 | 487874 | 4.73 | 303129 | 6.24 | 516166 | 7.57 | 514153 | 10.46 | 496478 | 12.03* |
| ZZZZZZ        | 130627* | 3.68 | 522938 | 4.73 | 322872 | 6.24 | 540342 | 7.57 | 554106 | 10.46 | 529899 | 12.03* |
| ZZZZZZ        | 125788* | 3.68 | 501678 | 4.73 | 312953 | 6.24 | 523425 | 7.57 | 545010 | 10.46 | 519366 | 12.03* |
| ZZZZZZ        | 128232* | 3.68 | 506830 | 4.73 | 313849 | 6.24 | 524818 | 7.57 | 543409 | 10.46 | 521977 | 12.03* |
| MC22754-1     | 128266* | 3.68 | 510255 | 4.73 | 323150 | 6.24 | 536949 | 7.57 | 549363 | 10.46 | 523197 | 12.03* |
| MC22754-2     | 140318  | 3.68 | 559313 | 4.73 | 347683 | 6.24 | 582272 | 7.57 | 599147 | 10.46 | 565883 | 12.03* |
| ZZZZZZ        | 314724  | 3.59 | 830039 | 4.57 | 416044 | 5.99 | 649114 | 7.26 | 415052 | 10.03 | 955285 | 11.45  |
| ZZZZZZ        | 295197  | 3.59 | 781273 | 4.57 | 387606 | 5.99 | 615043 | 7.26 | 398232 | 10.03 | 907045 | 11.45  |
| ZZZZZZ        | 286831  | 3.59 | 756162 | 4.57 | 373246 | 5.99 | 588475 | 7.26 | 378914 | 10.03 | 871619 | 11.45  |
| ZZZZZZ        | 282479  | 3.59 | 738703 | 4.57 | 372057 | 5.99 | 588240 | 7.26 | 379750 | 10.03 | 866568 | 11.45  |
| ZZZZZZ        | 300844  | 3.59 | 786733 | 4.57 | 393744 | 5.99 | 618768 | 7.26 | 408114 | 10.03 | 918684 | 11.45  |
| ZZZZZZ        | 293503  | 3.59 | 772726 | 4.57 | 383463 | 5.99 | 603941 | 7.26 | 391700 | 10.03 | 900407 | 11.45  |
| ZZZZZZ        | 296200  | 3.59 | 783061 | 4.57 | 391731 | 5.99 | 619437 | 7.26 | 395510 | 10.03 | 911718 | 11.45  |
| ZZZZZZ        | 276759  | 3.59 | 724469 | 4.57 | 358355 | 5.99 | 568653 | 7.26 | 366102 | 10.03 | 844639 | 11.45  |
| ZZZZZZ        | 301192  | 3.59 | 799512 | 4.57 | 396573 | 5.99 | 625152 | 7.26 | 395491 | 10.03 | 912997 | 11.45  |
| ZZZZZZ        | 146887  | 3.68 | 583950 | 4.73 | 363193 | 6.24 | 606435 | 7.57 | 623190 | 10.46 | 603834 | 12.03* |
| ZZZZZZ        | 143646  | 3.68 | 574389 | 4.73 | 355073 | 6.24 | 585831 | 7.58 | 601639 | 10.46 | 571888 | 12.03* |

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.

7.4.4  
7

# Semivolatile Internal Standard Area Summary

Job Number: MC22754  
Account: SHELLWIC Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |             |
|----------------|--------------|-----------------|-------------|
| Check Std:     | MSW646-CC633 | Injection Date: | 07/31/13    |
| Lab File ID:   | W14262.D     | Injection Time: | 17:03       |
| 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 |

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.4.4

7

# Semivolatile Surrogate Recovery Summary

Job Number: MC22754

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 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 |
|---------------|-------------|----|----|----|----|----|----|
| MC22754-1     | W14275.D    | 60 | 32 | 87 | 72 | 75 | 79 |
| MC22754-2     | W14276.D    | 59 | 23 | 97 | 79 | 80 | 84 |
| OP34082-BS    | R32332.D    | 57 | 21 | 93 | 76 | 87 | 80 |
| OP34082-MB    | R32331.D    | 48 | 18 | 73 | 67 | 77 | 77 |
| OP34082-MS    | R32333.D    | 57 | 21 | 92 | 80 | 91 | 81 |
| OP34082-MSD   | R32334.D    | 54 | 21 | 89 | 79 | 92 | 82 |

**Surrogate Compounds**                      **Recovery Limits**

|                           |         |
|---------------------------|---------|
| S1 = 2-Fluorophenol       | 15-110% |
| S2 = Phenol-d5            | 15-110% |
| S3 = 2,4,6-Tribromophenol | 15-110% |
| S4 = Nitrobenzene-d5      | 30-130% |
| S5 = 2-Fluorobiphenyl     | 30-130% |
| S6 = Terphenyl-d14        | 30-130% |

7.5.1

7

# Semivolatile Surrogate Recovery Summary

Job Number: MC22754

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 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 |
|---------------|-------------|----|----|----|
| MC22754-1     | W14235.D    | 79 | 80 | 80 |
| MC22754-2     | W14236.D    | 83 | 85 | 86 |
| OP34084-BS    | W14110.D    | 88 | 84 | 85 |
| OP34084-MB    | W14109.D    | 76 | 73 | 81 |
| OP34084-MS    | W14111.D    | 90 | 86 | 87 |
| OP34084-MSD   | W14112.D    | 90 | 87 | 87 |

Surrogate Compounds                      Recovery Limits

S1 = Nitrobenzene-d5                      30-130%  
 S2 = 2-Fluorobiphenyl                      30-130%  
 S3 = Terphenyl-d14                      30-130%

7.5.2  
7

## GC Volatiles

---

## QC Data Summaries



---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries



# Method Blank Summary

Job Number: MC22754  
Account: SHELLWIC Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| OP34095-MB | BK27122.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |

The QC reported here applies to the following samples:

Method: SW846 8011

MC22754-1, MC22754-2, MC22754-4

| CAS No.  | Compound                    | Result | RL    | MDL    | Units | Q |
|----------|-----------------------------|--------|-------|--------|-------|---|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND     | 0.015 | 0.0045 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.015 | 0.0097 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Limits |         |
|----------|------------------------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 138%   | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 123%   | 36-173% |

8.1.1  
8

# Blank Spike Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| OP34095-BS | BK27123.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |

The QC reported here applies to the following samples:

Method: SW846 8011

MC22754-1, MC22754-2, MC22754-4

| CAS No.  | Compound                    | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | Limits |
|----------|-----------------------------|---------------|-------------|----------|--------|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | 0.071         | 0.085       | 120      | 60-140 |
| 106-93-4 | 1,2-Dibromoethane           | 0.071         | 0.077       | 108      | 60-140 |

| CAS No.  | Surrogate Recoveries   | BSP  | Limits  |
|----------|------------------------|------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 125% | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 107% | 36-173% |

8.2.1  
8

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|-----------|----|----------|----|-----------|------------|------------------|
| OP34095-MS  | BK27124.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |
| OP34095-MSD | BK27125.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |
| MC22692-3   | BK27129.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |

The QC reported here applies to the following samples: Method: SW846 8011

MC22754-1, MC22754-2, MC22754-4

| CAS No.  | Compound                    | MC22692-3 |   | Spike<br>ug/l | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|----------|-----------------------------|-----------|---|---------------|------------|---------|---------------|-------------|----------|-----|-------------------|
|          |                             | ug/l      | Q |               |            |         |               |             |          |     |                   |
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND        |   | 0.0677        | 0.060      | 89      | 0.0675        | 0.057       | 84       | 5   | 64-141/29         |
| 106-93-4 | 1,2-Dibromoethane           | ND        |   | 0.0677        | 0.071      | 105     | 0.0675        | 0.073       | 108      | 3   | 63-163/27         |

| CAS No.  | Surrogate Recoveries   | MS  | MSD | MC22692-3 | Limits  |
|----------|------------------------|-----|-----|-----------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 89% | 87% | 123%      | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 76% | 64% | 91%       | 36-173% |

8.3.1  
8

\* = Outside of Control Limits.

# Volatile Surrogate Recovery Summary

Job Number: MC22754

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

Method: SW846 8011

Matrix: AQ

Samples and QC shown here apply to the above method

| Lab Sample ID | Lab File ID | S1 <sup>a</sup> | S1 <sup>b</sup> |
|---------------|-------------|-----------------|-----------------|
| MC22754-1     | BK27132.D   | 105             | 82              |
| MC22754-2     | BK27133.D   | 101             | 81              |
| MC22754-4     | BK27134.D   | 90              | 81              |
| OP34095-BS    | BK27123.D   | 125             | 107             |
| OP34095-MB    | BK27122.D   | 138             | 123             |
| OP34095-MS    | BK27124.D   | 89              | 76              |
| OP34095-MSD   | BK27125.D   | 87              | 64              |

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: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |            |
|----------------|--------------|-----------------|------------|
| Check Std:     | GBK930-CC929 | Injection Date: | 07/25/13   |
| Lab File ID:   | BK27116A.D   | Injection Time: | 05:10      |
| Instrument ID: | GCBK         | Method:         | SW846 8011 |

S1<sup>a</sup>    S1<sup>b</sup>  
 RT      RT

|           |      |      |
|-----------|------|------|
| Check Std | 4.58 | 4.94 |
|-----------|------|------|

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 <sup>a</sup> RT | S1 <sup>b</sup> RT |
|---------------|-------------|---------------|---------------|--------------------|--------------------|
| ZZZZZZ        | BK27117.D   | 07/25/13      | 05:36         | 4.58               | 4.94               |
| ZZZZZZ        | BK27118.D   | 07/25/13      | 06:00         | 4.58               | 4.94               |
| ZZZZZZ        | BK27119.D   | 07/25/13      | 06:24         | 4.58               | 4.94               |
| ZZZZZZ        | BK27120.D   | 07/25/13      | 06:48         | 4.58               | 4.94               |
| ZZZZZZ        | BK27121.D   | 07/25/13      | 07:12         | 4.58               | 4.94               |
| OP34095-MB    | BK27122.D   | 07/25/13      | 07:35         | 4.58               | 4.94               |
| OP34095-BS    | BK27123.D   | 07/25/13      | 07:59         | 4.58               | 4.94               |
| OP34095-MS    | BK27124.D   | 07/25/13      | 08:23         | 4.58               | 4.94               |
| OP34095-MSD   | BK27125.D   | 07/25/13      | 08:47         | 4.58               | 4.94               |
| ZZZZZZ        | BK27126.D   | 07/25/13      | 09:11         | 4.58               | 4.94               |

## Surrogate Compounds

S1 = Bromofluorobenzene (S)

- (a) Retention time from GC signal #2
- (b) Retention time from GC signal #1

8.5.1  
8

# GC Surrogate Retention Time Summary

Job Number: MC22754  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |            |
|----------------|--------------|-----------------|------------|
| Check Std:     | GBK930-CC929 | Injection Date: | 07/25/13   |
| Lab File ID:   | BK27127.D    | Injection Time: | 09:36      |
| Instrument ID: | GCBK         | Method:         | SW846 8011 |

S1<sup>a</sup>    S1<sup>b</sup>  
 RT      RT

|           |      |      |
|-----------|------|------|
| Check Std | 4.58 | 4.94 |
|-----------|------|------|

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 <sup>a</sup> RT | S1 <sup>b</sup> RT |
|---------------|-------------|---------------|---------------|--------------------|--------------------|
| ZZZZZZ        | BK27128.D   | 07/25/13      | 10:00         | 4.58               | 4.94               |
| MC22692-3     | BK27129.D   | 07/25/13      | 10:24         | 4.58               | 4.94               |
| ZZZZZZ        | BK27130.D   | 07/25/13      | 10:49         | 4.58               | 4.94               |
| ZZZZZZ        | BK27131.D   | 07/25/13      | 11:13         | 4.58               | 4.94               |
| MC22754-1     | BK27132.D   | 07/25/13      | 11:37         | 4.58               | 4.94               |
| MC22754-2     | BK27133.D   | 07/25/13      | 12:01         | 4.58               | 4.94               |
| MC22754-4     | BK27134.D   | 07/25/13      | 12:25         | 4.58               | 4.94               |
| ZZZZZZ        | BK27135.D   | 07/25/13      | 12:50         | 4.58               | 4.94               |
| ZZZZZZ        | BK27136.D   | 07/25/13      | 13:14         | 4.58               | 4.94               |
| ZZZZZZ        | BK27137.D   | 07/25/13      | 13:38         | 4.58               | 4.94               |

## Surrogate Compounds

S1 = Bromofluorobenzene (S)

- (a) Retention time from GC signal #2
- (b) Retention time from GC signal #1

8.5.2  
8

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VERIFICATION, TESTING AND CERTIFICATION COMPANY.



*e-Hardcopy 2.0*  
*Automated Report*

### Technical Report for

### Shell Oil

URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana,

SGS Accutest Job Number: MC22808

Sampling Date: 07/17/13

### Report to:

AECOM, INC.

Melissa.mansker@aecom.com

ATTN: Melissa Mansker

Total number of pages in report: 150



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.

H. (Brad) Madadian  
Lab Director

Client Service contact: Jeremy Vienneau 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) FL (E87579) NY (11791)  
NJ (MA926) PA (6801121) ND (R-188) CO (MA00136) 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

October 25, 2016

AECOM  
1001 Highlands Plaza Drive West Suite 300  
St. Louis, MO 63110

RE: SGS Accutest Job # MC22808

Dear Elizabeth Kunkel

As you are aware, SGS Accutest Inc. - Marlborough has been conducting an extensive review of data associated with some historical Gas Chromatography-Mass Spectroscopy volatiles analyses. As a result of this review it was determined that some revisions of the original test report for this job were needed. These corrections have been incorporated into the revised report.

Please be assured that corrective actions have been put in place to address this matter and prevent a recurrence.

We apologize for any inconvenience that this issue may have caused. Please don't hesitate to contact us if we can be of further assistance.

Sincerely,

**H. (Brad) Madadian**

Regional Laboratory Director  
SGS Accutest Inc. - Marlborough

SGS ACCUTEST IS PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION,  
TESTING AND CERTIFICATION COMPANY.



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## Sample Summary

Shell Oil

Job No: MC22808

URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample Number | Collected |            | Matrix Received | Code | Type         | Client Sample ID   |
|---------------|-----------|------------|-----------------|------|--------------|--------------------|
|               | Date      | Time By    |                 |      |              |                    |
| MC22808-1     | 07/17/13  | 09:35 LRDM | 07/18/13        | AQ   | Ground Water | MW4-ROX-071713     |
| MC22808-2     | 07/17/13  | 10:30 LRDM | 07/18/13        | AQ   | Ground Water | MW7-ROX-071713     |
| MC22808-3     | 07/17/13  | 11:30 LRDM | 07/18/13        | AQ   | Ground Water | MW8-ROX-071713     |
| MC22808-4     | 07/17/13  | 11:30 LRDM | 07/18/13        | AQ   | Ground Water | MW8-ROX-071713-DUP |
| MC22808-5     | 07/17/13  | 00:00 LRDM | 07/18/13        | AQ   | Ground Water | TB-ROX-071713-HCL  |
| MC22808-6     | 07/17/13  | 00:00 LRDM | 07/18/13        | AQ   | Ground Water | TB-ROX-071713-ST   |

## SAMPLE DELIVERY GROUP CASE NARRATIVE

2

**Client:** Shell Oil

**Job No** MC22808

**Site:** URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Centra

**Report Date** 10/25/2016 10:57:49 A

6 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 07/17/2013 and were received at SGS Accutest New England on 07/18/2013 properly preserved, at 2.1 Deg. C and intact. These Samples received a job number of MC22808. 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:** MSK2364

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC23063-7MS, MC23063-7MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for 2-Butanone (MEK), 2-Chloroethyl vinyl ether, Vinyl Acetate are outside control limits.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for Acetone are outside control limits. Outside control limits due to possible matrix interference.

**Matrix:** AQ

**Batch ID:** MSK2366

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC22784-4MS, MC22784-4MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike Recovery/Matrix Spike Duplicate(s) for Benzene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

**Matrix:** AQ

**Batch ID:** MSK2368

- Sample(s) MC22975-2MS, MC22975-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- The following samples were run outside of holding time for method SW846 8260B: MC22808-2 Sample reanalyzed past recommended hold time.

**Matrix:** AQ

**Batch ID:** MSL3537

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC22841-37MS, MC22841-37MSD were used as the QC samples indicated.
- Blank Spike Recovery(s) for Vinyl Acetate are outside control limits.
- Matrix Spike Recovery(s) for 2-Butanone (MEK), 4-Methyl-2-pentanone (MIBK), Acetone, Acrylonitrile, Chloromethane, Ethylbenzene, Vinyl Acetate, Vinyl chloride are outside control limits. Outside control limits due to possible matrix interference.
- Matrix Spike Duplicate Recovery(s) for 2-Butanone (MEK), Acetone, Acrylonitrile, Chloromethane, Vinyl Acetate, Vinyl chloride are outside control limits. Probable cause due to matrix interference.
- Vinyl Acetate: Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low.
- MC22808-2 for Toluene-D8: Outside control limits due to possible matrix interference. Confirmed by reanalysis.
- Acrolein: Initial calibration verification outside acceptance limits, biased high. Associated samples are non-detect.

Tuesday, October 25, 2016

Page 1 of 2

### Extractables by GCMS By Method SW846 8270C

|                   |                          |
|-------------------|--------------------------|
| <b>Matrix:</b> AQ | <b>Batch ID:</b> OP34099 |
|-------------------|--------------------------|

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC22900-7MS, MC22900-7MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for Hexachlorocyclopentadiene are outside control limits.
- Matrix Spike Recovery(s) for Hexachlorocyclopentadiene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for Hexachlorocyclopentadiene, Pyridine are outside control limits. Probable cause due to matrix interference.
- Initial calibration Verification standard MSR1160-ICV1159 for Hexachlorocyclopentadiene exceeds 50% Difference. is within criteria in continuing calibration check MSR1181-CC1159.
- Initial calibration Verification standard MSF3031-ICV3031 for Hexachlorocyclopentadiene exceeds 50% Difference. is within criteria in continuing calibration check MSF3050-CC3031.

### Extractables by GCMS By Method SW846 8270C BY SIM

|                   |                          |
|-------------------|--------------------------|
| <b>Matrix:</b> AQ | <b>Batch ID:</b> OP34100 |
|-------------------|--------------------------|

- 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) MC22900-8MS, MC22900-8MSD were used as the QC samples indicated.

### Volatiles by GC By Method SW846 8011

|                   |                          |
|-------------------|--------------------------|
| <b>Matrix:</b> AQ | <b>Batch ID:</b> OP34095 |
|-------------------|--------------------------|

- 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) MC22692-3MS, MC22692-3MSD were used as the QC samples indicated.

SGS Accutest 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 Laboratory Director for SGS Accutest New England or assignee as verified by the signature on the cover page has authorized the release of this report (MC22808).

# Summary of Hits

Job Number: MC22808  
 Account: Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
 Collected: 07/17/13



| Lab Sample ID | Client Sample ID | Result/<br>Analyte | RL | MDL | Units | Method |
|---------------|------------------|--------------------|----|-----|-------|--------|
|---------------|------------------|--------------------|----|-----|-------|--------|

MC22808-1 MW4-ROX-071713

|                            |         |       |       |      |                    |
|----------------------------|---------|-------|-------|------|--------------------|
| Benzene                    | 12200   | 130   | 110   | ug/l | SW846 8260B        |
| sec-Butylbenzene           | 1.6 J   | 5.0   | 0.58  | ug/l | SW846 8260B        |
| Ethylbenzene               | 1.5     | 1.0   | 0.38  | ug/l | SW846 8260B        |
| 2-Hexanone                 | 4.1 J   | 5.0   | 2.3   | ug/l | SW846 8260B        |
| Isopropylbenzene           | 6.7     | 5.0   | 0.64  | ug/l | SW846 8260B        |
| Methyl Tert Butyl Ether    | 55.9    | 1.0   | 0.43  | ug/l | SW846 8260B        |
| n-Propylbenzene            | 8.0     | 5.0   | 0.59  | ug/l | SW846 8260B        |
| Toluene                    | 38.1    | 1.0   | 0.46  | ug/l | SW846 8260B        |
| 1,1,2-Trichloroethane      | 0.85 J  | 1.0   | 0.49  | ug/l | SW846 8260B        |
| 1,2,4-Trimethylbenzene     | 1.2 J   | 5.0   | 0.47  | ug/l | SW846 8260B        |
| Vinyl Acetate <sup>a</sup> | 39.2    | 5.0   | 1.3   | ug/l | SW846 8260B        |
| m,p-Xylene                 | 30.2    | 1.0   | 0.70  | ug/l | SW846 8260B        |
| o-Xylene                   | 5.2     | 1.0   | 0.41  | ug/l | SW846 8260B        |
| Xylene (total)             | 35.3    | 1.0   | 0.41  | ug/l | SW846 8260B        |
| Phenol                     | 66.1    | 5.5   | 0.56  | ug/l | SW846 8270C        |
| Acenaphthene               | 0.036 J | 0.11  | 0.015 | ug/l | SW846 8270C BY SIM |
| Benzo(a)pyrene             | 0.040 J | 0.11  | 0.019 | ug/l | SW846 8270C BY SIM |
| Benzo(b)fluoranthene       | 0.034 J | 0.055 | 0.026 | ug/l | SW846 8270C BY SIM |
| Benzo(g,h,i)perylene       | 0.061 J | 0.11  | 0.041 | ug/l | SW846 8270C BY SIM |
| Indeno(1,2,3-cd)pyrene     | 0.052 J | 0.11  | 0.051 | ug/l | SW846 8270C BY SIM |
| 1-Methylnaphthalene        | 0.37    | 0.22  | 0.15  | ug/l | SW846 8270C BY SIM |
| 2-Methylnaphthalene        | 0.23    | 0.22  | 0.057 | ug/l | SW846 8270C BY SIM |
| Phenanthrene               | 0.030 J | 0.055 | 0.014 | ug/l | SW846 8270C BY SIM |

MC22808-2 MW7-ROX-071713

|                            |         |      |       |      |                    |
|----------------------------|---------|------|-------|------|--------------------|
| Benzene <sup>b</sup>       | 1000000 | 5000 | 4500  | ug/l | SW846 8260B        |
| sec-Butylbenzene           | 2.3 J   | 5.0  | 0.58  | ug/l | SW846 8260B        |
| Ethylbenzene               | 200     | 1.0  | 0.38  | ug/l | SW846 8260B        |
| Isopropylbenzene           | 9.6     | 5.0  | 0.64  | ug/l | SW846 8260B        |
| p-Isopropyltoluene         | 1.6 J   | 5.0  | 0.55  | ug/l | SW846 8260B        |
| Methyl Tert Butyl Ether    | 3.1     | 1.0  | 0.43  | ug/l | SW846 8260B        |
| Naphthalene                | 18.5    | 5.0  | 0.79  | ug/l | SW846 8260B        |
| n-Propylbenzene            | 17.3    | 5.0  | 0.59  | ug/l | SW846 8260B        |
| Toluene                    | 289     | 1.0  | 0.46  | ug/l | SW846 8260B        |
| 1,2,4-Trimethylbenzene     | 117     | 5.0  | 0.47  | ug/l | SW846 8260B        |
| 1,3,5-Trimethylbenzene     | 26.4    | 5.0  | 1.1   | ug/l | SW846 8260B        |
| Vinyl Acetate <sup>a</sup> | 9.4     | 5.0  | 1.3   | ug/l | SW846 8260B        |
| m,p-Xylene                 | 455     | 1.0  | 0.70  | ug/l | SW846 8260B        |
| o-Xylene                   | 183     | 1.0  | 0.41  | ug/l | SW846 8260B        |
| Xylene (total)             | 639     | 1.0  | 0.41  | ug/l | SW846 8260B        |
| Phenol                     | 118     | 5.4  | 0.56  | ug/l | SW846 8270C        |
| Acenaphthene               | 0.19    | 0.11 | 0.015 | ug/l | SW846 8270C BY SIM |

## Summary of Hits

Job Number: MC22808  
 Account: Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
 Collected: 07/17/13



| Lab Sample ID | Client Sample ID | Result/<br>Analyte     | RL      | MDL   | Units | Method |                    |
|---------------|------------------|------------------------|---------|-------|-------|--------|--------------------|
|               |                  | Acenaphthylene         | 0.031 J | 0.11  | 0.014 | ug/l   | SW846 8270C BY SIM |
|               |                  | Anthracene             | 0.028 J | 0.11  | 0.019 | ug/l   | SW846 8270C BY SIM |
|               |                  | Benzo(a)anthracene     | 0.040 J | 0.054 | 0.033 | ug/l   | SW846 8270C BY SIM |
|               |                  | Benzo(a)pyrene         | 0.044 J | 0.11  | 0.019 | ug/l   | SW846 8270C BY SIM |
|               |                  | Benzo(b)fluoranthene   | 0.045 J | 0.054 | 0.026 | ug/l   | SW846 8270C BY SIM |
|               |                  | Benzo(g,h,i)perylene   | 0.080 J | 0.11  | 0.041 | ug/l   | SW846 8270C BY SIM |
|               |                  | Dibenzo(a,h)anthracene | 0.077 J | 0.11  | 0.045 | ug/l   | SW846 8270C BY SIM |
|               |                  | Fluorene               | 0.19    | 0.11  | 0.050 | ug/l   | SW846 8270C BY SIM |
|               |                  | Indeno(1,2,3-cd)pyrene | 0.078 J | 0.11  | 0.050 | ug/l   | SW846 8270C BY SIM |
|               |                  | 1-Methylnaphthalene    | 4.3     | 0.22  | 0.15  | ug/l   | SW846 8270C BY SIM |
|               |                  | 2-Methylnaphthalene    | 6.0     | 0.22  | 0.056 | ug/l   | SW846 8270C BY SIM |
|               |                  | Phenanthrene           | 0.24    | 0.054 | 0.014 | ug/l   | SW846 8270C BY SIM |
|               |                  | Pyrene                 | 0.039 J | 0.11  | 0.039 | ug/l   | SW846 8270C BY SIM |

MC22808-3 MW8-ROX-071713

|                         |         |       |       |      |                    |
|-------------------------|---------|-------|-------|------|--------------------|
| Acetone                 | 8.0 J   | 10    | 2.8   | ug/l | SW846 8260B        |
| Benzene                 | 532000  | 1000  | 900   | ug/l | SW846 8260B        |
| sec-Butylbenzene        | 3.3 J   | 5.0   | 0.58  | ug/l | SW846 8260B        |
| Ethylbenzene            | 508     | 100   | 38    | ug/l | SW846 8260B        |
| Isopropylbenzene        | 17.3    | 5.0   | 0.64  | ug/l | SW846 8260B        |
| p-Isopropyltoluene      | 2.3 J   | 5.0   | 0.55  | ug/l | SW846 8260B        |
| Methyl Tert Butyl Ether | 197     | 1.0   | 0.43  | ug/l | SW846 8260B        |
| Naphthalene             | 33.5    | 5.0   | 0.79  | ug/l | SW846 8260B        |
| n-Propylbenzene         | 37.4    | 5.0   | 0.59  | ug/l | SW846 8260B        |
| Toluene                 | 348     | 1.0   | 0.46  | ug/l | SW846 8260B        |
| 1,2,4-Trimethylbenzene  | 199     | 5.0   | 0.47  | ug/l | SW846 8260B        |
| 1,3,5-Trimethylbenzene  | 59.8    | 5.0   | 1.1   | ug/l | SW846 8260B        |
| m,p-Xylene              | 1010    | 100   | 70    | ug/l | SW846 8260B        |
| o-Xylene                | 361     | 1.0   | 0.41  | ug/l | SW846 8260B        |
| Xylene (total)          | 1300    | 100   | 41    | ug/l | SW846 8260B        |
| 2,4-Dimethylphenol      | 9.0 J   | 10    | 1.2   | ug/l | SW846 8270C        |
| 2-Methylphenol          | 4.6 J   | 10    | 1.3   | ug/l | SW846 8270C        |
| 3&4-Methylphenol        | 10.6    | 10    | 2.1   | ug/l | SW846 8270C        |
| Phenol                  | 328     | 26    | 2.7   | ug/l | SW846 8270C        |
| Acenaphthene            | 0.20    | 0.10  | 0.014 | ug/l | SW846 8270C BY SIM |
| Anthracene              | 0.049 J | 0.10  | 0.018 | ug/l | SW846 8270C BY SIM |
| Benzo(a)pyrene          | 0.021 J | 0.10  | 0.018 | ug/l | SW846 8270C BY SIM |
| Benzo(g,h,i)perylene    | 0.040 J | 0.10  | 0.039 | ug/l | SW846 8270C BY SIM |
| Fluorene                | 0.33    | 0.10  | 0.048 | ug/l | SW846 8270C BY SIM |
| 1-Methylnaphthalene     | 9.7     | 0.21  | 0.15  | ug/l | SW846 8270C BY SIM |
| 2-Methylnaphthalene     | 11.3    | 0.21  | 0.054 | ug/l | SW846 8270C BY SIM |
| Phenanthrene            | 0.15    | 0.052 | 0.013 | ug/l | SW846 8270C BY SIM |
| Pyrene                  | 0.062 J | 0.10  | 0.037 | ug/l | SW846 8270C BY SIM |

## Summary of Hits

**Job Number:** MC22808  
**Account:** Shell Oil  
**Project:** URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
**Collected:** 07/17/13



| Lab Sample ID | Client Sample ID   | Result/<br>Analyte      | RL      | MDL   | Units | Method                  |
|---------------|--------------------|-------------------------|---------|-------|-------|-------------------------|
| MC22808-4     | MW8-ROX-071713-DUP |                         |         |       |       |                         |
|               |                    | Benzene                 | 494000  | 2500  | 2300  | ug/l SW846 8260B        |
|               |                    | sec-Butylbenzene        | 3.1 J   | 5.0   | 0.58  | ug/l SW846 8260B        |
|               |                    | Ethylbenzene            | 442 J   | 1000  | 380   | ug/l SW846 8260B        |
|               |                    | Isopropylbenzene        | 17.4    | 5.0   | 0.64  | ug/l SW846 8260B        |
|               |                    | p-Isopropyltoluene      | 2.4 J   | 5.0   | 0.55  | ug/l SW846 8260B        |
|               |                    | Methyl Tert Butyl Ether | 187     | 1.0   | 0.43  | ug/l SW846 8260B        |
|               |                    | Naphthalene             | 34.7    | 5.0   | 0.79  | ug/l SW846 8260B        |
|               |                    | n-Propylbenzene         | 38.3    | 5.0   | 0.59  | ug/l SW846 8260B        |
|               |                    | Toluene                 | 341     | 1.0   | 0.46  | ug/l SW846 8260B        |
|               |                    | 1,2,4-Trimethylbenzene  | 203     | 5.0   | 0.47  | ug/l SW846 8260B        |
|               |                    | 1,3,5-Trimethylbenzene  | 61.3    | 5.0   | 1.1   | ug/l SW846 8260B        |
|               |                    | m,p-Xylene              | 818 J   | 1000  | 700   | ug/l SW846 8260B        |
|               |                    | o-Xylene                | 364     | 1.0   | 0.41  | ug/l SW846 8260B        |
|               |                    | Xylene (total)          | 1050    | 1000  | 410   | ug/l SW846 8260B        |
|               |                    | 2,4-Dimethylphenol      | 8.9 J   | 11    | 1.2   | ug/l SW846 8270C        |
|               |                    | 2-Methylphenol          | 3.7 J   | 11    | 1.4   | ug/l SW846 8270C        |
|               |                    | 3&4-Methylphenol        | 9.1 J   | 11    | 2.2   | ug/l SW846 8270C        |
|               |                    | Phenol                  | 303     | 27    | 2.8   | ug/l SW846 8270C        |
|               |                    | Dibenzofuran            | 0.40 J  | 2.2   | 0.17  | ug/l SW846 8270C        |
|               |                    | Acenaphthene            | 0.19    | 0.11  | 0.015 | ug/l SW846 8270C BY SIM |
|               |                    | Acenaphthylene          | 0.056 J | 0.11  | 0.014 | ug/l SW846 8270C BY SIM |
|               |                    | Anthracene              | 0.061 J | 0.11  | 0.019 | ug/l SW846 8270C BY SIM |
|               |                    | Fluorene                | 0.36    | 0.11  | 0.050 | ug/l SW846 8270C BY SIM |
|               |                    | 1-Methylnaphthalene     | 8.7     | 0.22  | 0.15  | ug/l SW846 8270C BY SIM |
|               |                    | 2-Methylnaphthalene     | 9.8     | 0.22  | 0.056 | ug/l SW846 8270C BY SIM |
|               |                    | Phenanthrene            | 0.16    | 0.054 | 0.014 | ug/l SW846 8270C BY SIM |

MC22808-5 TB-ROX-071713-HCL

No hits reported in this sample.

MC22808-6 TB-ROX-071713-ST

No hits reported in this sample.

- (a) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low.
- (b) Sample reanalyzed past recommended hold time.

**Sample Results**

---

**Report of Analysis**

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## Report of Analysis

|                   |                   |   |          |
|-------------------|-------------------|---|----------|
| Client Sample ID: | MW4-ROX-071713    | Date Sampled:   | 07/17/13 |
| Lab Sample ID:    | MC22808-1         | Date Received:  | 07/18/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF  | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|-----|----------|----|-----------|------------|------------------|
| Run #1 | L76152.D | 1   | 07/30/13 | KR | n/a       | n/a        | MSL3537          |
| Run #2 | K72604.D | 25  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |
| Run #3 | K72655.D | 250 | 07/31/13 | GK | n/a       | n/a        | MSK2366          |

| Run #  | Purge Volume |
|--------|--------------|
| Run #1 | 5.0 ml       |
| Run #2 | 5.0 ml       |
| Run #3 | 5.0 ml       |

## VOA Special List

| CAS No.  | Compound                  | Result             | RL  | MDL  | Units | Q |
|----------|---------------------------|--------------------|-----|------|-------|---|
| 67-64-1  | Acetone                   | ND                 | 10  | 2.8  | 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                   | 12200 <sup>a</sup> | 130 | 110  | 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          | 1.6                | 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 <sup>b</sup>    | 130 | 28   | 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  |   |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates 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-071713    | Date Sampled:   | 07/17/13 |
| Lab Sample ID:    | MC22808-1         | Date Received:  | 07/18/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 156-59-2   | cis-1,2-Dichloroethene      | ND     | 1.0  | 0.54 | 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     | 1.0  | 0.29 | ug/l  |   |
| 123-91-1   | 1,4-Dioxane                 | ND     | 50   | 16   | ug/l  |   |
| 97-63-2    | Ethyl methacrylate          | ND     | 5.0  | 0.81 | ug/l  |   |
| 100-41-4   | Ethylbenzene                | 1.5    | 1.0  | 0.38 | ug/l  |   |
| 87-68-3    | Hexachlorobutadiene         | ND     | 5.0  | 1.3  | ug/l  |   |
| 591-78-6   | 2-Hexanone                  | 4.1    | 5.0  | 2.3  | ug/l  | J |
| 98-82-8    | Isopropylbenzene            | 6.7    | 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     | 55.9   | 1.0  | 0.43 | ug/l  |   |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | ND     | 5.0  | 1.3  | ug/l  |   |
| 74-95-3    | Methylene bromide           | ND     | 5.0  | 0.43 | ug/l  |   |
| 75-09-2    | Methylene chloride          | ND     | 2.0  | 0.41 | ug/l  |   |
| 91-20-3    | Naphthalene                 | ND     | 5.0  | 0.79 | ug/l  |   |
| 103-65-1   | n-Propylbenzene             | 8.0    | 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                     | 38.1   | 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       | 0.85   | 1.0  | 0.49 | ug/l  | J |
| 79-01-6    | Trichloroethene             | ND     | 1.0  | 0.45 | ug/l  |   |
| 75-69-4    | Trichlorofluoromethane      | ND     | 1.0  | 0.61 | ug/l  |   |
| 96-18-4    | 1,2,3-Trichloropropane      | ND     | 5.0  | 0.70 | ug/l  |   |
| 95-63-6    | 1,2,4-Trimethylbenzene      | 1.2    | 5.0  | 0.47 | ug/l  | J |
| 108-67-8   | 1,3,5-Trimethylbenzene      | ND     | 5.0  | 1.1  | ug/l  |   |
| 108-05-4   | Vinyl Acetate <sup>c</sup>  | 39.2   | 5.0  | 1.3  | ug/l  |   |
| 75-01-4    | Vinyl chloride              | ND     | 1.0  | 0.61 | ug/l  |   |
|            | m,p-Xylene                  | 30.2   | 1.0  | 0.70 | ug/l  |   |
| 95-47-6    | o-Xylene                    | 5.2    | 1.0  | 0.41 | ug/l  |   |
| 1330-20-7  | Xylene (total)              | 35.3   | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW4-ROX-071713  | <b>Date Sampled:</b> 07/17/13  |
| <b>Lab Sample ID:</b> MC22808-1  | <b>Date Received:</b> 07/18/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Run# 3 | Limits  |
|-----------|----------------------|--------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 86%    | 108%   | 113%   | 70-130% |
| 2037-26-5 | Toluene-D8           | 94%    | 100%   | 98%    | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 107%   | 94%    | 93%    | 70-130% |

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

- (a) Result is from Run# 3
- (b) Result is from Run# 2
- (c) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low.

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW4-ROX-071713  | <b>Date Sampled:</b> 07/17/13  |
| <b>Lab Sample ID:</b> MC22808-1  | <b>Date Received:</b> 07/18/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #1 | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | R32372.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |
| Run #2 |          |    |          |    |           |            |                  |

| Run #1 | 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                      | 66.1   | 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      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

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## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW4-ROX-071713  | <b>Date Sampled:</b> 07/17/13  |
| <b>Lab Sample ID:</b> MC22808-1  | <b>Date Received:</b> 07/18/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

**ABN Special List**

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.5 | 0.55 | 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       | 37%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 17%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 76%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 65%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 75%    |        | 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      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

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## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW4-ROX-071713  | <b>Date Sampled:</b> 07/17/13  |
| <b>Lab Sample ID:</b> MC22808-1  | <b>Date Received:</b> 07/18/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14163.D | 1  | 07/25/13 | WK | 07/23/13  | OP34100    | MSW640           |
| Run #2 |          |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 910 ml         | 1.0 ml       |
| Run #2 |                |              |

## BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | 0.036  | 0.11  | 0.015 | ug/l  | J |
| 208-96-8 | Acenaphthylene         | ND     | 0.11  | 0.015 | ug/l  |   |
| 120-12-7 | Anthracene             | ND     | 0.11  | 0.019 | ug/l  |   |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.055 | 0.033 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | 0.040  | 0.11  | 0.019 | ug/l  | J |
| 205-99-2 | Benzo(b)fluoranthene   | 0.034  | 0.055 | 0.026 | ug/l  | J |
| 191-24-2 | Benzo(g,h,i)perylene   | 0.061  | 0.11  | 0.041 | ug/l  | J |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.064 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.080 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.11  | 0.046 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.11  | 0.036 | ug/l  |   |
| 86-73-7  | Fluorene               | ND     | 0.11  | 0.051 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.052  | 0.11  | 0.051 | ug/l  | J |
| 90-12-0  | 1-Methylnaphthalene    | 0.37   | 0.22  | 0.15  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | 0.23   | 0.22  | 0.057 | ug/l  |   |
| 85-01-8  | Phenanthrene           | 0.030  | 0.055 | 0.014 | ug/l  | J |
| 129-00-0 | Pyrene                 | ND     | 0.11  | 0.039 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 367-12-4  | 2-Fluorophenol       | 37%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 17%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 83%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 68%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 72%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 85%    |        | 30-130% |

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

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW4-ROX-071713  | <b>Date Sampled:</b> 07/17/13  |
| <b>Lab Sample ID:</b> MC22808-1  | <b>Date Received:</b> 07/18/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27135.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |
| Run #2 |           |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 36.6 ml        | 2.0 ml       |
| Run #2 |                |              |

**VOA Special List**

| CAS No.  | Compound                    | Result | RL    | MDL    | Units | Q |
|----------|-----------------------------|--------|-------|--------|-------|---|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND     | 0.014 | 0.0043 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.014 | 0.0092 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 89%    |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 95%    |        | 36-173% |

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

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## Report of Analysis

|                   |                   |   |          |
|-------------------|-------------------|---|----------|
| Client Sample ID: | MW7-ROX-071713    | Date Sampled:   | 07/17/13 |
| Lab Sample ID:    | MC22808-2         | Date Received:  | 07/18/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #               | File ID  | DF    | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---------------------|----------|-------|----------|----|-----------|------------|------------------|
| Run #1              | L76153.D | 1     | 07/30/13 | KR | n/a       | n/a        | MSL3537          |
| Run #2              | K72605.D | 100   | 07/30/13 | GK | n/a       | n/a        | MSK2364          |
| Run #3 <sup>a</sup> | K72705.D | 10000 | 08/01/13 | GK | n/a       | n/a        | MSK2368          |

| Run #  | Purge Volume |
|--------|--------------|
| Run #1 | 5.0 ml       |
| Run #2 | 5.0 ml       |
| Run #3 | 5.0 ml       |

## VOA Special List

| CAS No.  | Compound                  | Result               | RL   | MDL  | Units | Q |
|----------|---------------------------|----------------------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND                   | 10   | 2.8  | 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                   | 1000000 <sup>b</sup> | 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            | ND                   | 5.0  | 0.54 | ug/l  |   |
| 135-98-8 | sec-Butylbenzene          | 2.3                  | 5.0  | 0.58 | ug/l  | J |
| 98-06-6  | tert-Butylbenzene         | ND                   | 5.0  | 0.87 | ug/l  |   |
| 75-15-0  | Carbon disulfide          | ND                   | 5.0  | 0.59 | ug/l  |   |
| 56-23-5  | Carbon tetrachloride      | ND                   | 1.0  | 0.62 | ug/l  |   |
| 108-90-7 | Chlorobenzene             | ND                   | 1.0  | 0.48 | ug/l  |   |
| 75-00-3  | Chloroethane              | ND                   | 2.0  | 0.84 | ug/l  |   |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND <sup>c</sup>      | 500  | 110  | 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  |   |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates 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-071713    | Date Sampled:   | 07/17/13 |
| Lab Sample ID:    | MC22808-2         | Date Received:  | 07/18/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 156-59-2   | cis-1,2-Dichloroethene      | ND     | 1.0  | 0.54 | 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     | 1.0  | 0.29 | ug/l  |   |
| 123-91-1   | 1,4-Dioxane                 | ND     | 50   | 16   | ug/l  |   |
| 97-63-2    | Ethyl methacrylate          | ND     | 5.0  | 0.81 | ug/l  |   |
| 100-41-4   | Ethylbenzene                | 200    | 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            | 9.6    | 5.0  | 0.64 | ug/l  |   |
| 99-87-6    | p-Isopropyltoluene          | 1.6    | 5.0  | 0.55 | ug/l  | J |
| 1634-04-4  | Methyl Tert Butyl Ether     | 3.1    | 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                 | 18.5   | 5.0  | 0.79 | ug/l  |   |
| 103-65-1   | n-Propylbenzene             | 17.3   | 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                     | 289    | 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      | 117    | 5.0  | 0.47 | ug/l  |   |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 26.4   | 5.0  | 1.1  | ug/l  |   |
| 108-05-4   | Vinyl Acetate <sup>d</sup>  | 9.4    | 5.0  | 1.3  | ug/l  |   |
| 75-01-4    | Vinyl chloride              | ND     | 1.0  | 0.61 | ug/l  |   |
|            | m,p-Xylene                  | 455    | 1.0  | 0.70 | ug/l  |   |
| 95-47-6    | o-Xylene                    | 183    | 1.0  | 0.41 | ug/l  |   |
| 1330-20-7  | Xylene (total)              | 639    | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> MW7-ROX-071713  |  | <b>Date Sampled:</b> 07/17/13  |
| <b>Lab Sample ID:</b> MC22808-2  |  | <b>Date Received:</b> 07/18/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

4.2  
4

### VOA Special List

| CAS No.   | Surrogate Recoveries | Run# 1            | Run# 2 | Run# 3 | Limits  |
|-----------|----------------------|-------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 82%               | 110%   | 113%   | 70-130% |
| 2037-26-5 | Toluene-D8           | 139% <sup>e</sup> | 103%   | 99%    | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 100%              | 94%    | 92%    | 70-130% |

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

- (a) Sample reanalyzed past recommended hold time.
- (b) Result is from Run# 3
- (c) Result is from Run# 2
- (d) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low.
- (e) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

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

## Report of Analysis

|                   |                         |   |          |
|-------------------|-------------------------|---|----------|
| Client Sample ID: | MW7-ROX-071713          | Date Sampled:   | 07/17/13 |
| Lab Sample ID:    | MC22808-2               | Date Received:  | 07/18/13 |
| Matrix:           | AQ - Ground Water       | Percent Solids:   | n/a      |
| Method:           | SW846 8270C SW846 3510C | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | R32373.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |
| Run #2 |          |    |          |    |           |            |                  |

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

## ABN Special List

| CAS No.   | Compound                    | Result | RL  | MDL  | Units | Q |
|-----------|-----------------------------|--------|-----|------|-------|---|
| 65-85-0   | Benzoic Acid                | ND     | 11  | 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                      | 118    | 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: | MW7-ROX-071713          | Date Sampled:  | 07/17/13 |
| Lab Sample ID:    | MC22808-2               | Date Received:   | 07/18/13 |
| Matrix:           | AQ - Ground Water       | Percent Solids:  | n/a      |
| Method:           | SW846 8270C SW846 3510C | Project: URMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## ABN Special List

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.4 | 0.54 | 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       | 40%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 21%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 85%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 56%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 73%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 79%    |        | 30-130% |

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

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

J = Indicates 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-071713                 | Date Sampled:   | 07/17/13 |
| Lab Sample ID:    | MC22808-2                      | Date Received:  | 07/18/13 |
| Matrix:           | AQ - Ground Water              | Percent Solids:   | n/a      |
| Method:           | SW846 8270C BY SIM SW846 3510C | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14164.D | 1  | 07/25/13 | WK | 07/23/13  | OP34100    | MSW640           |
| Run #2 |          |    |          |    |           |            |                  |

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

## BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | 0.19   | 0.11  | 0.015 | ug/l  |   |
| 208-96-8 | Acenaphthylene         | 0.031  | 0.11  | 0.014 | ug/l  | J |
| 120-12-7 | Anthracene             | 0.028  | 0.11  | 0.019 | ug/l  | J |
| 56-55-3  | Benzo(a)anthracene     | 0.040  | 0.054 | 0.033 | ug/l  | J |
| 50-32-8  | Benzo(a)pyrene         | 0.044  | 0.11  | 0.019 | ug/l  | J |
| 205-99-2 | Benzo(b)fluoranthene   | 0.045  | 0.054 | 0.026 | ug/l  | J |
| 191-24-2 | Benzo(g,h,i)perylene   | 0.080  | 0.11  | 0.041 | ug/l  | J |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.064 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.079 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | 0.077  | 0.11  | 0.045 | ug/l  | J |
| 206-44-0 | Fluoranthene           | ND     | 0.11  | 0.035 | ug/l  |   |
| 86-73-7  | Fluorene               | 0.19   | 0.11  | 0.050 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.078  | 0.11  | 0.050 | ug/l  | J |
| 90-12-0  | 1-Methylnaphthalene    | 4.3    | 0.22  | 0.15  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | 6.0    | 0.22  | 0.056 | ug/l  |   |
| 85-01-8  | Phenanthrene           | 0.24   | 0.054 | 0.014 | ug/l  |   |
| 129-00-0 | Pyrene                 | 0.039  | 0.11  | 0.039 | ug/l  | J |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 367-12-4  | 2-Fluorophenol       | 40%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 20%    |        | 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     | 69%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 83%    |        | 30-130% |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW7-ROX-071713  | <b>Date Sampled:</b> 07/17/13  |
| <b>Lab Sample ID:</b> MC22808-2  | <b>Date Received:</b> 07/18/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27136.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |
| 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 | 0.0044 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.015 | 0.0094 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 51%    |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 50%    |        | 36-173% |

---

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

4.2  
4

## Report of Analysis

|                   |                   |   |          |
|-------------------|-------------------|---|----------|
| Client Sample ID: | MW8-ROX-071713    | Date Sampled:   | 07/17/13 |
| Lab Sample ID:    | MC22808-3         | Date Received:  | 07/18/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF   | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|------|----------|----|-----------|------------|------------------|
| Run #1 | L76154.D | 1    | 07/30/13 | KR | n/a       | n/a        | MSL3537          |
| Run #2 | K72606.D | 100  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |
| Run #3 | K72657.D | 2000 | 07/31/13 | GK | n/a       | n/a        | MSK2366          |

| Run #  | Purge Volume |
|--------|--------------|
| Run #1 | 5.0 ml       |
| Run #2 | 5.0 ml       |
| Run #3 | 5.0 ml       |

## VOA Special List

| CAS No.  | Compound                  | Result              | RL   | MDL  | Units | Q |
|----------|---------------------------|---------------------|------|------|-------|---|
| 67-64-1  | Acetone                   | 8.0                 | 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                   | 532000 <sup>a</sup> | 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          | 3.3                 | 5.0  | 0.58 | ug/l  | J |
| 98-06-6  | tert-Butylbenzene         | ND                  | 5.0  | 0.87 | ug/l  |   |
| 75-15-0  | Carbon disulfide          | ND                  | 5.0  | 0.59 | ug/l  |   |
| 56-23-5  | Carbon tetrachloride      | ND                  | 1.0  | 0.62 | ug/l  |   |
| 108-90-7 | Chlorobenzene             | ND                  | 1.0  | 0.48 | ug/l  |   |
| 75-00-3  | Chloroethane              | ND                  | 2.0  | 0.84 | ug/l  |   |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND <sup>b</sup>     | 500  | 110  | 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  |   |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates 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-071713    | Date Sampled:   | 07/17/13 |
| Lab Sample ID:    | MC22808-3         | Date Received:  | 07/18/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result            | RL   | MDL  | Units | Q |
|------------|-----------------------------|-------------------|------|------|-------|---|
| 156-59-2   | cis-1,2-Dichloroethene      | ND                | 1.0  | 0.54 | 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                | 1.0  | 0.29 | ug/l  |   |
| 123-91-1   | 1,4-Dioxane                 | ND                | 50   | 16   | ug/l  |   |
| 97-63-2    | Ethyl methacrylate          | ND                | 5.0  | 0.81 | ug/l  |   |
| 100-41-4   | Ethylbenzene                | 508 <sup>b</sup>  | 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            | 17.3              | 5.0  | 0.64 | ug/l  |   |
| 99-87-6    | p-Isopropyltoluene          | 2.3               | 5.0  | 0.55 | ug/l  | J |
| 1634-04-4  | Methyl Tert Butyl Ether     | 197               | 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                 | 33.5              | 5.0  | 0.79 | ug/l  |   |
| 103-65-1   | n-Propylbenzene             | 37.4              | 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                     | 348               | 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      | 199               | 5.0  | 0.47 | ug/l  |   |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 59.8              | 5.0  | 1.1  | ug/l  |   |
| 108-05-4   | Vinyl Acetate <sup>c</sup>  | ND                | 5.0  | 1.3  | ug/l  |   |
| 75-01-4    | Vinyl chloride              | ND                | 1.0  | 0.61 | ug/l  |   |
|            | m,p-Xylene                  | 1010 <sup>b</sup> | 100  | 70   | ug/l  |   |
| 95-47-6    | o-Xylene                    | 361               | 1.0  | 0.41 | ug/l  |   |
| 1330-20-7  | Xylene (total)              | 1300 <sup>b</sup> | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> MW8-ROX-071713  |  | <b>Date Sampled:</b> 07/17/13  |
| <b>Lab Sample ID:</b> MC22808-3  |  | <b>Date Received:</b> 07/18/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

4.3  
4

**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Run# 3 | Limits  |
|-----------|----------------------|--------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 81%    | 109%   | 113%   | 70-130% |
| 2037-26-5 | Toluene-D8           | 119%   | 100%   | 100%   | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 99%    | 93%    | 93%    | 70-130% |

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

- (a) Result is from Run# 3
- (b) Result is from Run# 2
- (c) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low.

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

## Report of Analysis

|                   |                         |   |          |
|-------------------|-------------------------|---|----------|
| Client Sample ID: | MW8-ROX-071713          | Date Sampled:   | 07/17/13 |
| Lab Sample ID:    | MC22808-3               | Date Received:  | 07/18/13 |
| Matrix:           | AQ - Ground Water       | Percent Solids:   | n/a      |
| Method:           | SW846 8270C SW846 3510C | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | R32374.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |
| Run #2 | F65884.D | 5  | 07/31/13 | KR | 07/23/13  | OP34099    | MSF3050          |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 960 ml         | 1.0 ml       |
| Run #2 | 960 ml         | 1.0 ml       |

## ABN Special List

| CAS No.   | Compound                    | Result           | RL  | MDL  | Units | Q |
|-----------|-----------------------------|------------------|-----|------|-------|---|
| 65-85-0   | Benzoic Acid                | ND               | 10  | 1.3  | ug/l  |   |
| 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          | 9.0              | 10  | 1.2  | ug/l  | J |
| 51-28-5   | 2,4-Dinitrophenol           | ND               | 21  | 2.6  | ug/l  |   |
| 534-52-1  | 4,6-Dinitro-o-cresol        | ND               | 10  | 1.2  | ug/l  |   |
| 95-48-7   | 2-Methylphenol              | 4.6              | 10  | 1.3  | ug/l  | J |
|           | 3&4-Methylphenol            | 10.6             | 10  | 2.1  | ug/l  |   |
| 88-75-5   | 2-Nitrophenol               | ND               | 10  | 0.52 | ug/l  |   |
| 100-02-7  | 4-Nitrophenol               | ND               | 21  | 0.61 | ug/l  |   |
| 87-86-5   | Pentachlorophenol           | ND               | 10  | 1.3  | ug/l  |   |
| 108-95-2  | Phenol                      | 328 <sup>a</sup> | 26  | 2.7  | ug/l  |   |
| 95-95-4   | 2,4,5-Trichlorophenol       | ND               | 10  | 0.60 | ug/l  |   |
| 88-06-2   | 2,4,6-Trichlorophenol       | ND               | 10  | 0.33 | ug/l  |   |
| 62-53-3   | Aniline                     | ND               | 10  | 0.66 | ug/l  |   |
| 101-55-3  | 4-Bromophenyl phenyl ether  | ND               | 5.2 | 0.21 | ug/l  |   |
| 85-68-7   | Butyl benzyl phthalate      | ND               | 5.2 | 0.89 | ug/l  |   |
| 100-51-6  | Benzyl Alcohol              | ND               | 10  | 0.60 | ug/l  |   |
| 91-58-7   | 2-Chloronaphthalene         | ND               | 5.2 | 0.96 | ug/l  |   |
| 106-47-8  | 4-Chloroaniline             | ND               | 10  | 0.26 | ug/l  |   |
| 111-91-1  | bis(2-Chloroethoxy)methane  | ND               | 5.2 | 0.22 | ug/l  |   |
| 111-44-4  | bis(2-Chloroethyl)ether     | ND               | 5.2 | 0.24 | ug/l  |   |
| 108-60-1  | bis(2-Chloroisopropyl)ether | ND               | 5.2 | 0.14 | ug/l  |   |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND               | 5.2 | 0.21 | ug/l  |   |
| 122-66-7  | 1,2-Diphenylhydrazine       | ND               | 5.2 | 0.68 | ug/l  |   |
| 121-14-2  | 2,4-Dinitrotoluene          | ND               | 10  | 0.70 | ug/l  |   |
| 606-20-2  | 2,6-Dinitrotoluene          | ND               | 10  | 0.67 | ug/l  |   |
| 91-94-1   | 3,3'-Dichlorobenzidine      | ND               | 5.2 | 0.52 | ug/l  |   |
| 132-64-9  | Dibenzofuran                | ND               | 2.1 | 0.16 | ug/l  |   |
| 84-74-2   | Di-n-butyl phthalate        | ND               | 5.2 | 0.40 | ug/l  |   |
| 117-84-0  | Di-n-octyl phthalate        | ND               | 5.2 | 0.45 | ug/l  |   |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates 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-071713          | Date Sampled:  | 07/17/13 |
| Lab Sample ID:    | MC22808-3               | Date Received:   | 07/18/13 |
| Matrix:           | AQ - Ground Water       | Percent Solids:  | n/a      |
| Method:           | SW846 8270C SW846 3510C | Project: URMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## ABN Special List

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.2 | 0.52 | ug/l  |   |
| 131-11-3 | Dimethyl phthalate         | ND     | 5.2 | 0.52 | ug/l  |   |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | ND     | 2.1 | 0.51 | ug/l  |   |
| 118-74-1 | Hexachlorobenzene          | ND     | 5.2 | 0.31 | ug/l  |   |
| 77-47-4  | Hexachlorocyclopentadiene  | ND     | 10  | 2.6  | ug/l  |   |
| 67-72-1  | Hexachloroethane           | ND     | 5.2 | 0.46 | ug/l  |   |
| 78-59-1  | Isophorone                 | ND     | 5.2 | 0.21 | ug/l  |   |
| 88-74-4  | 2-Nitroaniline             | ND     | 10  | 0.29 | ug/l  |   |
| 99-09-2  | 3-Nitroaniline             | ND     | 10  | 0.52 | ug/l  |   |
| 100-01-6 | 4-Nitroaniline             | ND     | 10  | 4.5  | ug/l  |   |
| 98-95-3  | Nitrobenzene               | ND     | 5.2 | 0.26 | ug/l  |   |
| 62-75-9  | n-Nitrosodimethylamine     | ND     | 5.2 | 0.52 | ug/l  |   |
| 621-64-7 | N-Nitroso-di-n-propylamine | ND     | 5.2 | 0.84 | ug/l  |   |
| 86-30-6  | N-Nitrosodiphenylamine     | ND     | 5.2 | 0.56 | ug/l  |   |
| 110-86-1 | Pyridine                   | ND     | 10  | 0.54 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 367-12-4  | 2-Fluorophenol       | 50%    | 61%    | 15-110% |
| 4165-62-2 | Phenol-d5            | 23%    | 31%    | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 92%    | 98%    | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 68%    | 99%    | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 80%    | 93%    | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 75%    | 89%    | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW8-ROX-071713  | <b>Date Sampled:</b> 07/17/13  |
| <b>Lab Sample ID:</b> MC22808-3  | <b>Date Received:</b> 07/18/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14165.D | 1  | 07/25/13 | WK | 07/23/13  | OP34100    | MSW640           |
| Run #2 |          |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 960 ml         | 1.0 ml       |
| Run #2 |                |              |

## BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | 0.20   | 0.10  | 0.014 | ug/l  |   |
| 208-96-8 | Acenaphthylene         | ND     | 0.10  | 0.014 | ug/l  |   |
| 120-12-7 | Anthracene             | 0.049  | 0.10  | 0.018 | ug/l  | J |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.052 | 0.031 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | 0.021  | 0.10  | 0.018 | ug/l  | J |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.052 | 0.025 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | 0.040  | 0.10  | 0.039 | ug/l  | J |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.10  | 0.061 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.10  | 0.076 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.10  | 0.043 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.10  | 0.034 | ug/l  |   |
| 86-73-7  | Fluorene               | 0.33   | 0.10  | 0.048 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.10  | 0.048 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | 9.7    | 0.21  | 0.15  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | 11.3   | 0.21  | 0.054 | ug/l  |   |
| 85-01-8  | Phenanthrene           | 0.15   | 0.052 | 0.013 | ug/l  |   |
| 129-00-0 | Pyrene                 | 0.062  | 0.10  | 0.037 | ug/l  | J |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 367-12-4  | 2-Fluorophenol       | 52%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 23%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 94%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 77%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 74%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 77%    |        | 30-130% |

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

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW8-ROX-071713  | <b>Date Sampled:</b> 07/17/13  |
| <b>Lab Sample ID:</b> MC22808-3  | <b>Date Received:</b> 07/18/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27137.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |
| 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 | 0.0043 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.014 | 0.0092 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 104%   |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 99%    |        | 36-173% |

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

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

4.3  
4

## Report of Analysis

|                   |                    |   |          |
|-------------------|--------------------|---|----------|
| Client Sample ID: | MW8-ROX-071713-DUP | Date Sampled:   | 07/17/13 |
| Lab Sample ID:    | MC22808-4          | Date Received:  | 07/18/13 |
| Matrix:           | AQ - Ground Water  | Percent Solids:   | n/a      |
| Method:           | SW846 8260B        | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF   | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|------|----------|----|-----------|------------|------------------|
| Run #1 | L76155.D | 1    | 07/30/13 | KR | n/a       | n/a        | MSL3537          |
| Run #2 | K72607.D | 1000 | 07/30/13 | GK | n/a       | n/a        | MSK2364          |
| Run #3 | K72656.D | 5000 | 07/31/13 | GK | n/a       | n/a        | MSK2366          |

| Run #  | Purge Volume |
|--------|--------------|
| Run #1 | 5.0 ml       |
| Run #2 | 5.0 ml       |
| Run #3 | 5.0 ml       |

## VOA Special List

| CAS No.  | Compound                  | Result              | RL   | MDL  | Units | Q |
|----------|---------------------------|---------------------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND                  | 10   | 2.8  | 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                   | 494000 <sup>a</sup> | 2500 | 2300 | 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          | 3.1                 | 5.0  | 0.58 | ug/l  | J |
| 98-06-6  | tert-Butylbenzene         | ND                  | 5.0  | 0.87 | ug/l  |   |
| 75-15-0  | Carbon disulfide          | ND                  | 5.0  | 0.59 | ug/l  |   |
| 56-23-5  | Carbon tetrachloride      | ND                  | 1.0  | 0.62 | ug/l  |   |
| 108-90-7 | Chlorobenzene             | ND                  | 1.0  | 0.48 | ug/l  |   |
| 75-00-3  | Chloroethane              | ND                  | 2.0  | 0.84 | ug/l  |   |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND <sup>b</sup>     | 5000 | 1100 | 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  |   |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates 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-071713-DUP | Date Sampled:   | 07/17/13 |
| Lab Sample ID:    | MC22808-4          | Date Received:  | 07/18/13 |
| Matrix:           | AQ - Ground Water  | Percent Solids:   | n/a      |
| Method:           | SW846 8260B        | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result            | RL   | MDL  | Units | Q |
|------------|-----------------------------|-------------------|------|------|-------|---|
| 156-59-2   | cis-1,2-Dichloroethene      | ND                | 1.0  | 0.54 | 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                | 1.0  | 0.29 | ug/l  |   |
| 123-91-1   | 1,4-Dioxane                 | ND                | 50   | 16   | ug/l  |   |
| 97-63-2    | Ethyl methacrylate          | ND                | 5.0  | 0.81 | ug/l  |   |
| 100-41-4   | Ethylbenzene                | 442 <sup>b</sup>  | 1000 | 380  | ug/l  | J |
| 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            | 17.4              | 5.0  | 0.64 | ug/l  |   |
| 99-87-6    | p-Isopropyltoluene          | 2.4               | 5.0  | 0.55 | ug/l  | J |
| 1634-04-4  | Methyl Tert Butyl Ether     | 187               | 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                 | 34.7              | 5.0  | 0.79 | ug/l  |   |
| 103-65-1   | n-Propylbenzene             | 38.3              | 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                     | 341               | 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      | 203               | 5.0  | 0.47 | ug/l  |   |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 61.3              | 5.0  | 1.1  | ug/l  |   |
| 108-05-4   | Vinyl Acetate <sup>c</sup>  | ND                | 5.0  | 1.3  | ug/l  |   |
| 75-01-4    | Vinyl chloride              | ND                | 1.0  | 0.61 | ug/l  |   |
|            | m,p-Xylene                  | 818 <sup>b</sup>  | 1000 | 700  | ug/l  | J |
| 95-47-6    | o-Xylene                    | 364               | 1.0  | 0.41 | ug/l  |   |
| 1330-20-7  | Xylene (total)              | 1050 <sup>b</sup> | 1000 | 410  | ug/l  |   |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW8-ROX-071713-DUP  | <b>Date Sampled:</b> 07/17/13  |
| <b>Lab Sample ID:</b> MC22808-4  | <b>Date Received:</b> 07/18/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

4.4  
4

**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Run# 3 | Limits  |
|-----------|----------------------|--------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 80%    | 110%   | 115%   | 70-130% |
| 2037-26-5 | Toluene-D8           | 118%   | 100%   | 98%    | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 100%   | 94%    | 94%    | 70-130% |

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

- (a) Result is from Run# 3
- (b) Result is from Run# 2
- (c) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low.

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



## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW8-ROX-071713-DUP  | <b>Date Sampled:</b> 07/17/13  |
| <b>Lab Sample ID:</b> MC22808-4  | <b>Date Received:</b> 07/18/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | R32375.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |
| Run #2 | F65885.D | 5  | 07/31/13 | KR | 07/23/13  | OP34099    | MSF3050          |

| Run #  | 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          | 8.9              | 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              | 3.7              | 11  | 1.4  | ug/l  | J |
|           | 3&4-Methylphenol            | 9.1              | 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  | 1.4  | ug/l  |   |
| 108-95-2  | Phenol                      | 303 <sup>a</sup> | 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                | 0.40             | 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-071713-DUP      | Date Sampled:  | 07/17/13 |
| Lab Sample ID:    | MC22808-4               | Date Received:   | 07/18/13 |
| Matrix:           | AQ - Ground Water       | Percent Solids:  | n/a      |
| Method:           | SW846 8270C SW846 3510C | Project: URMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## ABN Special List

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.4 | 0.54 | 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       | 45%    | 54%    | 15-110% |
| 4165-62-2 | Phenol-d5            | 22%    | 27%    | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 94%    | 97%    | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 59%    | 82%    | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 72%    | 81%    | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 75%    | 84%    | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW8-ROX-071713-DUP  | <b>Date Sampled:</b> 07/17/13  |
| <b>Lab Sample ID:</b> MC22808-4  | <b>Date Received:</b> 07/18/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14166.D | 1  | 07/26/13 | WK | 07/23/13  | OP34100    | MSW640           |
| Run #2 |          |    |          |    |           |            |                  |

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

## BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | 0.19   | 0.11  | 0.015 | ug/l  |   |
| 208-96-8 | Acenaphthylene         | 0.056  | 0.11  | 0.014 | ug/l  | J |
| 120-12-7 | Anthracene             | 0.061  | 0.11  | 0.019 | ug/l  | J |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.054 | 0.033 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.11  | 0.019 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.054 | 0.026 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.11  | 0.041 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.064 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.079 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.11  | 0.045 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.11  | 0.035 | ug/l  |   |
| 86-73-7  | Fluorene               | 0.36   | 0.11  | 0.050 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.11  | 0.050 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | 8.7    | 0.22  | 0.15  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | 9.8    | 0.22  | 0.056 | ug/l  |   |
| 85-01-8  | Phenanthrene           | 0.16   | 0.054 | 0.014 | ug/l  |   |
| 129-00-0 | Pyrene                 | ND     | 0.11  | 0.039 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 367-12-4  | 2-Fluorophenol       | 46%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 21%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 99%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 65%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 68%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 79%    |        | 30-130% |

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

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> MW8-ROX-071713-DUP  | <b>Date Sampled:</b> 07/17/13  |
| <b>Lab Sample ID:</b> MC22808-4  | <b>Date Received:</b> 07/18/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27139.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |
| Run #2 |           |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 36.5 ml        | 2.0 ml       |
| Run #2 |                |              |

**VOA Special List**

| CAS No.  | Compound                    | Result | RL    | MDL    | Units | Q |
|----------|-----------------------------|--------|-------|--------|-------|---|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND     | 0.014 | 0.0043 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.014 | 0.0093 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 121%   |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 107%   |        | 36-173% |

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

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

4.4  
4

## Report of Analysis

|                   |                   |   |          |
|-------------------|-------------------|---|----------|
| Client Sample ID: | TB-ROX-071713-HCL | Date Sampled:   | 07/17/13 |
| Lab Sample ID:    | MC22808-5         | Date Received:  | 07/18/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | K72608.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |
| Run #2 | L76156.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

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

## VOA Special List

| CAS No.  | Compound                  | Result          | RL   | MDL  | Units | Q |
|----------|---------------------------|-----------------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND              | 10   | 2.8  | ug/l  |   |
| 107-02-8 | Acrolein                  | ND <sup>a</sup> | 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  | 1.1  | 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-071713-HCL | Date Sampled:   | 07/17/13 |
| Lab Sample ID:    | MC22808-5         | Date Received:  | 07/18/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> TB-ROX-071713-HCL   | <b>Date Sampled:</b> 07/17/13  |
| <b>Lab Sample ID:</b> MC22808-5  | <b>Date Received:</b> 07/18/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 110%   | 79%    | 70-130% |
| 2037-26-5 | Toluene-D8           | 95%    | 93%    | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 94%    | 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 | J = Indicates an estimated value                       |
| RL = Reporting Limit                          |                              | B = Indicates analyte found in associated method blank |
| E = Indicates value exceeds calibration range |                              | N = Indicates presumptive evidence of a compound       |

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> TB-ROX-071713-ST  | <b>Date Sampled:</b> 07/17/13  |
| <b>Lab Sample ID:</b> MC22808-6  | <b>Date Received:</b> 07/18/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27140.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |
| 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 | 0.0044 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.014 | 0.0093 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 86%    |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 73%    |        | 36-173% |

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

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

4.6  
4



**Misc. Forms****5****Custody Documents and Other Forms**

---

Includes the following where applicable:

- Chain of Custody
- REPROC Form: Reprocessed/Corrected Data
- Sample Tracking Chronicle
- Internal Chain of Custody

LAB (LOCATION)

- XENCO
- CALSCEANCE
- OTHER: **Accutest Labs, 495 Technology Cir W, Marlborough, MA 01752 (508-481-6200)**
- SPL

Lab Vendor #



Shell Oil Products Chain Of Custody Record

URS

**Please Check Appropriate Box:**

|   |                                       |                                       |
|---|---------------------------------------|---------------------------------------|
| <input checked="" type="checkbox"/> ENV. SERVICES | <input type="checkbox"/> MOTVA RETAIL | <input type="checkbox"/> SHELL RETAIL |
| <input type="checkbox"/> MOTVA SOBCH              | <input type="checkbox"/> CONSULTANT   | <input type="checkbox"/> LUBES        |
| <input type="checkbox"/> SHELL PIPELINE           | <input type="checkbox"/> OTHER        |                                       |

Print Bill To Contact Name: **Bob Billman**

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

DATE: **7/17/13**

PO # \_\_\_\_\_ SAP # \_\_\_\_\_

PAGE: **1** of **1**

LABORING COMPANY: **URS CORPORATION**

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

PROJECT CONTACT (Please copy or PDF Report to): **Elizabeth Kunkel, Wendy Pennington, Bob Billman**

TELEPHONE: **314-429-0100** FAX: **314-429-0462**

SHIP ADDRESS: **900 South Central Ave; ROXANA, IL**

SHIP DELIVERABLE TO (Name, Company, Office Location): \_\_\_\_\_ PHONE NO: \_\_\_\_\_ E-MAIL: \_\_\_\_\_

CONSULTANT PROJECT NO: **Roxana Quarterly GW / 21562850.03003**

SAMPLER NAME(S) (Print): **L Rathnow, D Lettingly**

LAB USE ONLY: **mc22808**

TURNAROUND TIME (CALENDAR DAYS):  STANDARD (10 DAY)  5 DAYS  3 DAYS  2 DAYS  24 HOURS  RESULTS NEEDED ON USE (END)

LA - RWQOB 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 \_\_\_\_\_

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING |      | MATRIX | PRESERVATIVE |      |       |      |       | NO. OF CONT. | VOC 8260B SL+TICS |                    |            | PID (ppm) | FIELD NOTES:<br>TEMPERATURE ON RECEIPT C°<br><br>Container PID Readings or Laboratory Notes |
|--------------|-----------------------------|----------|------|--------|--------------|------|-------|------|-------|--------------|-------------------|--------------------|------------|-----------|---|
|              |                             | DATE     | TIME |        | HCL          | HNO3 | H2SO4 | NONE | OTHER |              | VOC 8011 SL       | SVOC 8270C SL+TICS | PAH 8270LL |           |   |
|              | -1 MW4-ROX-071713           | 7/17/13  | 0935 | water  | 2            |      |       | 2    | 2     | 6            | X                 | X                  | X          | 0         |   |
|              | -2 MW7-ROX-071713           |          | 1030 |        | 2            |      |       | 2    | 2     | 6            | X                 | X                  | X          |           |   |
|              | -3 MW8-ROX-071713           |          | 1130 |        | 2            |      |       | 2    | 2     | 6            | X                 | X                  | X          |           |   |
|              | -4 MW8-ROX-071713-DUP       |          | 1130 |        | 2            |      |       | 2    | 2     | 6            | X                 | X                  | X          |           |   |
|              | -5 TB-ROX-071713-HC1        |          | 0000 |        | 2            |      |       |      |       | 2            | X                 |                    |            |           |   |
|              | -6 TB-ROX-071713-ST         |          | 0000 |        |              |      |       | 2    | 2     |              | X                 |                    |            |           |   |
|              |                             |          |      |        |              |      |       |      |       |              |                   |                    |            |           | 19CC, 1A3   |
|              |                             |          |      |        |              |      |       |      |       |              |                   |                    |            |           | 2.1°  |

Received by (Signature): *[Signature]* Date: **7/17/13** Time: **1800**

Received by (Signature): **FED EX** Date: **7-18-13** Time: **930**

Received by (Signature): *[Signature]* Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by (Signature): \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

05200 Revision

5.1  
5

MC22808: Chain of Custody  
Page 1 of 2

# Accutest Laboratories Sample Receipt Summary

**Accutest Job Number:** MC22808      **Client:** URS      **Immediate Client Services Action Required:** No  
**Date / Time Received:** 7/18/2013      **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. Smp'l Dates/Time OK:

**Cooler Temperature**      Y or N  
 1. Temp criteria achieved:    
 2. Cooler temp verification: Infrared gun \_\_\_\_\_  
 3. Cooler media: Ice (bag) \_\_\_\_\_

**Quality Control Preservation**      Y or N      N/A  
 1. Trip Blank present / cooler:     
 2. Trip Blank listed on COC:     
 3. Samples preserved properly:     
 4. VOCs headspace free:

**Sample Integrity - Documentation**      Y or N  
 1. Sample labels present on bottles:    
 2. Container labeling complete:    
 3. Sample container label / COC agree:

**Sample Integrity - Condition**      Y or N  
 1. Sample recvd within HT:    
 2. All containers accounted for:    
 3. Condition of sample: Intact \_\_\_\_\_

**Sample Integrity - Instructions**      Y or N      N/A  
 1. Analysis requested is clear:    
 2. Bottles received for unspecified tests:    
 3. Sufficient volume recvd for analysis:    
 4. Compositing instructions clear:     
 5. Filtering instructions clear:

Comments

# Initial Calibration Summary

Job Number: MC22808

Sample: MSL3534-ICC3534

Account: SHELLWIC Shell Oil

Lab FileID: L76082.D

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

## Response Factor Report MSL

Method : O:\msl\1\methods\1130729wx.m (RTE Integrator)  
Title : SW-846 Method 8260  
Last Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration

### Calibration Files

|               |               |               |              |
|---------------|---------------|---------------|--------------|
| 0.5 =176076.d | 2 =176078.d   | 5 =176079.d   | 50 =176082.d |
| 10 =176080.d  | 200 =176084.d | 400 =176085.d | 25 =176081.d |
| 1 =176077.d   | 100 =176083.d | =             | =            |

### Compound

|  | 0.5 | 2 | 5 | 50 | 10 | 200 | 400 | 25 | 1 | 100 | Avg | %RSD |
|--|-----|---|---|----|----|-----|-----|----|---|-----|-----|------|
|--|-----|---|---|----|----|-----|-----|----|---|-----|-----|------|

|                          |       |       |       |       |       |       |       |       |       |       |  |      |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|------|
| 1) I 1,4-difluorobenzene | ----- | ISTD  | ----- |       |       |       |       |       |       |       |  |      |
| 2) 1,2-dichloroethane    |       |       |       |       |       |       |       |       |       |       |  |      |
|                          | 0.484 | 0.511 | 0.487 | 0.538 | 0.533 | 0.495 | 0.489 | 0.436 | 0.505 | 0.498 |  | 6.07 |

(#) = Out of Range ### Number of calibration levels exceeded format ###

1130729wx.m Mon Oct 19 11:51:51 2015

5.2  
5

# Initial Calibration Verification

Job Number: MC22808      Sample: MSL3534-ICV3534  
Account: SHELLWIC Shell Oil      Lab FileID: L76088.D  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

## Evaluate Continuing Calibration Report

Data File : O:\msl\1\data backup\1130726\176088.d      Vial: 16  
Acq On : 27 Jul 2013 1:09 am      Operator: kerryr  
Sample : icv3534-50      Inst : MSL  
Misc : ms29503,msl3534,,,,5,1      Multiplr: 1.00  
MS Integration Params: RTEINT.P

Method : O:\msl\1\methods\1130729wx.m (RTE Integrator)  
Title : SW-846 Method 8260  
Last Update : Mon Oct 19 11:51:04 2015  
Response via : Multiple Level Calibration

Min. RRF : 0.000    Min. Rel. Area : 50%    Max. R.T. Dev 0.50min  
Max. RRF Dev : 20%    Max. Rel. Area : 200%

| Compound                | AvgRF | CCRF  | %Dev | Area% | Dev (min) | R.T. |
|-------------------------|-------|-------|------|-------|-----------|------|
| 1 I 1,4-difluorobenzene | 1.000 | 1.000 | 0.0  | 102   | 0.00      | 8.89 |
| 2 M 1,2-dichloroethane  | 0.498 | 0.496 | 0.4  | 104   | 0.00      | 8.20 |

(#) = Out of Range      SPCC's out = 0    CCC's out = 0  
176082.d    1130729wx.m      Mon Oct 19 11:51:57 2015

5.2  
5



Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176076.d  
 Acq On : 26 Jul 2013 7:18 pm  
 Operator : kerryr  
 Sample : ic3534-0.5  
 Misc : ms29503,msl3534,,,,,5,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 19 11:47:40 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:44:54 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|------------------------|-------|------|----------|-------|-------|----------|
| Internal Standards     |       |      |          |       |       |          |
| 1) 1,4-difluorobenzene | 8.898 | 114  | 135854   | 50.00 | ug/L  | 0.00     |

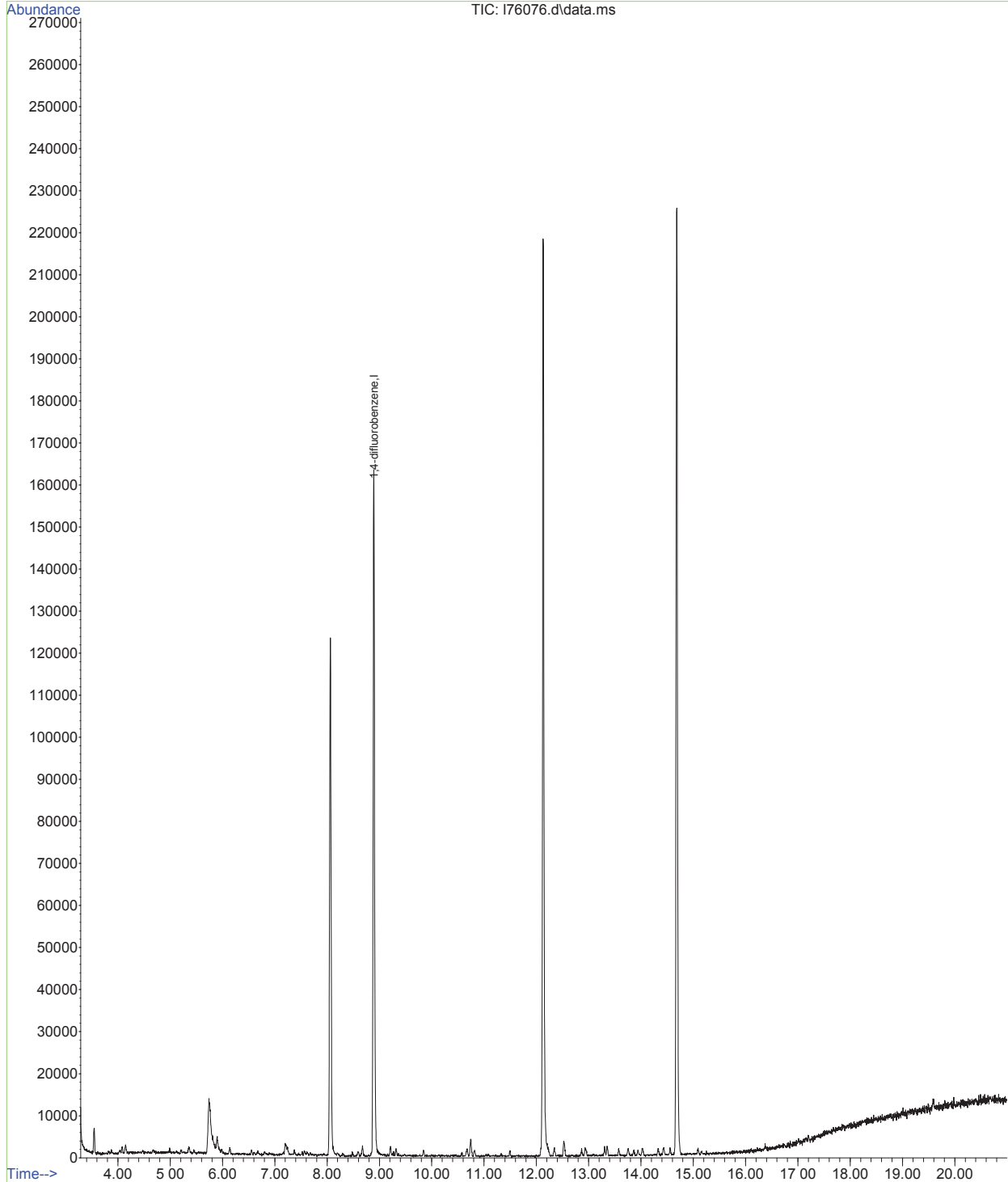
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130726\  
Data File : 176076.d  
Acq On : 26 Jul 2013 7:18 pm  
Operator : kerryr  
Sample : ic3534-0.5  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 19 11:47:40 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:44:54 2015  
Response via : Initial Calibration





Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176077.d  
 Acq On : 26 Jul 2013 7:46 pm  
 Operator : kerryr  
 Sample : ic3534-1  
 Misc : ms29503,msl3534,,,,,5,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 19 11:45:44 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:44:54 2015  
 Response via : Initial Calibration

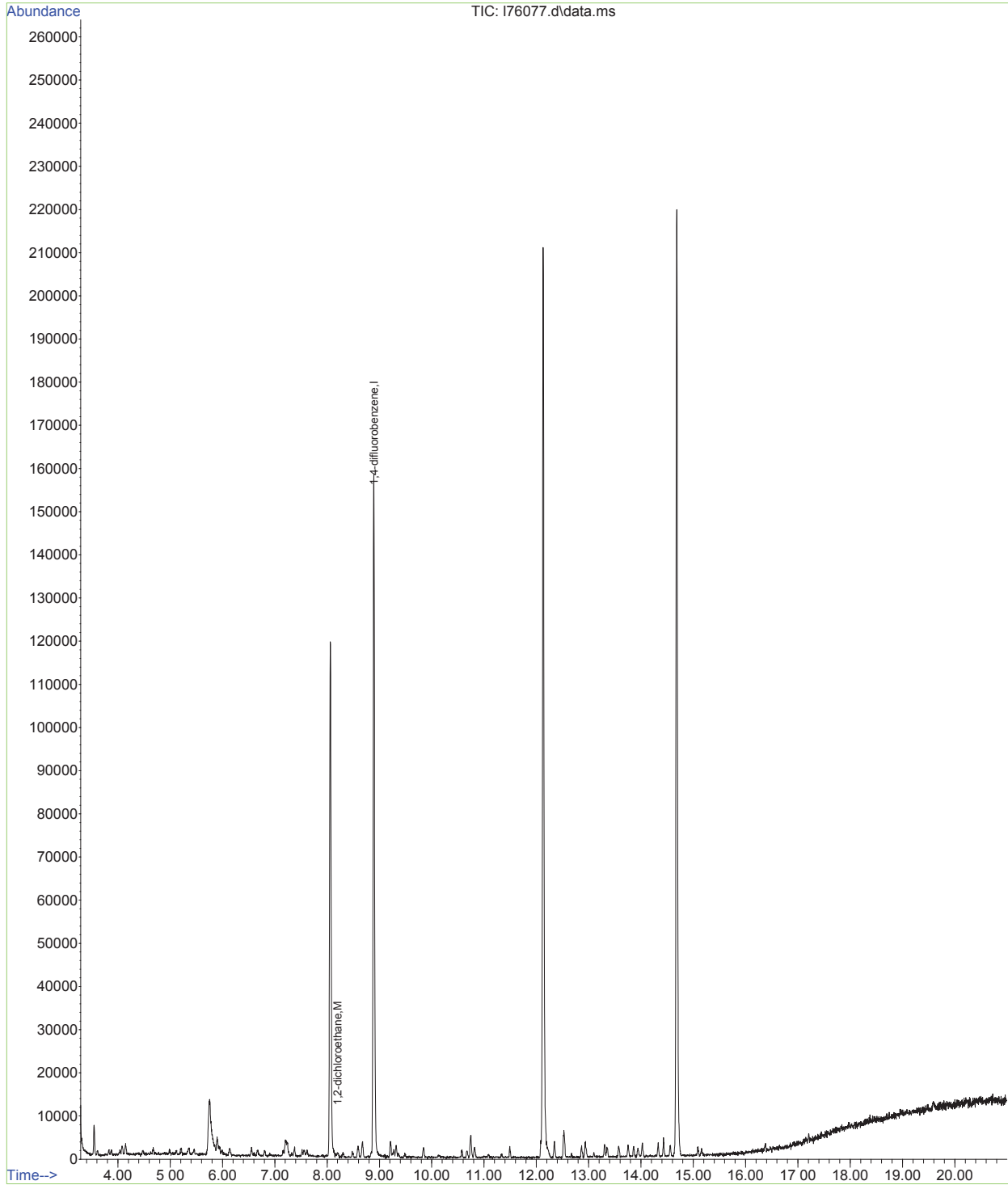
| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.898 | 114  | 130372   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.202 | 62   | 1136     | 0.89  | ug/L  | Qvalue<br>83 |
| -----                  |       |      |          |       |       |              |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130726\  
Data File : 176077.d  
Acq On : 26 Jul 2013 7:46 pm  
Operator : kerryr  
Sample : ic3534-1  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 19 11:45:44 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:44:54 2015  
Response via : Initial Calibration



Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176078.d  
 Acq On : 26 Jul 2013 8:15 pm  
 Operator : kerryr  
 Sample : ic3534-2  
 Misc : ms29503,msl3534,,,,,5,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 19 11:45:46 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:44:54 2015  
 Response via : Initial Calibration

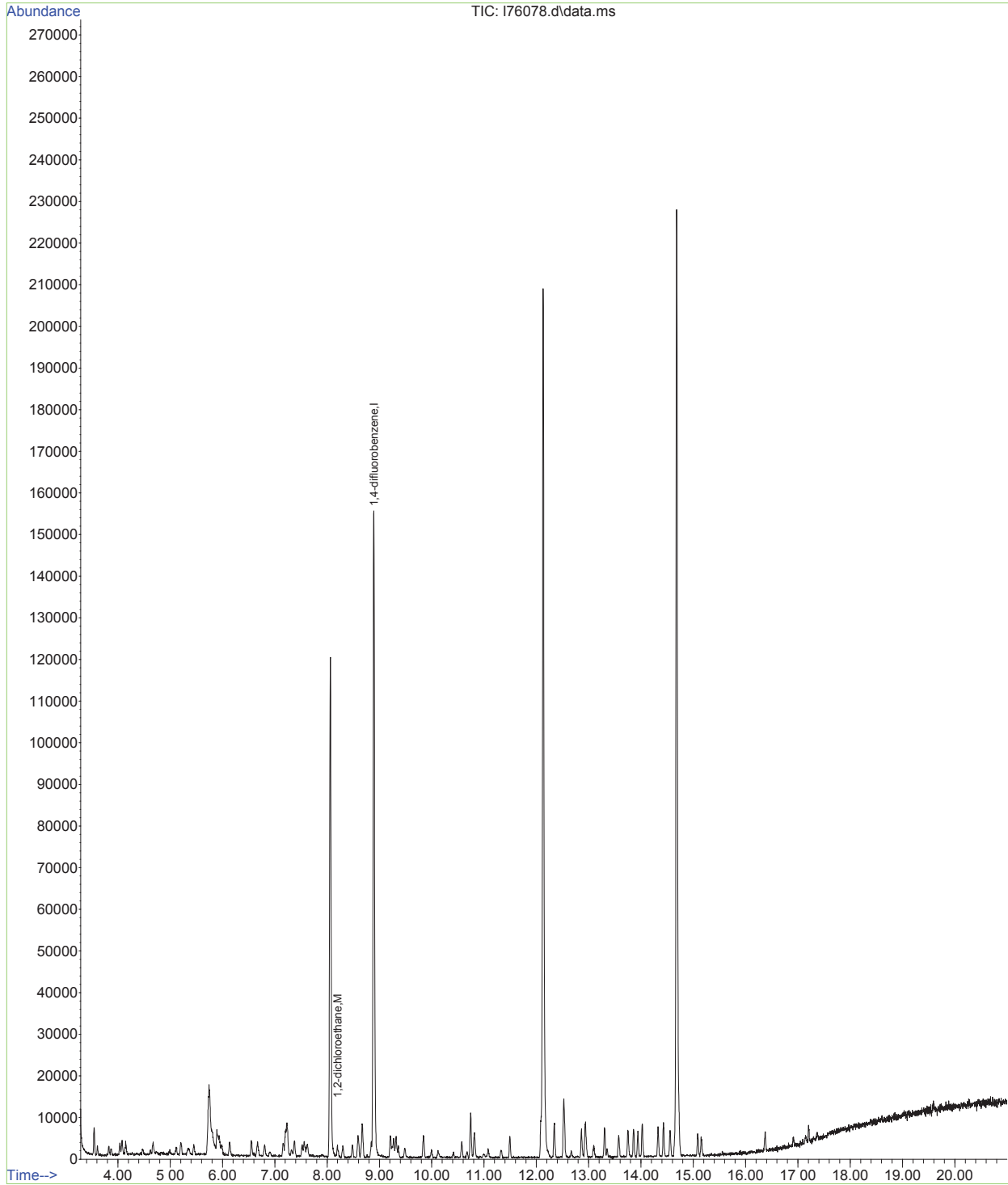
| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.896 | 114  | 129092   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.202 | 62   | 2500     | 1.99  | ug/L  | Qvalue<br>83 |
| -----                  |       |      |          |       |       |              |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130726\  
Data File : 176078.d  
Acq On : 26 Jul 2013 8:15 pm  
Operator : kerryr  
Sample : ic3534-2  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 19 11:45:46 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:44:54 2015  
Response via : Initial Calibration



Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176079.d  
 Acq On : 26 Jul 2013 8:45 pm  
 Operator : kerryr  
 Sample : ic3534-5  
 Misc : ms29503,msl3534,,,,,5,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 19 11:45:48 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:44:54 2015  
 Response via : Initial Calibration

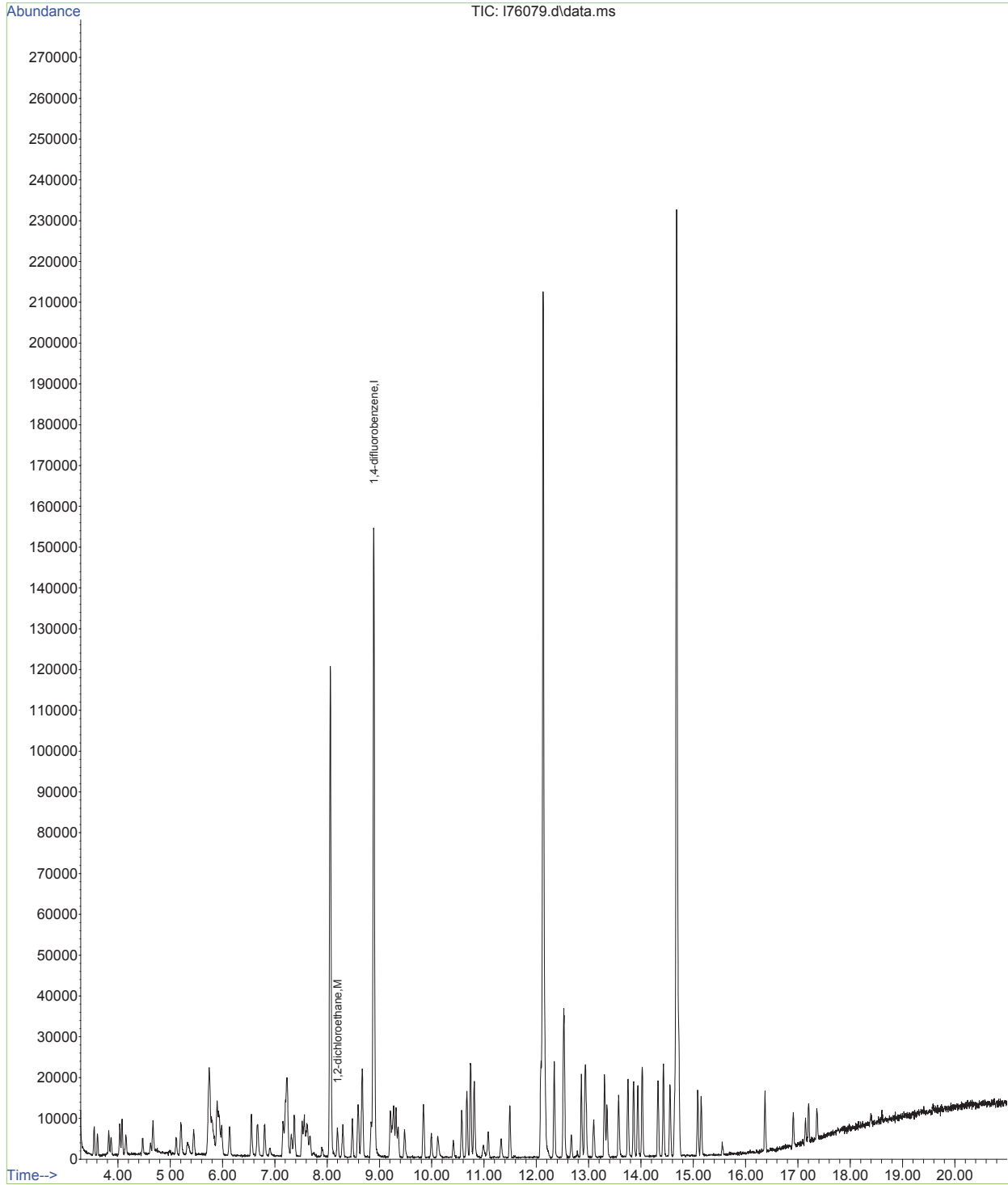
| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.895 | 114  | 126971   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.201 | 62   | 6483     | 5.24  | ug/L  | Qvalue<br>83 |
| -----                  |       |      |          |       |       |              |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130726\  
Data File : 176079.d  
Acq On : 26 Jul 2013 8:45 pm  
Operator : kerryr  
Sample : ic3534-5  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 19 11:45:48 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:44:54 2015  
Response via : Initial Calibration



Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176080.d  
 Acq On : 26 Jul 2013 9:14 pm  
 Operator : kerryr  
 Sample : ic3534-10  
 Misc : ms29503,msl3534,,,,,5,1  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 19 11:45:50 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:44:54 2015  
 Response via : Initial Calibration

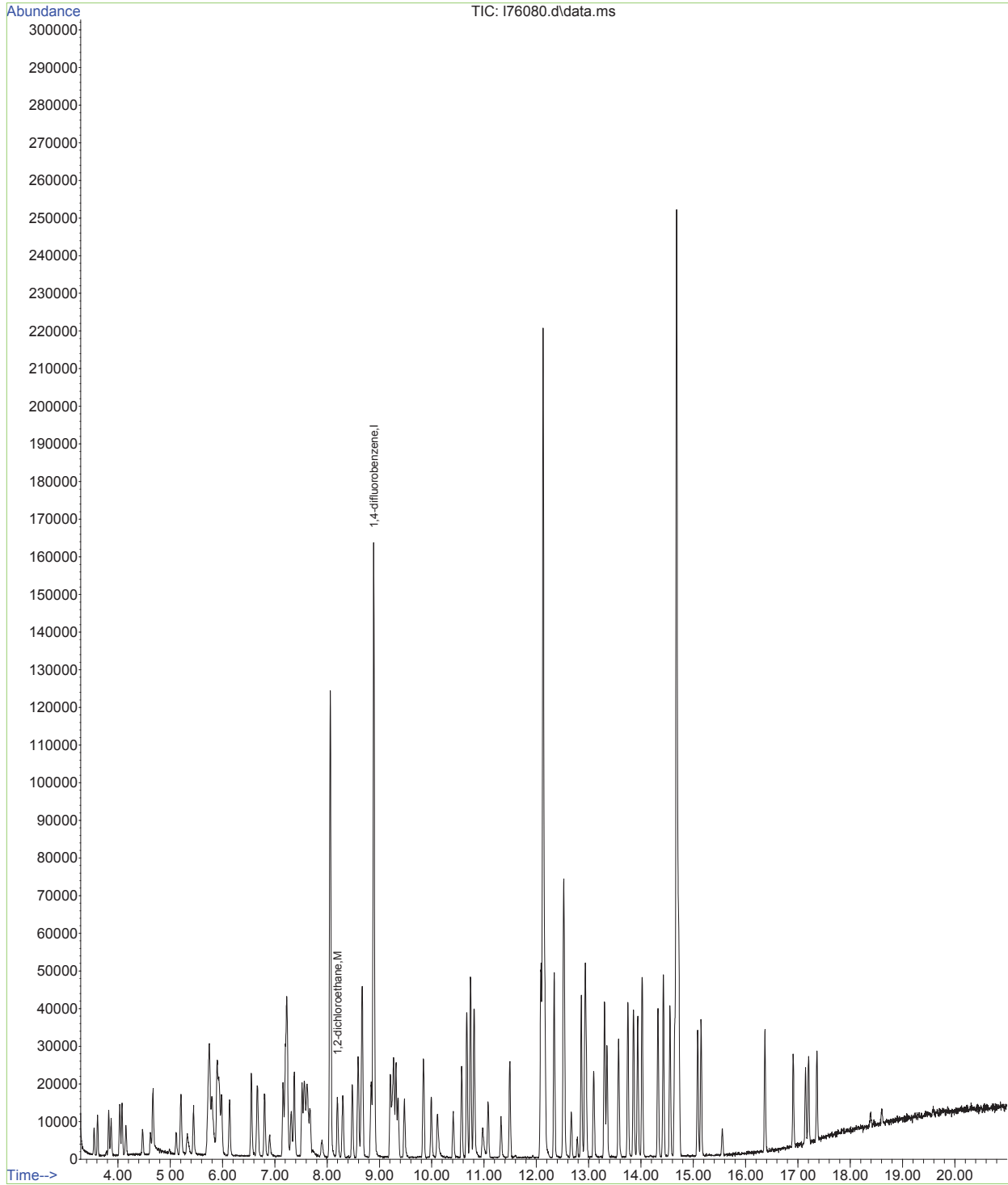
| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.894 | 114  | 130643   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.200 | 62   | 14059    | 11.03 | ug/L  | Qvalue<br>92 |
| -----                  |       |      |          |       |       |              |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130726\  
Data File : 176080.d  
Acq On : 26 Jul 2013 9:14 pm  
Operator : kerryr  
Sample : ic3534-10  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 19 11:45:50 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:44:54 2015  
Response via : Initial Calibration





Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176081.d  
 Acq On : 26 Jul 2013 9:44 pm  
 Operator : kerryr  
 Sample : ic3534-25  
 Misc : ms29503,msl3534,,,,,5,1  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 19 11:45:52 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:44:54 2015  
 Response via : Initial Calibration

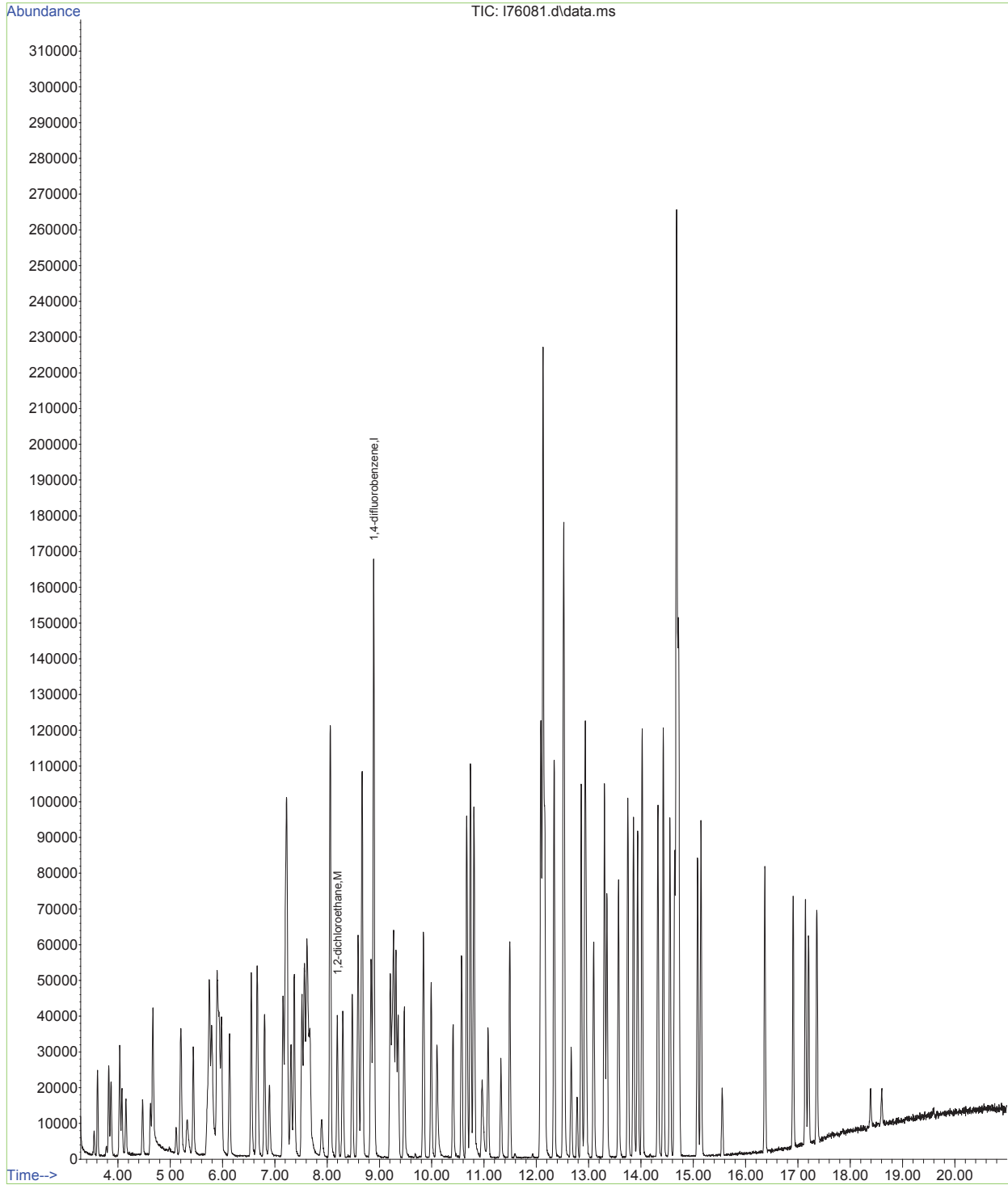
| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.893 | 114  | 131826   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.198 | 62   | 32253    | 25.09 | ug/L  | Qvalue<br>96 |
| -----                  |       |      |          |       |       |              |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130726\  
Data File : 176081.d  
Acq On : 26 Jul 2013 9:44 pm  
Operator : kerryr  
Sample : ic3534-25  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 19 11:45:52 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:44:54 2015  
Response via : Initial Calibration



Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176082.d  
 Acq On : 26 Jul 2013 10:13 pm  
 Operator : kerryr  
 Sample : icc3534-50  
 Misc : ms29503,msl3534,,,,5,1  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 19 11:45:54 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:44:54 2015  
 Response via : Initial Calibration

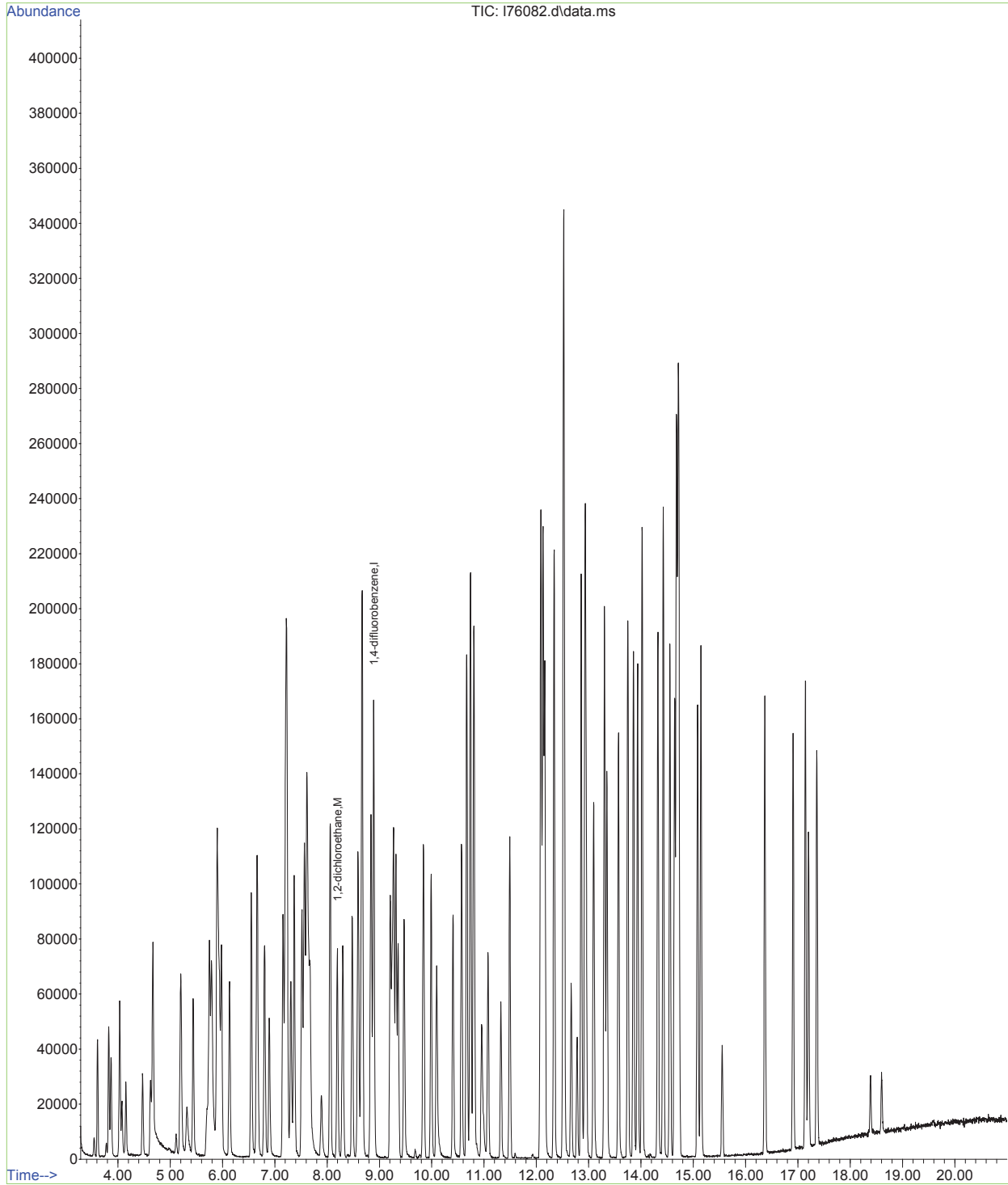
| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)      |
|------------------------|-------|------|----------|-------|-------|---------------|
| -----                  |       |      |          |       |       |               |
| Internal Standards     |       |      |          |       |       |               |
| 1) 1,4-difluorobenzene | 8.892 | 114  | 129809   | 50.00 | ug/L  | 0.00          |
| Target Compounds       |       |      |          |       |       |               |
| 2) 1,2-dichloroethane  | 8.197 | 62   | 63250    | 49.96 | ug/L  | Qvalue<br>100 |
| -----                  |       |      |          |       |       |               |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130726\  
Data File : 176082.d  
Acq On : 26 Jul 2013 10:13 pm  
Operator : kerryr  
Sample : icc3534-50  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 19 11:45:54 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:44:54 2015  
Response via : Initial Calibration



Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176083.d  
 Acq On : 26 Jul 2013 10:43 pm  
 Operator : kerryr  
 Sample : ic3534-100  
 Misc : ms29503,msl3534,,,,,5,1  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 19 11:45:56 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:44:54 2015  
 Response via : Initial Calibration

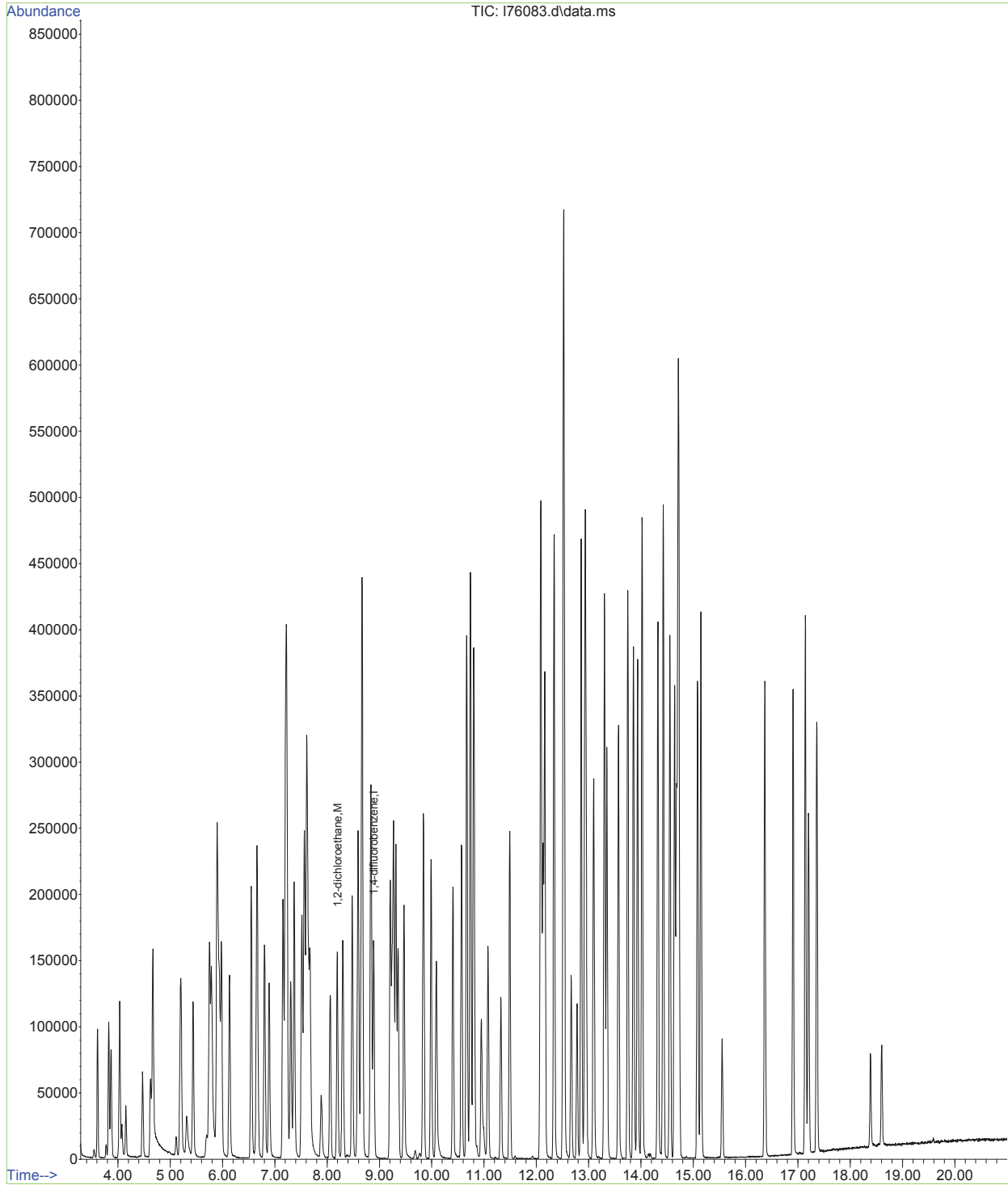
| Compound               | R.T.  | QIon | Response | Conc   | Units | Dev(Min)     |
|------------------------|-------|------|----------|--------|-------|--------------|
| -----                  |       |      |          |        |       |              |
| Internal Standards     |       |      |          |        |       |              |
| 1) 1,4-difluorobenzene | 8.891 | 114  | 128337   | 50.00  | ug/L  | 0.00         |
| Target Compounds       |       |      |          |        |       |              |
| 2) 1,2-dichloroethane  | 8.196 | 62   | 129642   | 103.58 | ug/L  | Qvalue<br>95 |
| -----                  |       |      |          |        |       |              |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130726\  
Data File : 176083.d  
Acq On : 26 Jul 2013 10:43 pm  
Operator : kerryr  
Sample : ic3534-100  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 19 11:45:56 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:44:54 2015  
Response via : Initial Calibration



Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176084.d  
 Acq On : 26 Jul 2013 11:12 pm  
 Operator : kerryr  
 Sample : ic3534-200  
 Misc : ms29503,msl3534,,,,,5,1  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 19 11:45:58 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:44:54 2015  
 Response via : Initial Calibration

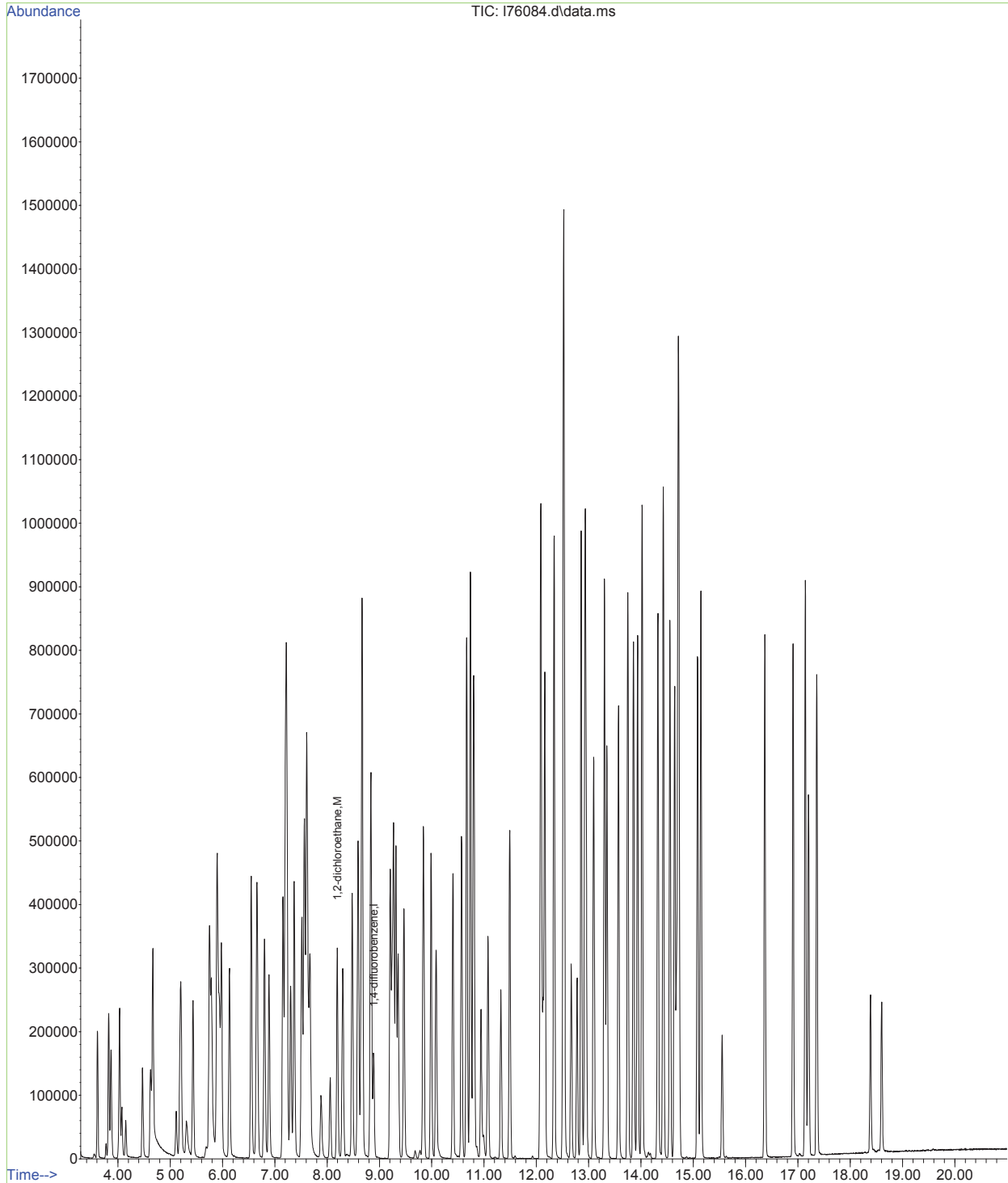
| Compound               | R.T.  | QIon | Response | Conc   | Units | Dev(Min)     |
|------------------------|-------|------|----------|--------|-------|--------------|
| -----                  |       |      |          |        |       |              |
| Internal Standards     |       |      |          |        |       |              |
| 1) 1,4-difluorobenzene | 8.891 | 114  | 126477   | 50.00  | ug/L  | 0.00         |
| Target Compounds       |       |      |          |        |       |              |
| 2) 1,2-dichloroethane  | 8.196 | 62   | 269464   | 218.45 | ug/L  | Qvalue<br>97 |
| -----                  |       |      |          |        |       |              |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130726\  
Data File : 176084.d  
Acq On : 26 Jul 2013 11:12 pm  
Operator : kerryr  
Sample : ic3534-200  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 19 11:45:58 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:44:54 2015  
Response via : Initial Calibration





Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176085.d  
 Acq On : 26 Jul 2013 11:42 pm  
 Operator : kerryr  
 Sample : ic3534-400  
 Misc : ms29503,msl3534,,,,5,1  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 19 11:46:00 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:44:54 2015  
 Response via : Initial Calibration

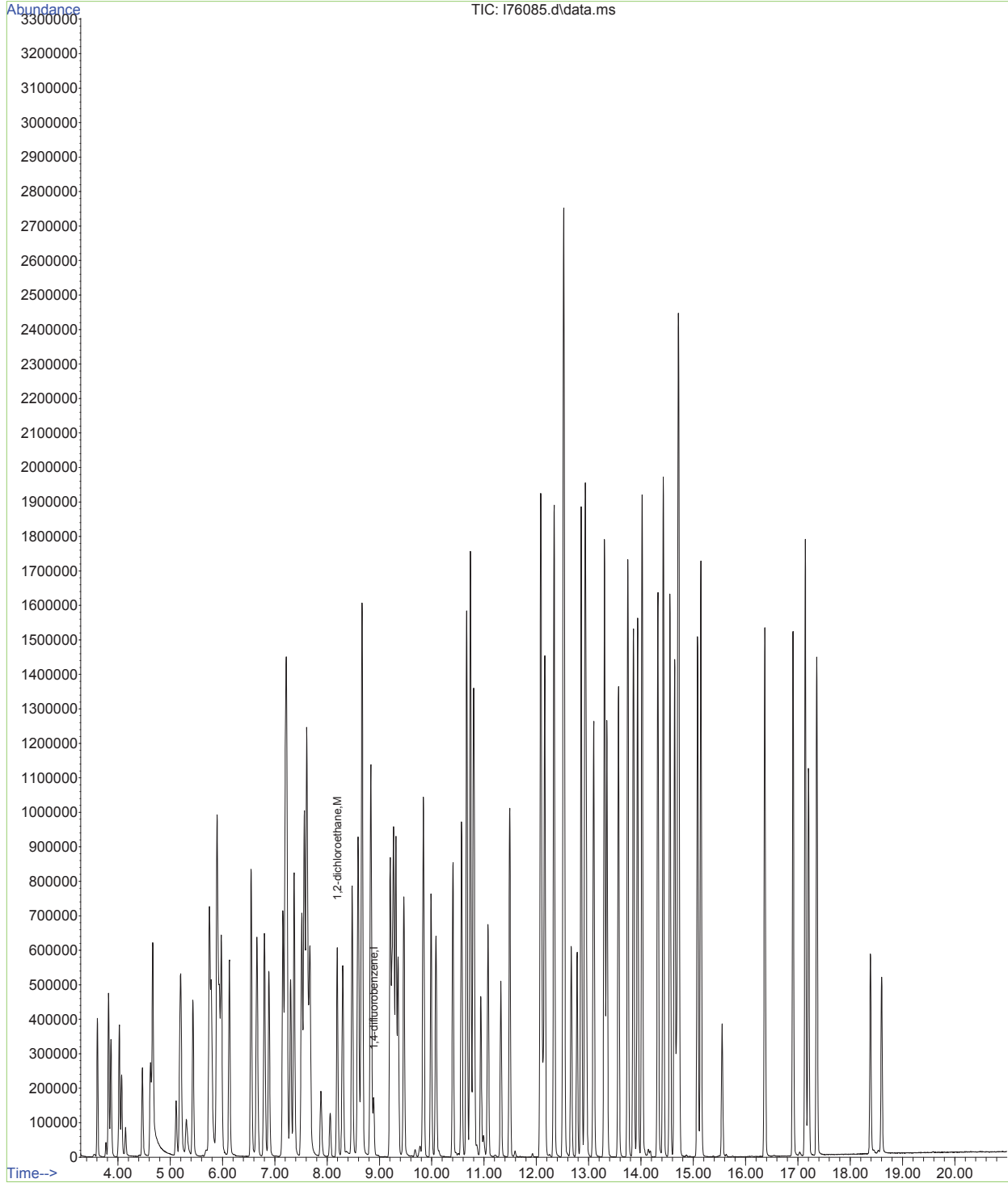
| Compound               | R.T.  | QIon | Response | Conc   | Units | Dev(Min)     |
|------------------------|-------|------|----------|--------|-------|--------------|
| -----                  |       |      |          |        |       |              |
| Internal Standards     |       |      |          |        |       |              |
| 1) 1,4-difluorobenzene | 8.891 | 114  | 126155   | 50.00  | ug/L  | 0.00         |
| Target Compounds       |       |      |          |        |       |              |
| 2) 1,2-dichloroethane  | 8.195 | 62   | 499464   | 405.94 | ug/L  | Qvalue<br>97 |
| -----                  |       |      |          |        |       |              |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130726\  
Data File : 176085.d  
Acq On : 26 Jul 2013 11:42 pm  
Operator : kerryr  
Sample : ic3534-400  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 19 11:46:00 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:44:54 2015  
Response via : Initial Calibration



Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176088.d  
 Acq On : 27 Jul 2013 1:09 am  
 Operator : kerryr  
 Sample : icv3534-50  
 Misc : ms29503,msl3534,,,,5,1  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Oct 19 11:51:40 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

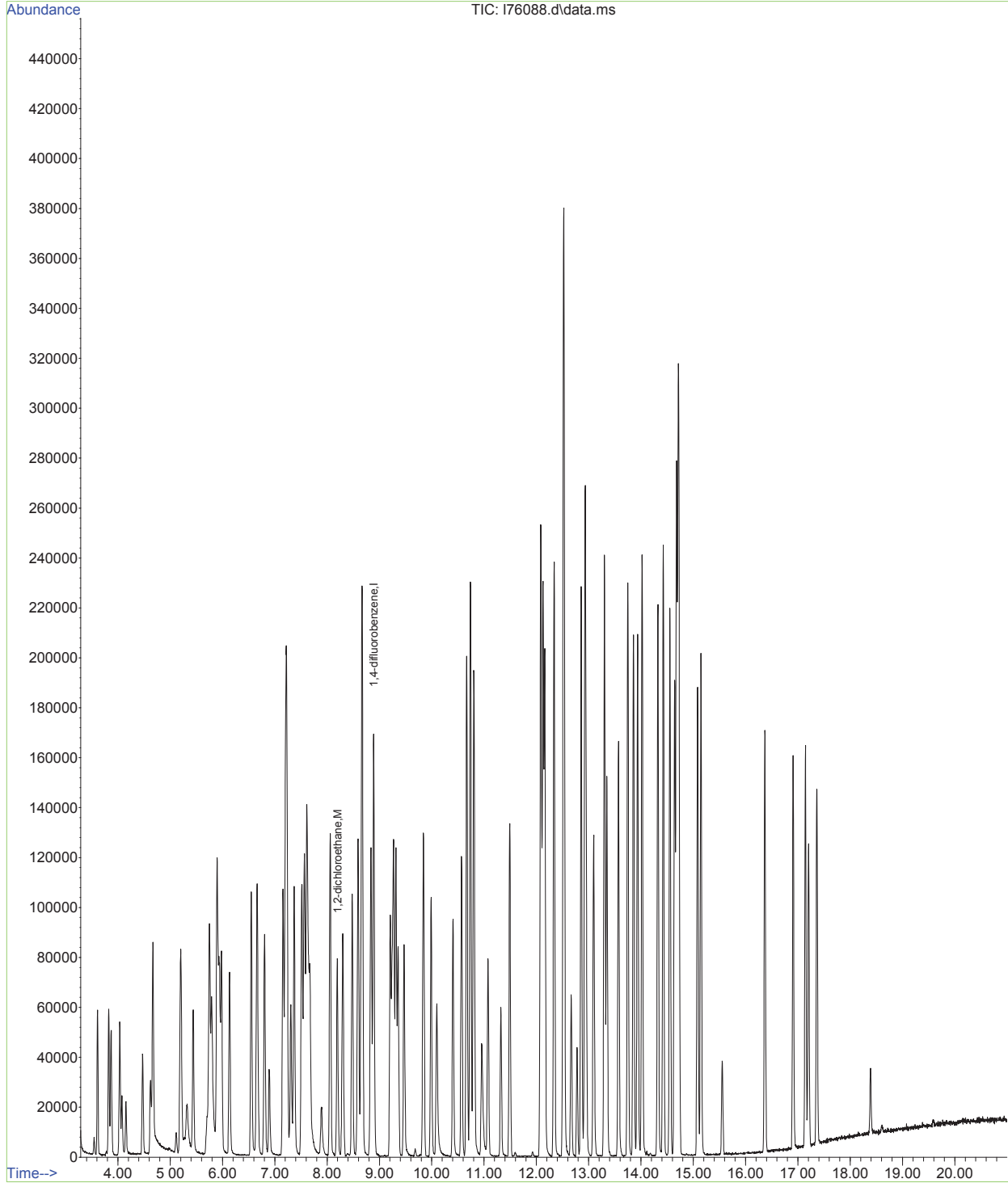
| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.892 | 114  | 132946   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.196 | 62   | 65927    | 49.84 | ug/L  | Qvalue<br>96 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130726\  
Data File : 176088.d  
Acq On : 27 Jul 2013 1:09 am  
Operator : kerryr  
Sample : icv3534-50  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Oct 19 11:51:40 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176141.d  
 Acq On : 30 Jul 2013 8:33 am  
 Operator : kerryr  
 Sample : cc3534-50  
 Misc : ms29537,msl3537,,,,,5,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 20 16:41:32 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.895 | 114  | 132933   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.200 | 62   | 58804    | 44.46 | ug/L  | Qvalue<br>95 |
| -----                  |       |      |          |       |       |              |

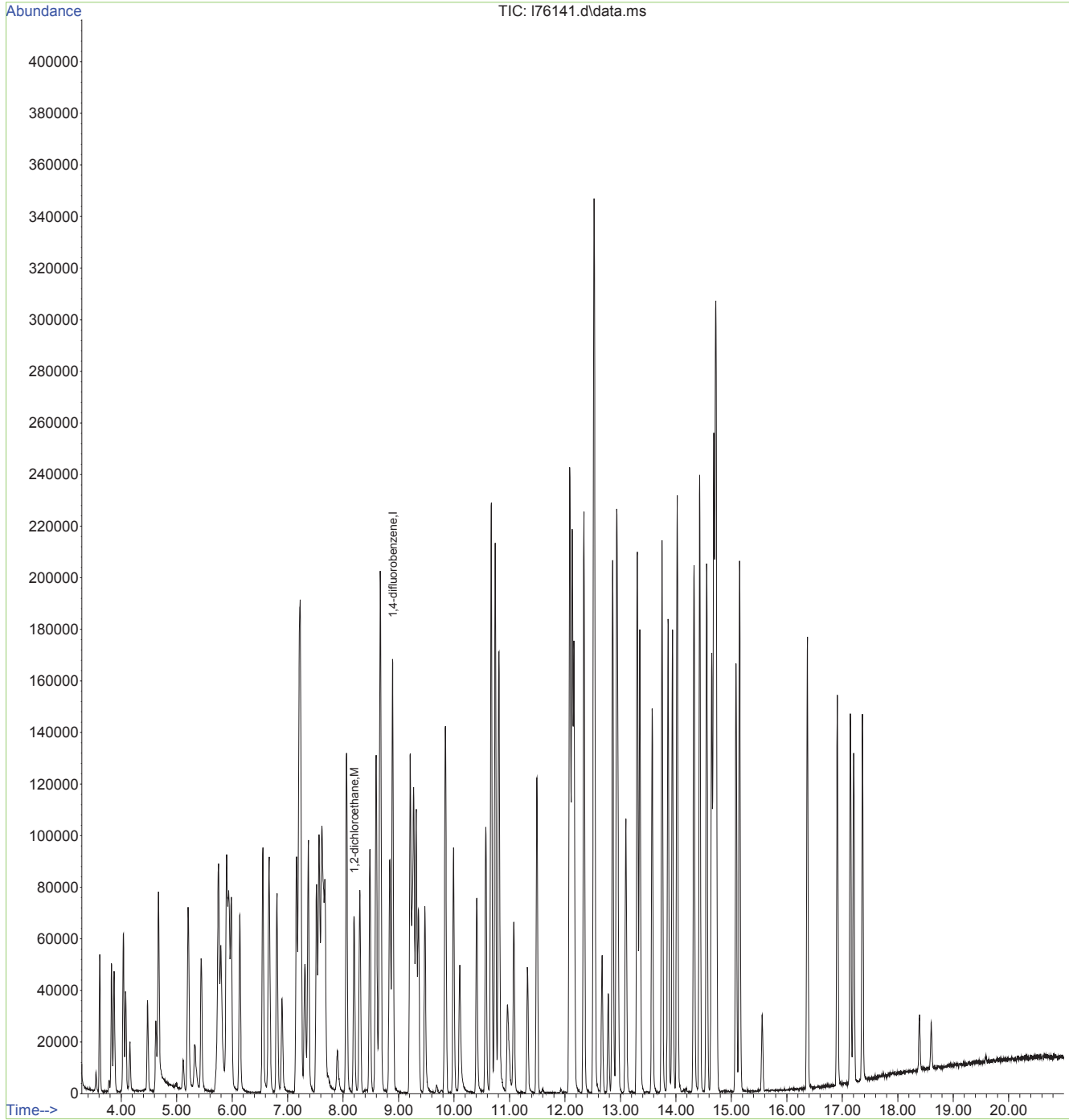
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
Data File : 176141.d  
Acq On : 30 Jul 2013 8:33 am  
Operator : kerryr  
Sample : cc3534-50  
Misc : ms29537,msl3537,,,,5,1  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 20 16:41:32 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176152.d  
 Acq On : 30 Jul 2013 1:54 pm  
 Operator : kerryr  
 Sample : mc22808-1  
 Misc : ms29544tic,msl3537,,,,5,1  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 20 16:41:39 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|------------------------|-------|------|----------|-------|-------|----------|
| -----                  |       |      |          |       |       |          |
| Internal Standards     |       |      |          |       |       |          |
| 1) 1,4-difluorobenzene | 8.893 | 114  | 128582   | 50.00 | ug/L  | 0.00     |

Target Compounds Qvalue  
 -----

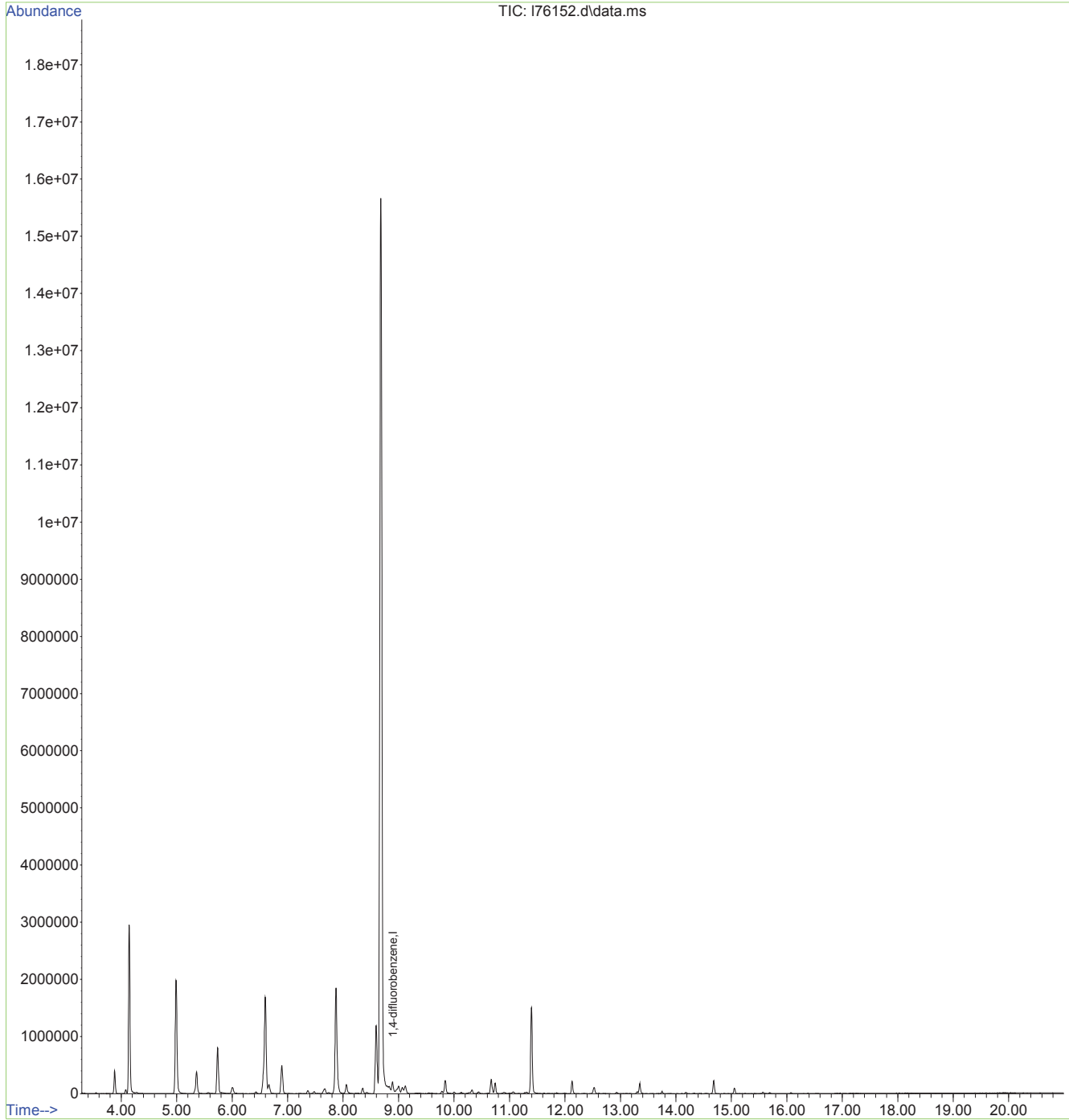
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
Data File : 176152.d  
Acq On : 30 Jul 2013 1:54 pm  
Operator : kerryr  
Sample : mc22808-1  
Misc : ms29544tic,msl3537,,,,5,1  
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 20 16:41:39 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176153.d  
 Acq On : 30 Jul 2013 2:23 pm  
 Operator : kerryr  
 Sample : mc22808-2  
 Misc : ms29544tic,msl3537,,,,5,1  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 20 16:41:41 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|------------------------|-------|------|----------|-------|-------|----------|
| -----                  |       |      |          |       |       |          |
| Internal Standards     |       |      |          |       |       |          |
| 1) 1,4-difluorobenzene | 9.000 | 114  | 92723    | 50.00 | ug/L  | 0.11     |

Target Compounds Qvalue  
 -----

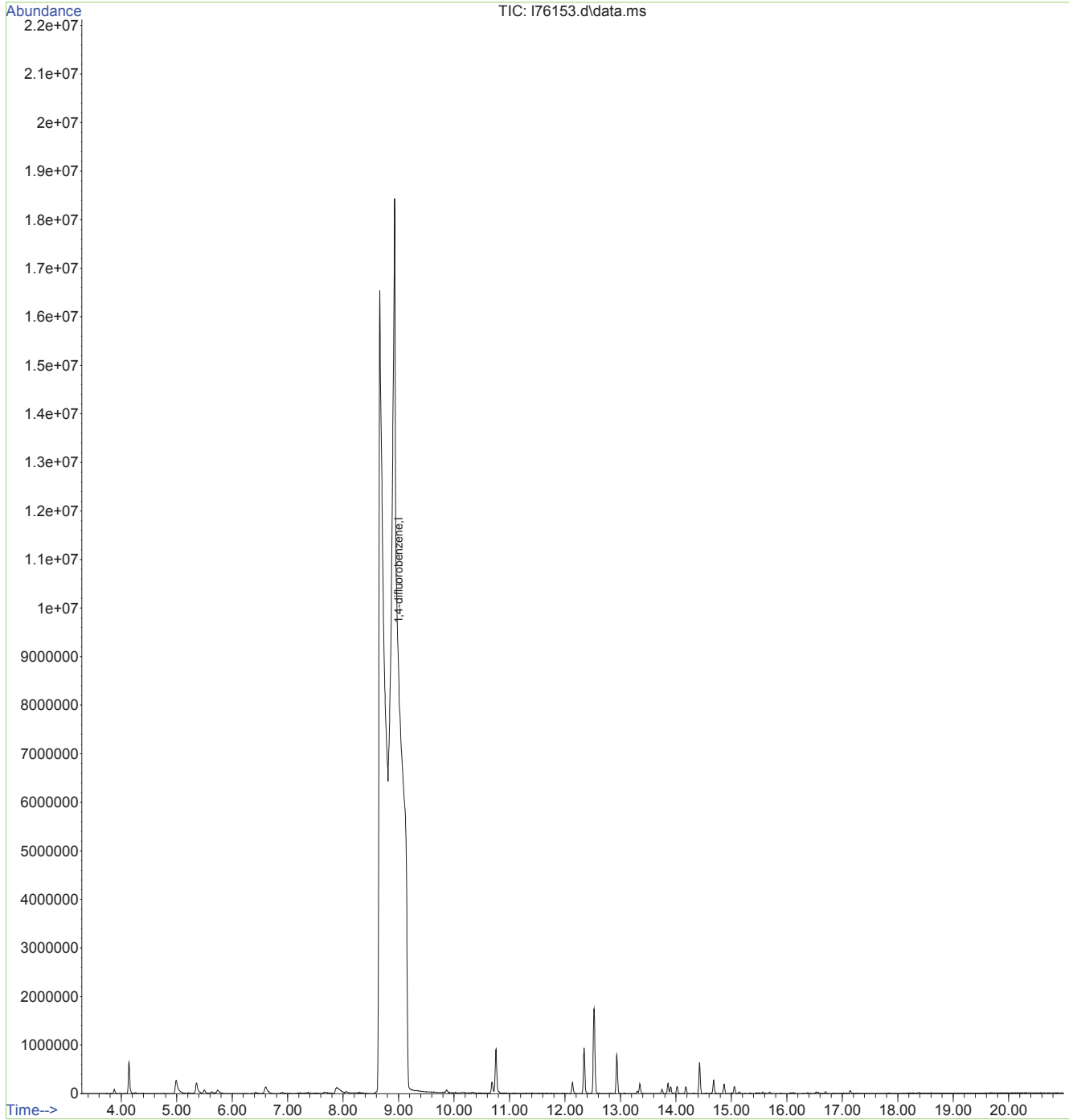
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
Data File : 176153.d  
Acq On : 30 Jul 2013 2:23 pm  
Operator : kerryr  
Sample : mc22808-2  
Misc : ms29544tic,msl3537,,,,5,1  
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 20 16:41:41 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176154.d  
 Acq On : 30 Jul 2013 2:52 pm  
 Operator : kerryr  
 Sample : mc22808-3  
 Misc : ms29544tic,msl3537,,,,5,1  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Oct 20 16:41:43 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|------------------------|-------|------|----------|-------|-------|----------|
| -----                  |       |      |          |       |       |          |
| Internal Standards     |       |      |          |       |       |          |
| 1) 1,4-difluorobenzene | 8.944 | 114  | 112101   | 50.00 | ug/L  | 0.05     |

Target Compounds Qvalue  
 -----

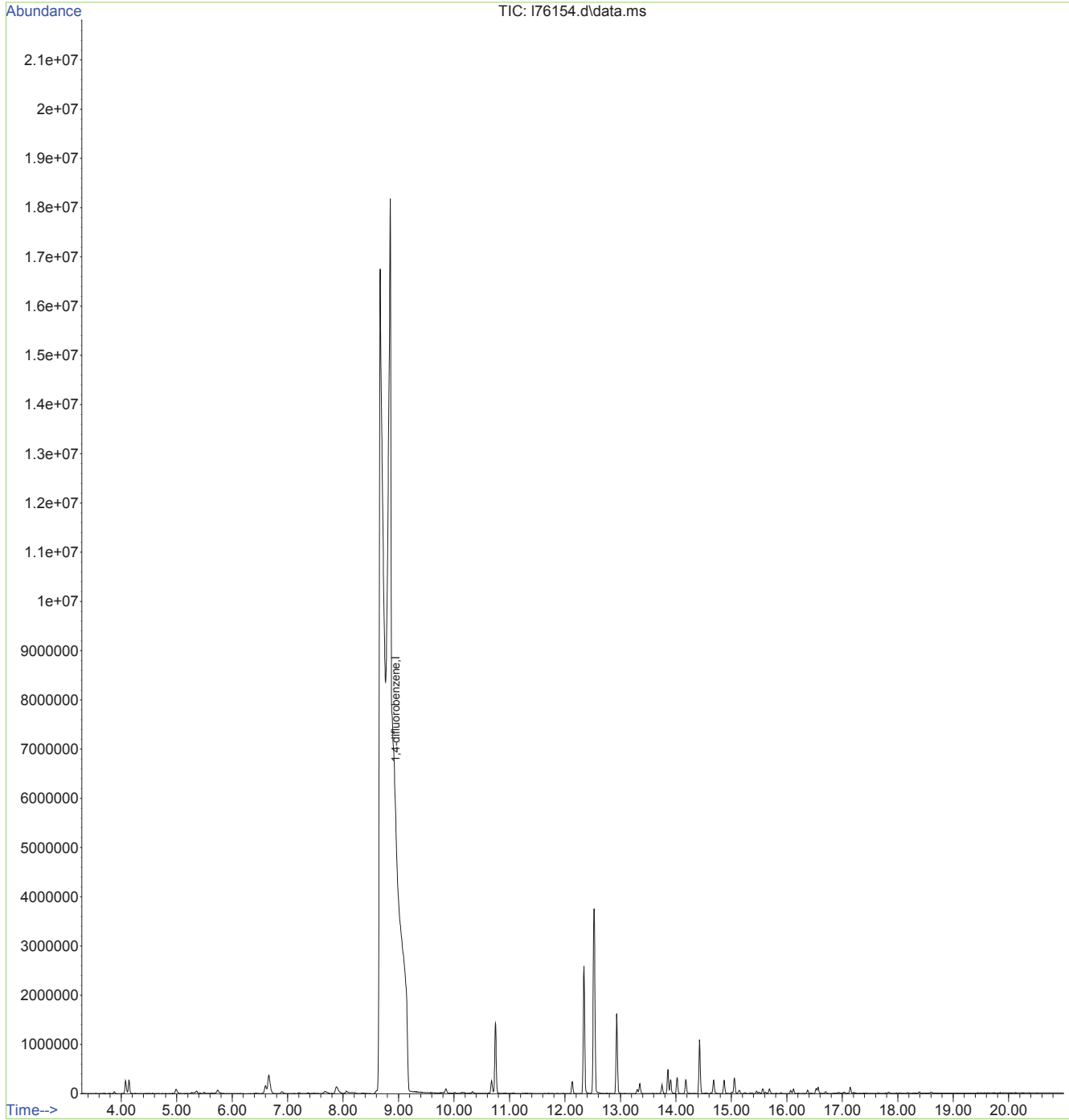
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
Data File : 176154.d  
Acq On : 30 Jul 2013 2:52 pm  
Operator : kerryr  
Sample : mc22808-3  
Misc : ms29544tic,msl3537,,,,5,1  
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Oct 20 16:41:43 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176155.d  
 Acq On : 30 Jul 2013 3:21 pm  
 Operator : kerryr  
 Sample : mc22808-4  
 Misc : ms29544tic,msl3537,,,,5,1  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Oct 20 16:41:45 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|------------------------|-------|------|----------|-------|-------|----------|
| -----                  |       |      |          |       |       |          |
| Internal Standards     |       |      |          |       |       |          |
| 1) 1,4-difluorobenzene | 8.944 | 114  | 116261   | 50.00 | ug/L  | 0.05     |

Target Compounds Qvalue  
 -----

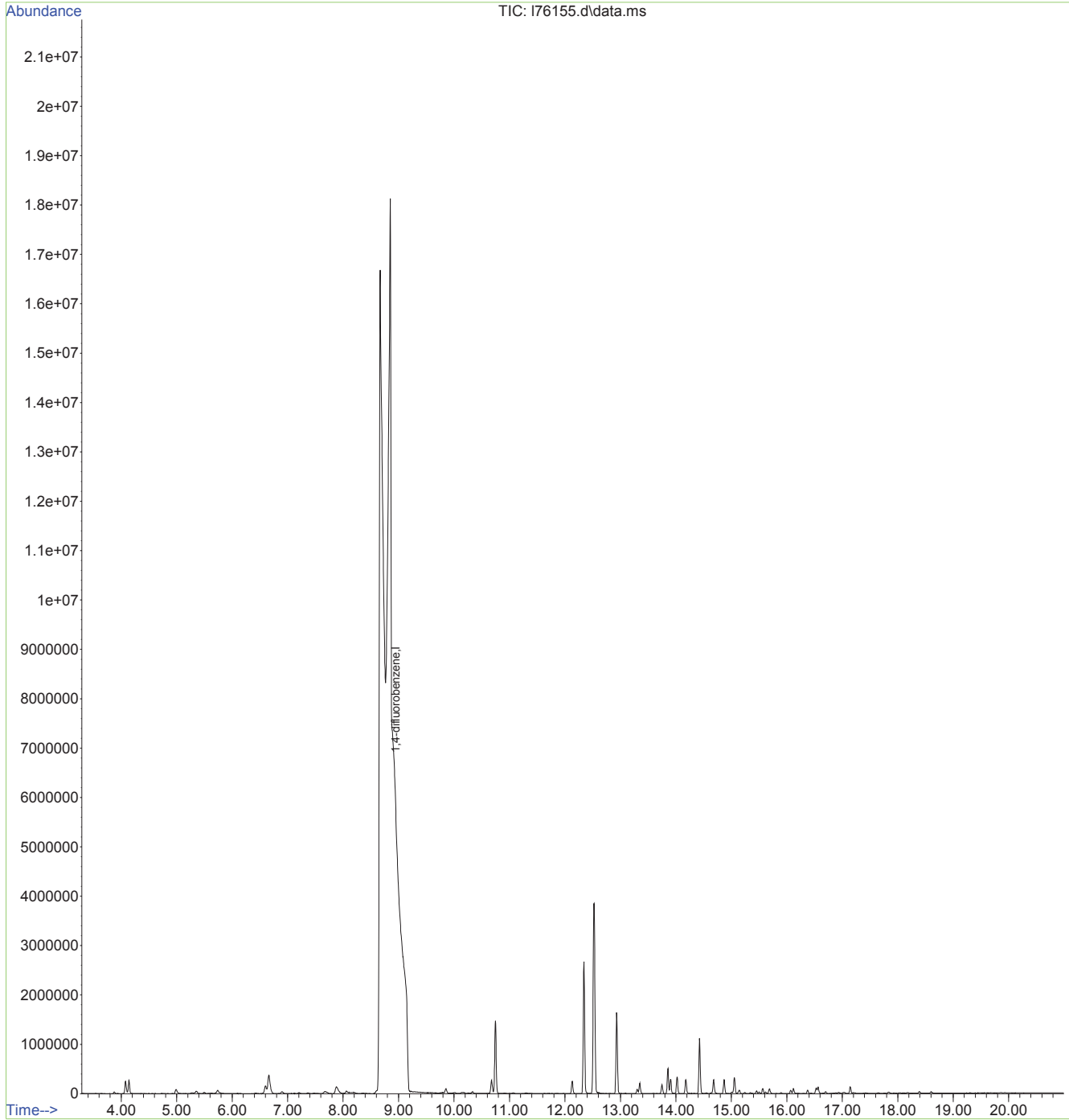
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
Data File : 176155.d  
Acq On : 30 Jul 2013 3:21 pm  
Operator : kerryr  
Sample : mc22808-4  
Misc : ms29544tic,msl3537,,,,5,1  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Oct 20 16:41:45 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176142.d  
 Acq On : 30 Jul 2013 9:02 am  
 Operator : kerryr  
 Sample : bs  
 Misc : ms29537,msl3537,,,,,5,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 20 16:41:35 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.893 | 114  | 140042   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.198 | 62   | 65009    | 46.65 | ug/L  | Qvalue<br>98 |
| -----                  |       |      |          |       |       |              |

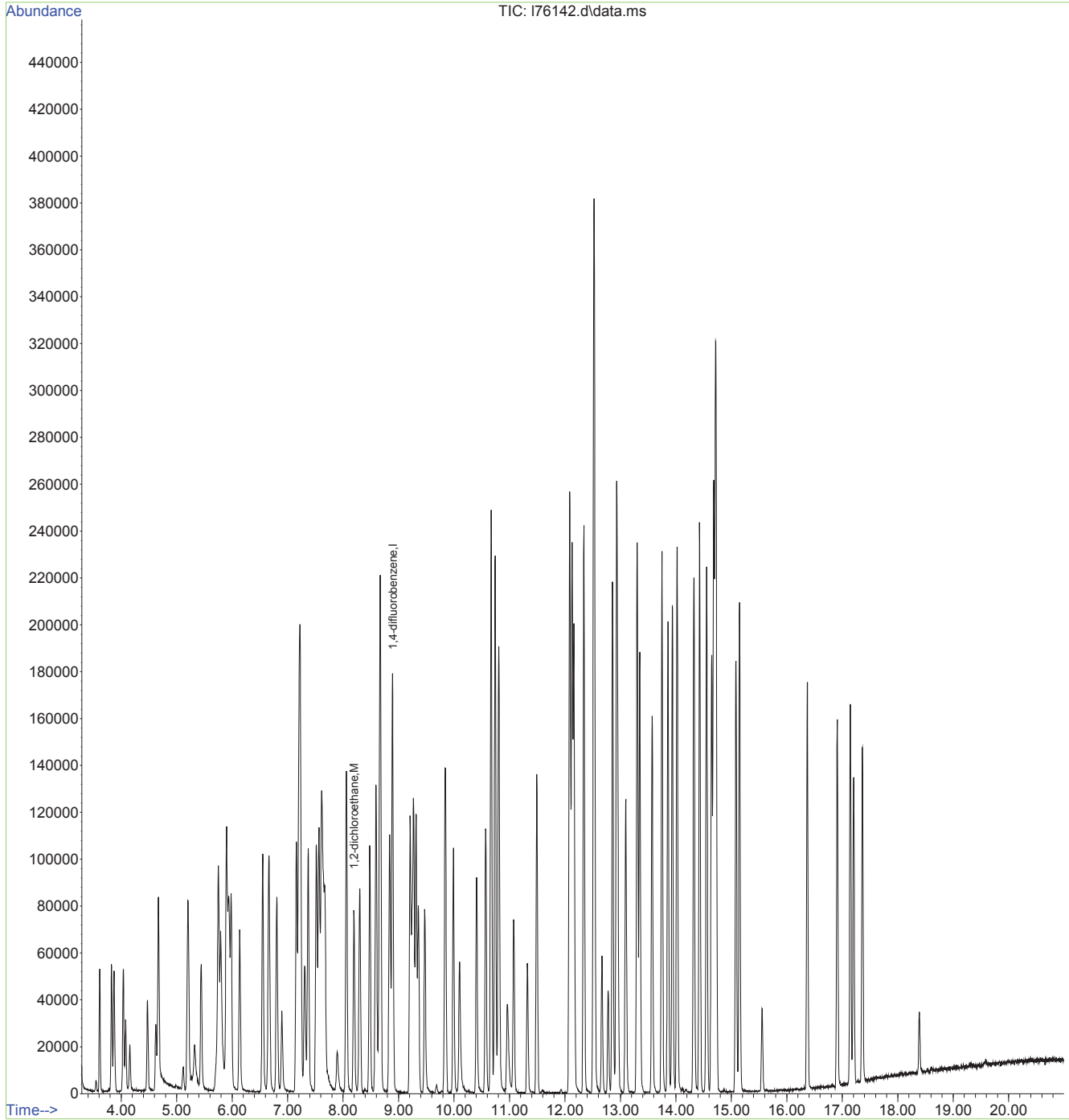
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
Data File : 176142.d  
Acq On : 30 Jul 2013 9:02 am  
Operator : kerryr  
Sample : bs  
Misc : ms29537,msl3537,,,,5,1  
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 20 16:41:35 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176145.d  
 Acq On : 30 Jul 2013 10:32 am  
 Operator : kerryr  
 Sample : mb  
 Misc : ms29544tic,msl3537,,,,5,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 20 16:41:37 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|------------------------|-------|------|----------|-------|-------|----------|
| -----                  |       |      |          |       |       |          |
| Internal Standards     |       |      |          |       |       |          |
| 1) 1,4-difluorobenzene | 8.897 | 114  | 138887   | 50.00 | ug/L  | 0.00     |

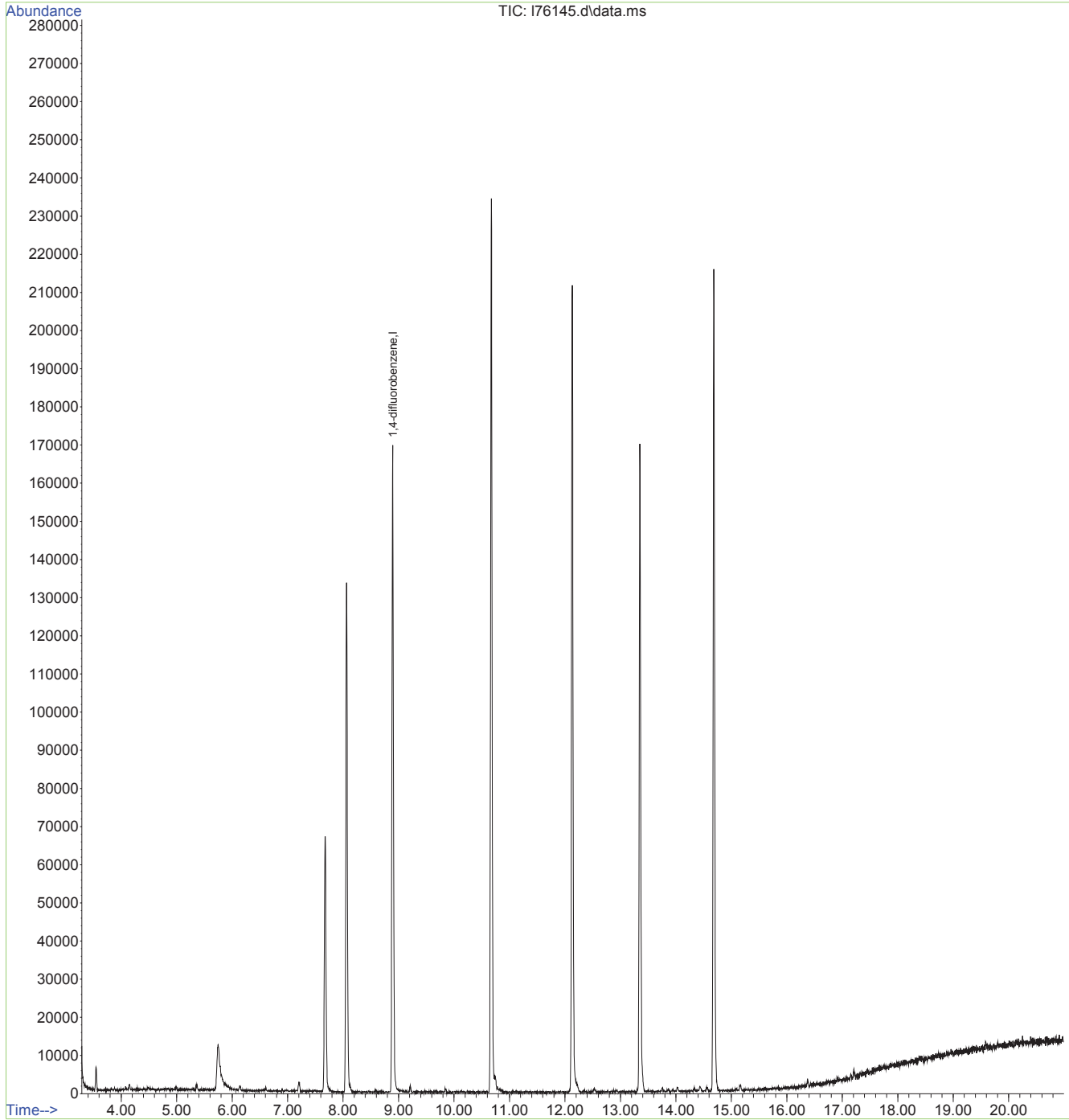
Target Compounds Qvalue  
 -----

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130730\  
Data File : 176145.d  
Acq On : 30 Jul 2013 10:32 am  
Operator : kerryr  
Sample : mb  
Misc : ms29544tic,msl3537,,,,5,1  
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 20 16:41:37 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176163.d  
 Acq On : 30 Jul 2013 7:12 pm  
 Operator : kerryr  
 Sample : mc22841-37ms  
 Misc : ms29537,msl3537,,,,,5,5  
 ALS Vial : 23 Sample Multiplier: 1

Quant Time: Oct 20 16:41:59 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.892 | 114  | 146262   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.198 | 62   | 61358    | 42.16 | ug/L  | Qvalue<br>95 |
| -----                  |       |      |          |       |       |              |

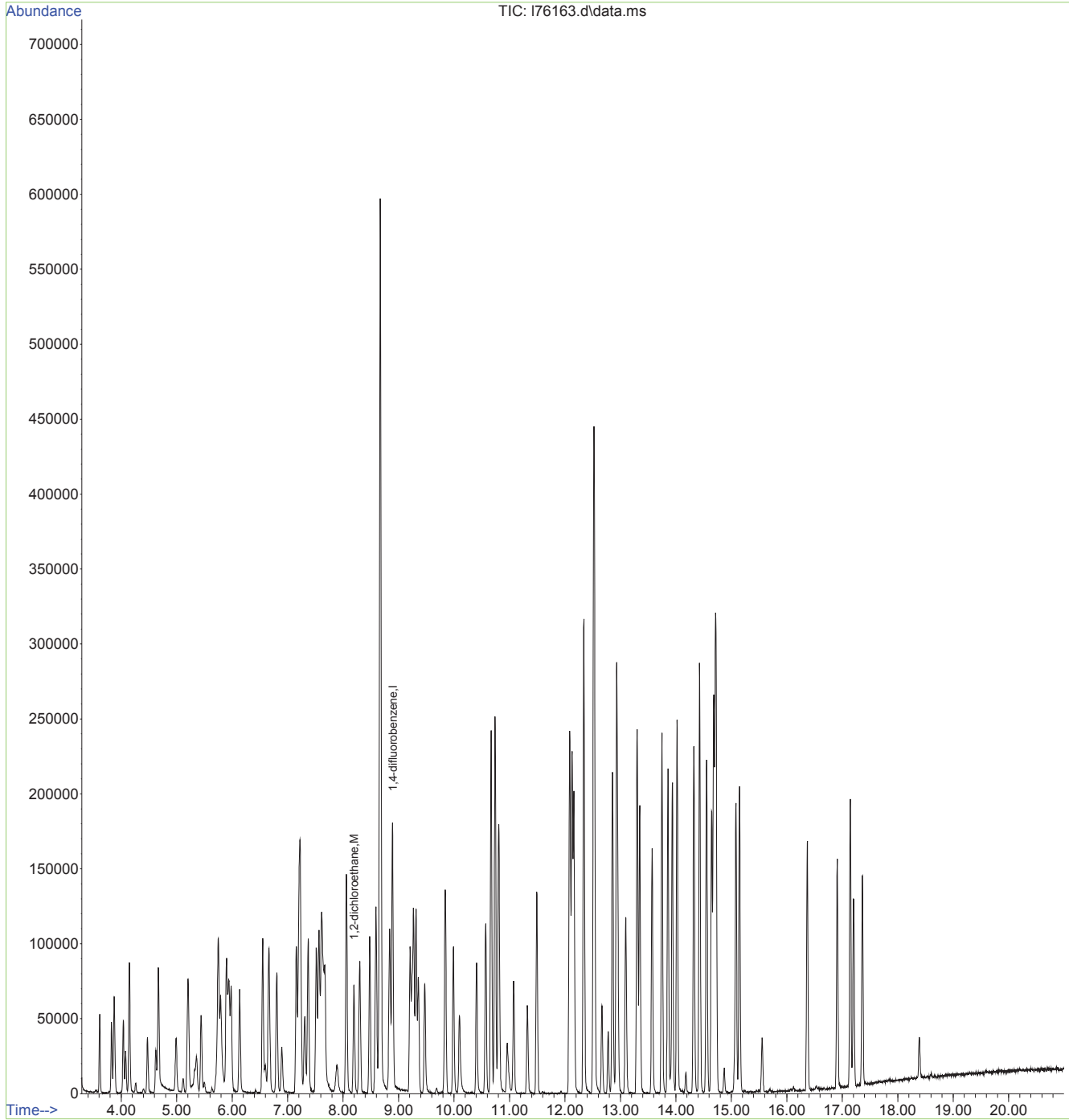
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
Data File : 176163.d  
Acq On : 30 Jul 2013 7:12 pm  
Operator : kerryr  
Sample : mc22841-37ms  
Misc : ms29537,msl3537,,,,,5,5  
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Oct 20 16:41:59 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176163.d  
 Acq On : 30 Jul 2013 7:12 pm  
 Operator : kerryr  
 Sample : mc22841-37ms  
 Misc : ms29537,msl3537,,,,,5,5  
 ALS Vial : 23 Sample Multiplier: 1

Quant Time: Oct 20 16:41:59 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.892 | 114  | 146262   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.198 | 62   | 61358    | 42.16 | ug/L  | Qvalue<br>95 |
| -----                  |       |      |          |       |       |              |

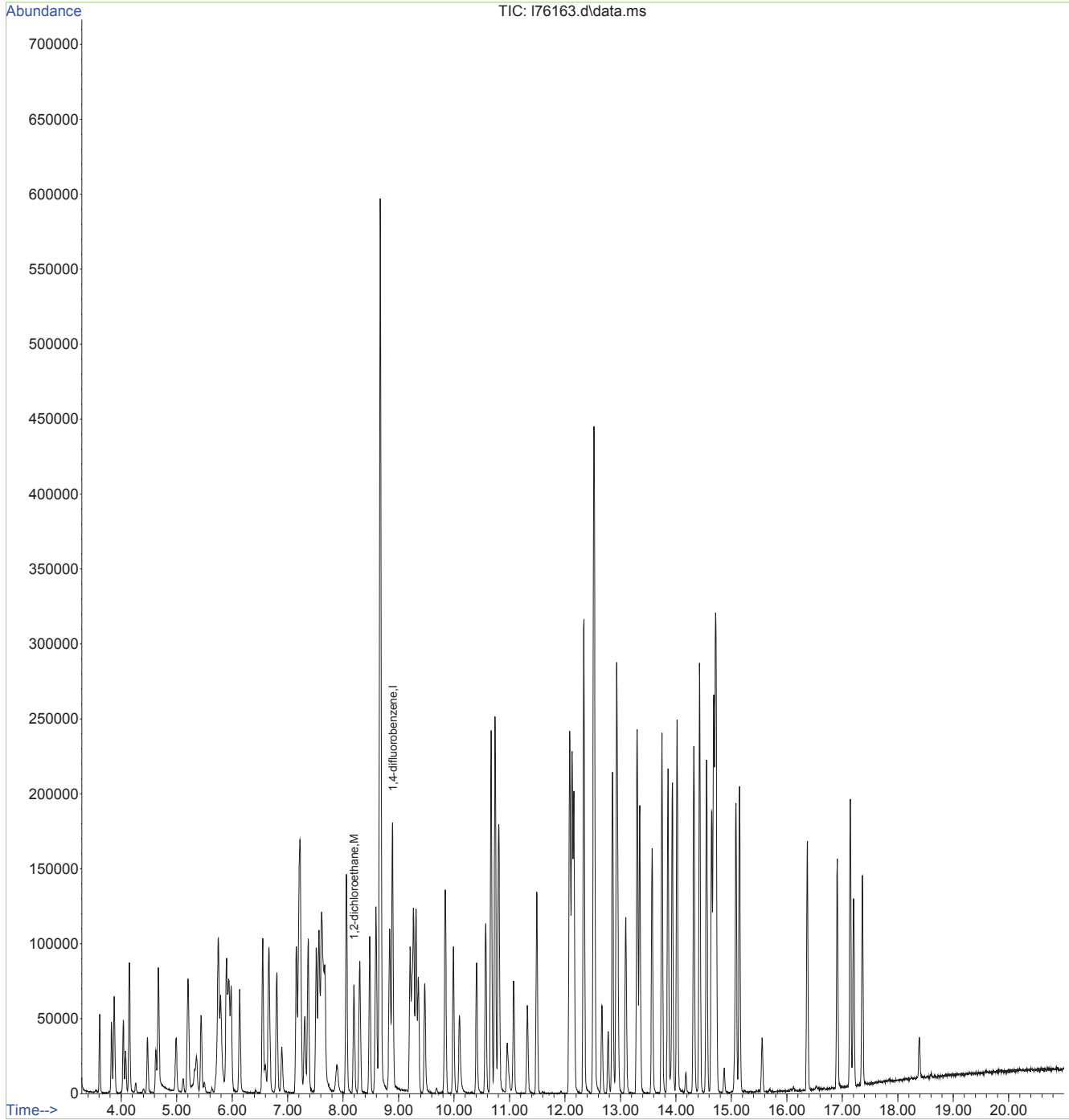
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
Data File : 176163.d  
Acq On : 30 Jul 2013 7:12 pm  
Operator : kerryr  
Sample : mc22841-37ms  
Misc : ms29537,msl3537,,,,,5,5  
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Oct 20 16:41:59 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176164.d  
 Acq On : 30 Jul 2013 7:42 pm  
 Operator : kerryr  
 Sample : mc22841-37msd  
 Misc : ms29537,msl3537,,,,,5,5  
 ALS Vial : 24 Sample Multiplier: 1

Quant Time: Oct 20 16:42:01 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

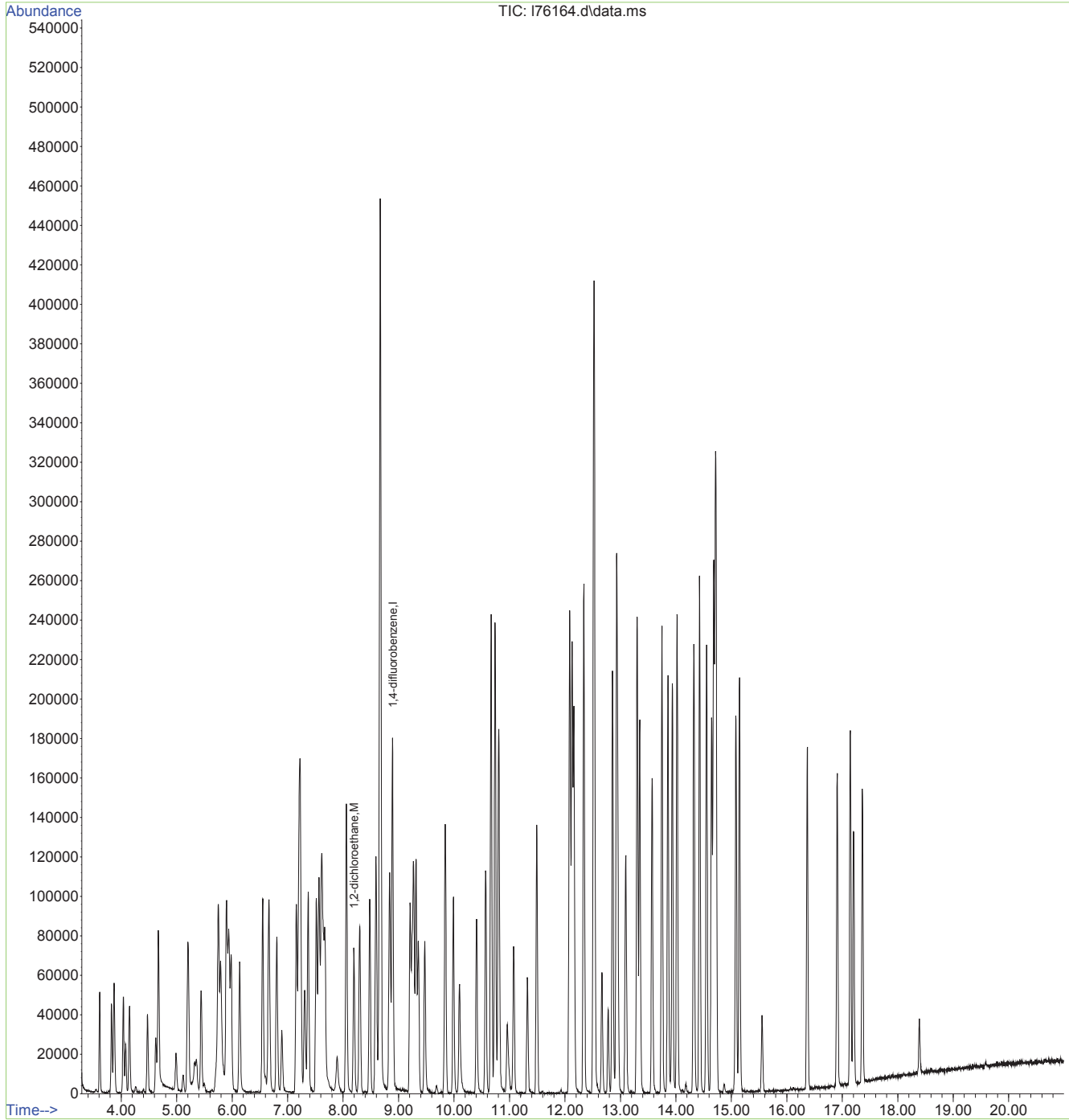
| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.893 | 114  | 144863   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.197 | 62   | 61678    | 42.79 | ug/L  | Qvalue<br>94 |
| -----                  |       |      |          |       |       |              |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130730\  
Data File : 176164.d  
Acq On : 30 Jul 2013 7:42 pm  
Operator : kerryr  
Sample : mc22841-37msd  
Misc : ms29537,msl3537,,,,,5,5  
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Oct 20 16:42:01 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176164.d  
 Acq On : 30 Jul 2013 7:42 pm  
 Operator : kerryr  
 Sample : mc22841-37msd  
 Misc : ms29537,msl3537,,,,,5,5  
 ALS Vial : 24 Sample Multiplier: 1

Quant Time: Oct 20 16:42:01 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.893 | 114  | 144863   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.197 | 62   | 61678    | 42.79 | ug/L  | Qvalue<br>94 |
| -----                  |       |      |          |       |       |              |

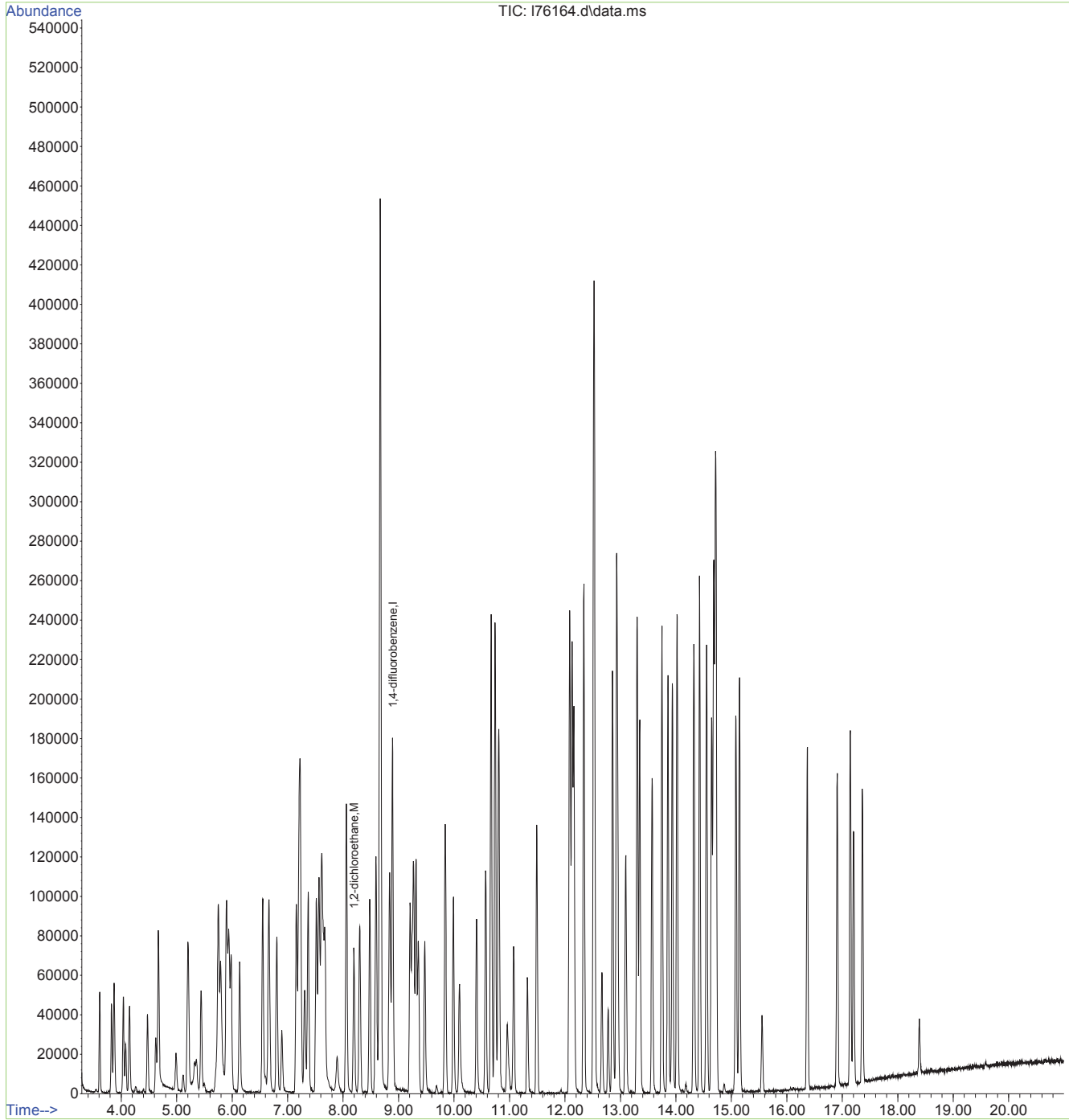
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
Data File : 176164.d  
Acq On : 30 Jul 2013 7:42 pm  
Operator : kerryr  
Sample : mc22841-37msd  
Misc : ms29537,msl3537,,,,,5,5  
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Oct 20 16:42:01 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration



### Internal Sample Tracking Chronicle

Shell Oil

Job No: MC22808

URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

5.3  
5

| Sample Number  | Method             | Analyzed        | By | Prepped   | By | Test Codes |
|--|--------------------|-----------------|----|-----------|----|------------|
| MC22808-1 Collected: 17-JUL-13 09:35 By: LRDM Received: 18-JUL-13 By: MW4-ROX-071713     |                    |                 |    |           |    |            |
| MC22808-1  | SW846 8270C        | 25-JUL-13 11:33 | WK | 23-JUL-13 | PA | AB8270SL + |
| MC22808-1  | SW846 8011         | 25-JUL-13 12:50 | NK | 23-JUL-13 | BJ | V8011SL    |
| MC22808-1  | SW846 8270C BY SIM | 25-JUL-13 23:06 | WK | 23-JUL-13 | SC | B8270SIMSL |
| MC22808-1  | SW846 8260B        | 30-JUL-13 13:54 | KR |           |    | V8260SL +  |
| MC22808-1  | SW846 8260B        | 30-JUL-13 14:37 | GK |           |    | V8260SL +  |
| MC22808-1  | SW846 8260B        | 31-JUL-13 14:11 | GK |           |    | V8260SL +  |
| MC22808-2 Collected: 17-JUL-13 10:30 By: LRDM Received: 18-JUL-13 By: MW7-ROX-071713     |                    |                 |    |           |    |            |
| MC22808-2  | SW846 8270C        | 25-JUL-13 11:57 | WK | 23-JUL-13 | PA | AB8270SL + |
| MC22808-2  | SW846 8011         | 25-JUL-13 13:14 | NK | 23-JUL-13 | BJ | V8011SL    |
| MC22808-2  | SW846 8270C BY SIM | 25-JUL-13 23:29 | WK | 23-JUL-13 | SC | B8270SIMSL |
| MC22808-2  | SW846 8260B        | 30-JUL-13 14:23 | KR |           |    | V8260SL +  |
| MC22808-2  | SW846 8260B        | 30-JUL-13 15:05 | GK |           |    | V8260SL +  |
| MC22808-2  | SW846 8260B        | 01-AUG-13 13:15 | GK |           |    | V8260SL +  |
| MC22808-3 Collected: 17-JUL-13 11:30 By: LRDM Received: 18-JUL-13 By: MW8-ROX-071713     |                    |                 |    |           |    |            |
| MC22808-3  | SW846 8270C        | 25-JUL-13 12:21 | WK | 23-JUL-13 | PA | AB8270SL + |
| MC22808-3  | SW846 8011         | 25-JUL-13 13:38 | NK | 23-JUL-13 | BJ | V8011SL    |
| MC22808-3  | SW846 8270C BY SIM | 25-JUL-13 23:53 | WK | 23-JUL-13 | SC | B8270SIMSL |
| MC22808-3  | SW846 8260B        | 30-JUL-13 14:52 | KR |           |    | V8260SL +  |
| MC22808-3  | SW846 8260B        | 30-JUL-13 15:32 | GK |           |    | V8260SL +  |
| MC22808-3  | SW846 8270C        | 31-JUL-13 11:41 | KR | 23-JUL-13 | PA | AB8270SL + |
| MC22808-3  | SW846 8260B        | 31-JUL-13 15:05 | GK |           |    | V8260SL +  |
| MC22808-4 Collected: 17-JUL-13 11:30 By: LRDM Received: 18-JUL-13 By: MW8-ROX-071713-DUP |                    |                 |    |           |    |            |
| MC22808-4  | SW846 8270C        | 25-JUL-13 12:45 | WK | 23-JUL-13 | PA | AB8270SL + |
| MC22808-4  | SW846 8011         | 25-JUL-13 14:26 | NK | 23-JUL-13 | BJ | V8011SL    |
| MC22808-4  | SW846 8270C BY SIM | 26-JUL-13 00:15 | WK | 23-JUL-13 | SC | B8270SIMSL |
| MC22808-4  | SW846 8260B        | 30-JUL-13 15:21 | KR |           |    | V8260SL +  |
| MC22808-4  | SW846 8260B        | 30-JUL-13 15:59 | GK |           |    | V8260SL +  |
| MC22808-4  | SW846 8270C        | 31-JUL-13 12:05 | KR | 23-JUL-13 | PA | AB8270SL + |

### Internal Sample Tracking Chronicle

Shell Oil

Job No: MC22808

URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

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| Sample Number   | Method      | Analyzed        | By | Prepped   | By | Test Codes |
|---|-------------|-----------------|----|-----------|----|------------|
| MC22808-4   | SW846 8260B | 31-JUL-13 14:38 | GK |           |    | V8260SL+   |
| MC22808-5 Collected: 17-JUL-13 00:00 By: LRDM Received: 18-JUL-13 By: TB-ROX-071713-HCL |             |                 |    |           |    |            |
| MC22808-5   | SW846 8260B | 30-JUL-13 15:50 | KR |           |    | V8260SL+   |
| MC22808-5   | SW846 8260B | 30-JUL-13 16:26 | GK |           |    | V8260SL+   |
| MC22808-6 Collected: 17-JUL-13 00:00 By: LRDM Received: 18-JUL-13 By: TB-ROX-071713-ST  |             |                 |    |           |    |            |
| MC22808-6   | SW846 8011  | 25-JUL-13 14:51 | NK | 23-JUL-13 | BJ | V8011SL    |

# SGS Accutest Internal Chain of Custody

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
 Received: 07/18/13

| Sample.Bottle Number | Transfer FROM    | Transfer TO      | Date/Time      | Reason                 |
|----------------------|------------------|------------------|----------------|------------------------|
| MC22808-1.1          | Walk In Ref #22  | Thomas Abruzzise | 07/23/13 14:59 | Retrieve from Storage  |
| MC22808-1.1          | Thomas Abruzzise |                  | 07/30/13 14:35 | Depleted               |
| MC22808-1.3          | VOC Ref #1       | Kerry Ryan       | 07/30/13 09:39 | Retrieve from Storage  |
| MC22808-1.3          | Kerry Ryan       | GCMSL            | 07/30/13 09:39 | Load on Instrument     |
| MC22808-1.3          | GCMSL            | Kerry Ryan       | 07/31/13 09:24 | Unload from Instrument |
| MC22808-1.3          | Kerry Ryan       | VOC Ref #1       | 07/31/13 09:24 | Return to Storage      |
| MC22808-1.3          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22808-1.4          | VOC Ref #1       | Gary Krasinski   | 07/30/13 11:04 | Retrieve from Storage  |
| MC22808-1.4          | Gary Krasinski   | GCMSK            | 07/30/13 11:04 | Load on Instrument     |
| MC22808-1.4          | GCMSK            | Gary Krasinski   | 07/31/13 09:37 | Unload from Instrument |
| MC22808-1.4          | Gary Krasinski   | VOC Ref #1       | 07/31/13 09:37 | Return to Storage      |
| MC22808-1.4          | VOC Ref #1       | Gary Krasinski   | 07/31/13 11:41 | Retrieve from Storage  |
| MC22808-1.4          | Gary Krasinski   | GCMSK            | 07/31/13 11:41 | Load on Instrument     |
| MC22808-1.4          | GCMSK            | Kerry Ryan       | 08/01/13 09:39 | Unload from Instrument |
| MC22808-1.4          | Kerry Ryan       | VOC Ref #1       | 08/01/13 09:39 | Return to Storage      |
| MC22808-1.4          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22808-1.5          | VOC Ref #1       | Bijan Jafari     | 07/23/13 10:48 | Retrieve from Storage  |
| MC22808-1.5          | Bijan Jafari     |                  | 07/23/13 18:13 | Depleted               |
| MC22808-2.2          | Walk In Ref #22  | Thomas Abruzzise | 07/23/13 14:59 | Retrieve from Storage  |
| MC22808-2.2          | Thomas Abruzzise |                  | 07/30/13 14:35 | Depleted               |
| MC22808-2.3          | VOC Ref #1       | Kerry Ryan       | 07/30/13 09:39 | Retrieve from Storage  |
| MC22808-2.3          | Kerry Ryan       | GCMSL            | 07/30/13 09:39 | Load on Instrument     |
| MC22808-2.3          | GCMSL            | Kerry Ryan       | 08/01/13 08:44 | Unload from Instrument |
| MC22808-2.3          | Kerry Ryan       | VOC Ref #1       | 08/01/13 08:44 | Return to Storage      |
| MC22808-2.3          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22808-2.4          | VOC Ref #1       | Gary Krasinski   | 07/30/13 11:04 | Retrieve from Storage  |
| MC22808-2.4          | Gary Krasinski   | GCMSK            | 07/30/13 11:04 | Load on Instrument     |
| MC22808-2.4          | GCMSK            | Gary Krasinski   | 07/31/13 09:37 | Unload from Instrument |
| MC22808-2.4          | Gary Krasinski   | VOC Ref #1       | 07/31/13 09:37 | Return to Storage      |
| MC22808-2.4          | VOC Ref #1       | Gary Krasinski   | 07/31/13 11:41 | Retrieve from Storage  |
| MC22808-2.4          | Gary Krasinski   | GCMSK            | 07/31/13 11:41 | Load on Instrument     |
| MC22808-2.4          | GCMSK            | Kerry Ryan       | 08/01/13 09:39 | Unload from Instrument |
| MC22808-2.4          | Kerry Ryan       | VOC Ref #1       | 08/01/13 09:39 | Return to Storage      |
| MC22808-2.4          | VOC Ref #1       | Kerry Ryan       | 08/01/13 11:24 | Retrieve from Storage  |
| MC22808-2.4          | Kerry Ryan       | GCMSK            | 08/01/13 11:24 | Load on Instrument     |
| MC22808-2.4          | GCMSK            | Kerry Ryan       | 08/02/13 10:28 | Unload from Instrument |
| MC22808-2.4          | Kerry Ryan       | VOC Ref #1       | 08/02/13 10:28 | Return to Storage      |
| MC22808-2.4          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |

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# SGS Accutest Internal Chain of Custody

**Job Number:** MC22808  
**Account:** SHELLWIC Shell Oil  
**Project:** URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
**Received:** 07/18/13

| Sample.Bottle Number | Transfer FROM    | Transfer TO      | Date/Time      | Reason                 |
|----------------------|------------------|------------------|----------------|------------------------|
| MC22808-2.5          | VOC Ref #1       | Bijan Jafari     | 07/23/13 10:48 | Retrieve from Storage  |
| MC22808-2.5          | Bijan Jafari     |                  | 07/23/13 18:13 | Depleted               |
| MC22808-3.2          | Walk In Ref #22  | Thomas Abruzzise | 07/23/13 14:59 | Retrieve from Storage  |
| MC22808-3.2          | Thomas Abruzzise |                  | 07/30/13 14:35 | Depleted               |
| MC22808-3.3          | VOC Ref #1       | Gary Krasinski   | 07/30/13 11:04 | Retrieve from Storage  |
| MC22808-3.3          | Gary Krasinski   | GCMSK            | 07/30/13 11:04 | Load on Instrument     |
| MC22808-3.3          | GCMSK            | Gary Krasinski   | 07/31/13 09:37 | Unload from Instrument |
| MC22808-3.3          | Gary Krasinski   | VOC Ref #1       | 07/31/13 09:37 | Return to Storage      |
| MC22808-3.3          | VOC Ref #1       | Gary Krasinski   | 07/31/13 11:41 | Retrieve from Storage  |
| MC22808-3.3          | Gary Krasinski   | GCMSK            | 07/31/13 11:41 | Load on Instrument     |
| MC22808-3.3          | GCMSK            | Kerry Ryan       | 08/01/13 09:39 | Unload from Instrument |
| MC22808-3.3          | Kerry Ryan       | VOC Ref #1       | 08/01/13 09:39 | Return to Storage      |
| MC22808-3.3          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22808-3.4          | VOC Ref #1       | Kerry Ryan       | 07/30/13 09:39 | Retrieve from Storage  |
| MC22808-3.4          | Kerry Ryan       | GCMSL            | 07/30/13 09:39 | Load on Instrument     |
| MC22808-3.4          | GCMSL            | Kerry Ryan       | 07/31/13 09:24 | Unload from Instrument |
| MC22808-3.4          | Kerry Ryan       | VOC Ref #1       | 07/31/13 09:24 | Return to Storage      |
| MC22808-3.4          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22808-3.6          | VOC Ref #1       | Bijan Jafari     | 07/23/13 10:48 | Retrieve from Storage  |
| MC22808-3.6          | Bijan Jafari     |                  | 07/23/13 18:13 | Depleted               |
| MC22808-4.1          | Walk In Ref #22  | Thomas Abruzzise | 07/23/13 14:59 | Retrieve from Storage  |
| MC22808-4.1          | Thomas Abruzzise |                  | 07/30/13 14:35 | Depleted               |
| MC22808-4.3          | VOC Ref #1       | Gary Krasinski   | 07/30/13 11:04 | Retrieve from Storage  |
| MC22808-4.3          | Gary Krasinski   | GCMSK            | 07/30/13 11:04 | Load on Instrument     |
| MC22808-4.3          | GCMSK            | Gary Krasinski   | 07/31/13 09:37 | Unload from Instrument |
| MC22808-4.3          | Gary Krasinski   | VOC Ref #1       | 07/31/13 09:37 | Return to Storage      |
| MC22808-4.3          | VOC Ref #1       | Gary Krasinski   | 07/31/13 11:41 | Retrieve from Storage  |
| MC22808-4.3          | Gary Krasinski   | GCMSK            | 07/31/13 11:41 | Load on Instrument     |
| MC22808-4.3          | GCMSK            | Kerry Ryan       | 08/01/13 09:39 | Unload from Instrument |
| MC22808-4.3          | Kerry Ryan       | VOC Ref #1       | 08/01/13 09:39 | Return to Storage      |
| MC22808-4.3          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |
| MC22808-4.4          | VOC Ref #1       | Kerry Ryan       | 07/30/13 09:39 | Retrieve from Storage  |
| MC22808-4.4          | Kerry Ryan       | GCMSL            | 07/30/13 09:39 | Load on Instrument     |
| MC22808-4.4          | GCMSL            | Kerry Ryan       | 07/31/13 09:24 | Unload from Instrument |
| MC22808-4.4          | Kerry Ryan       | VOC Ref #1       | 07/31/13 09:24 | Return to Storage      |
| MC22808-4.4          | Scott Parsick    |                  | 10/04/13 13:49 | Disposed               |

# SGS Accutest Internal Chain of Custody

**Job Number:** MC22808  
**Account:** SHELLWIC Shell Oil  
**Project:** URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
**Received:** 07/18/13

| Sample.Bottle Number | Transfer FROM  | Transfer TO    | Date/Time      | Reason                 |
|----------------------|----------------|----------------|----------------|------------------------|
| MC22808-4.5          | VOC Ref #1     | Bijan Jafari   | 07/23/13 10:48 | Retrieve from Storage  |
| MC22808-4.5          | Bijan Jafari   |                | 07/23/13 18:13 | Depleted               |
| MC22808-5.1          | VOC Ref #1     | Gary Krasinski | 07/30/13 11:04 | Retrieve from Storage  |
| MC22808-5.1          | Gary Krasinski | GCMSK          | 07/30/13 11:04 | Load on Instrument     |
| MC22808-5.1          | GCMSK          | Gary Krasinski | 07/31/13 09:37 | Unload from Instrument |
| MC22808-5.1          | Gary Krasinski | VOC Ref #1     | 07/31/13 09:37 | Return to Storage      |
| MC22808-5.1          | Scott Parsick  |                | 10/04/13 13:49 | Disposed               |
| MC22808-5.2          | VOC Ref #1     | Kerry Ryan     | 07/30/13 09:39 | Retrieve from Storage  |
| MC22808-5.2          | Kerry Ryan     | GCMSL          | 07/30/13 09:39 | Load on Instrument     |
| MC22808-5.2          | GCMSL          | Kerry Ryan     | 07/31/13 09:24 | Unload from Instrument |
| MC22808-5.2          | Kerry Ryan     | VOC Ref #1     | 07/31/13 09:24 | Return to Storage      |
| MC22808-5.2          | Scott Parsick  |                | 10/04/13 13:49 | Disposed               |
| MC22808-6.2          | VOC Ref #1     | Bijan Jafari   | 07/23/13 10:48 | Retrieve from Storage  |
| MC22808-6.2          | Bijan Jafari   |                | 07/23/13 18:13 | Depleted               |

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## GC/MS Volatiles

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## QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries



# Method Blank Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSL3537-MB | L76145.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-5

| 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  |   |
| 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  |   |
| 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  |   |
| 10061-01-5 | cis-1,3-Dichloropropene   | ND     | 0.50 | 0.22 | ug/l  |   |
| 10061-02-6 | trans-1,3-Dichloropropene | ND     | 1.0  | 0.29 | ug/l  |   |

6.1.1  
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# Method Blank Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSL3537-MB | L76145.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-5

| CAS No.   | Compound                    | Result | RL   | MDL  | Units | Q |
|-----------|-----------------------------|--------|------|------|-------|---|
| 123-91-1  | 1,4-Dioxane                 | ND     | 50   | 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     | 1.0  | 0.47 | ug/l  |   |
| 108-67-8  | 1,3,5-Trimethylbenzene      | ND     | 1.0  | 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: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSL3537-MB | L76145.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-5

| CAS No.   | Surrogate Recoveries | Limits |         |
|-----------|----------------------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 85%    | 70-130% |
| 2037-26-5 | Toluene-D8           | 90%    | 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  
6

# Method Blank Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2364-MB | K72596.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-5

| CAS No.    | Compound                  | Result | RL   | MDL  | Units | Q |
|------------|---------------------------|--------|------|------|-------|---|
| 67-64-1    | Acetone                   | ND     | 10   | 2.8  | 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  | 1.1  | 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  |   |
| 10061-01-5 | cis-1,3-Dichloropropene   | ND     | 0.50 | 0.22 | ug/l  |   |

# Method Blank Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2364-MB | K72596.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-5

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 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: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2364-MB | K72596.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-5

| CAS No.   | Surrogate Recoveries | Limits |         |
|-----------|----------------------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 112%   | 70-130% |
| 2037-26-5 | Toluene-D8           | 96%    | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 94%    | 70-130% |

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

6.1.2  
6

# Method Blank Summary

Job Number: MC22808  
Account: SHELLWIC Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2366-MB | K72651.D | 1  | 07/31/13 | GK | n/a       | n/a        | MSK2366          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-3, MC22808-4

| 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 | 111% 70-130% |
| 2037-26-5 | Toluene-D8           | 97% 70-130%  |
| 460-00-4  | 4-Bromofluorobenzene | 92% 70-130%  |

# Method Blank Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2368-MB | K72703.D | 1  | 08/01/13 | GK | n/a       | n/a        | MSK2368          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-2

| 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 | 112%   | 70-130% |
| 2037-26-5 | Toluene-D8           | 97%    | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 93%    | 70-130% |



# Blank Spike Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSL3537-BS | L76142.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-5

| CAS No.    | Compound                  | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | Limits |
|------------|---------------------------|---------------|-------------|----------|--------|
| 67-64-1    | Acetone                   | 50            | 42.2        | 84       | 70-130 |
| 107-02-8   | Acrolein                  | 250           | 321         | 128      | 70-130 |
| 107-13-1   | Acrylonitrile             | 50            | 44.2        | 88       | 70-130 |
| 108-86-1   | Bromobenzene              | 50            | 50.4        | 101      | 70-130 |
| 74-97-5    | Bromochloromethane        | 50            | 44.4        | 89       | 70-130 |
| 75-27-4    | Bromodichloromethane      | 50            | 47.1        | 94       | 70-130 |
| 75-25-2    | Bromoform                 | 50            | 43.4        | 87       | 70-130 |
| 74-83-9    | Bromomethane              | 50            | 49.0        | 98       | 70-130 |
| 78-93-3    | 2-Butanone (MEK)          | 50            | 37.1        | 74       | 70-130 |
| 104-51-8   | n-Butylbenzene            | 50            | 55.7        | 111      | 70-130 |
| 135-98-8   | sec-Butylbenzene          | 50            | 58.0        | 116      | 70-130 |
| 98-06-6    | tert-Butylbenzene         | 50            | 55.9        | 112      | 70-130 |
| 75-15-0    | Carbon disulfide          | 50            | 42.1        | 84       | 70-130 |
| 56-23-5    | Carbon tetrachloride      | 50            | 48.4        | 97       | 70-130 |
| 108-90-7   | Chlorobenzene             | 50            | 52.8        | 106      | 70-130 |
| 75-00-3    | Chloroethane              | 50            | 43.8        | 88       | 70-130 |
| 67-66-3    | Chloroform                | 50            | 44.6        | 89       | 70-130 |
| 74-87-3    | Chloromethane             | 50            | 42.5        | 85       | 70-130 |
| 95-49-8    | o-Chlorotoluene           | 50            | 51.3        | 103      | 70-130 |
| 106-43-4   | p-Chlorotoluene           | 50            | 54.7        | 109      | 70-130 |
| 124-48-1   | Dibromochloromethane      | 50            | 50.4        | 101      | 70-130 |
| 95-50-1    | 1,2-Dichlorobenzene       | 50            | 54.5        | 109      | 70-130 |
| 541-73-1   | 1,3-Dichlorobenzene       | 50            | 52.7        | 105      | 70-130 |
| 106-46-7   | 1,4-Dichlorobenzene       | 50            | 48.6        | 97       | 70-130 |
| 75-71-8    | Dichlorodifluoromethane   | 50            | 46.3        | 93       | 70-130 |
| 75-34-3    | 1,1-Dichloroethane        | 50            | 46.4        | 93       | 70-130 |
| 107-06-2   | 1,2-Dichloroethane        | 50            | 46.7        | 93       | 70-130 |
| 75-35-4    | 1,1-Dichloroethene        | 50            | 48.1        | 96       | 70-130 |
| 156-59-2   | cis-1,2-Dichloroethene    | 50            | 44.2        | 88       | 70-130 |
| 156-60-5   | trans-1,2-Dichloroethene  | 50            | 44.2        | 88       | 70-130 |
| 78-87-5    | 1,2-Dichloropropane       | 50            | 44.7        | 89       | 70-130 |
| 142-28-9   | 1,3-Dichloropropane       | 50            | 50.2        | 100      | 70-130 |
| 594-20-7   | 2,2-Dichloropropane       | 50            | 50.9        | 102      | 70-130 |
| 563-58-6   | 1,1-Dichloropropene       | 50            | 49.9        | 100      | 70-130 |
| 10061-01-5 | cis-1,3-Dichloropropene   | 50            | 39.7        | 79       | 70-130 |
| 10061-02-6 | trans-1,3-Dichloropropene | 50            | 43.4        | 87       | 70-130 |

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSL3537-BS | L76142.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-5

| CAS No.   | Compound                    | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | Limits |
|-----------|-----------------------------|---------------|-------------|----------|--------|
| 123-91-1  | 1,4-Dioxane                 | 250           | 179         | 72       | 70-130 |
| 97-63-2   | Ethyl methacrylate          | 50            | 44.0        | 88       | 77-137 |
| 100-41-4  | Ethylbenzene                | 50            | 50.0        | 100      | 70-130 |
| 87-68-3   | Hexachlorobutadiene         | 50            | 52.5        | 105      | 70-130 |
| 591-78-6  | 2-Hexanone                  | 50            | 45.6        | 91       | 70-130 |
| 98-82-8   | Isopropylbenzene            | 50            | 54.4        | 109      | 70-130 |
| 99-87-6   | p-Isopropyltoluene          | 50            | 54.8        | 110      | 70-130 |
| 1634-04-4 | Methyl Tert Butyl Ether     | 50            | 37.6        | 75       | 70-130 |
| 108-10-1  | 4-Methyl-2-pentanone (MIBK) | 50            | 39.8        | 80       | 70-130 |
| 74-95-3   | Methylene bromide           | 50            | 46.3        | 93       | 70-130 |
| 75-09-2   | Methylene chloride          | 50            | 45.5        | 91       | 70-130 |
| 91-20-3   | Naphthalene                 | 50            | 43.3        | 87       | 70-130 |
| 103-65-1  | n-Propylbenzene             | 50            | 53.9        | 108      | 70-130 |
| 100-42-5  | Styrene                     | 50            | 50.9        | 102      | 70-130 |
| 630-20-6  | 1,1,1,2-Tetrachloroethane   | 50            | 50.9        | 102      | 70-130 |
| 79-34-5   | 1,1,2,2-Tetrachloroethane   | 50            | 47.4        | 95       | 70-130 |
| 127-18-4  | Tetrachloroethene           | 50            | 56.4        | 113      | 70-130 |
| 108-88-3  | Toluene                     | 50            | 42.5        | 85       | 70-130 |
| 87-61-6   | 1,2,3-Trichlorobenzene      | 50            | 45.6        | 91       | 70-130 |
| 120-82-1  | 1,2,4-Trichlorobenzene      | 50            | 47.2        | 94       | 70-130 |
| 71-55-6   | 1,1,1-Trichloroethane       | 50            | 52.5        | 105      | 70-130 |
| 79-00-5   | 1,1,2-Trichloroethane       | 50            | 45.7        | 91       | 70-130 |
| 79-01-6   | Trichloroethene             | 50            | 42.3        | 85       | 70-130 |
| 75-69-4   | Trichlorofluoromethane      | 50            | 46.7        | 93       | 70-130 |
| 96-18-4   | 1,2,3-Trichloropropane      | 50            | 49.8        | 100      | 70-130 |
| 95-63-6   | 1,2,4-Trimethylbenzene      | 50            | 48.4        | 97       | 70-130 |
| 108-67-8  | 1,3,5-Trimethylbenzene      | 50            | 47.8        | 96       | 70-130 |
| 108-05-4  | Vinyl Acetate               | 50            | 28.4        | 57* a    | 70-130 |
| 75-01-4   | Vinyl chloride              | 50            | 36.5        | 73       | 70-130 |
|           | m,p-Xylene                  | 100           | 103         | 103      | 70-130 |
| 95-47-6   | o-Xylene                    | 50            | 54.7        | 109      | 70-130 |
| 1330-20-7 | Xylene (total)              | 150           | 157         | 105      | 70-130 |

\* = Outside of Control Limits.

## Blank Spike Summary

Job Number: MC22808

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSL3537-BS | L76142.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-5

| CAS No.   | Surrogate Recoveries | BSP  | Limits  |
|-----------|----------------------|------|---------|
| 1868-53-7 | Dibromofluoromethane | 85%  | 70-130% |
| 2037-26-5 | Toluene-D8           | 90%  | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 101% | 70-130% |

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

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2364-BS | K72593.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-5

| CAS No.    | Compound                  | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | Limits |
|------------|---------------------------|---------------|-------------|----------|--------|
| 67-64-1    | Acetone                   | 50            | 64.7        | 129      | 70-130 |
| 107-13-1   | Acrylonitrile             | 50            | 49.8        | 100      | 70-130 |
| 71-43-2    | Benzene                   | 50            | 52.2        | 104      | 70-130 |
| 108-86-1   | Bromobenzene              | 50            | 49.4        | 99       | 70-130 |
| 74-97-5    | Bromochloromethane        | 50            | 53.3        | 107      | 70-130 |
| 75-27-4    | Bromodichloromethane      | 50            | 50.4        | 101      | 70-130 |
| 75-25-2    | Bromoform                 | 50            | 51.6        | 103      | 70-130 |
| 74-83-9    | Bromomethane              | 50            | 60.2        | 120      | 70-130 |
| 78-93-3    | 2-Butanone (MEK)          | 50            | 66.5        | 133* a   | 70-130 |
| 104-51-8   | n-Butylbenzene            | 50            | 48.8        | 98       | 70-130 |
| 135-98-8   | sec-Butylbenzene          | 50            | 51.7        | 103      | 70-130 |
| 98-06-6    | tert-Butylbenzene         | 50            | 50.1        | 100      | 70-130 |
| 75-15-0    | Carbon disulfide          | 50            | 50.8        | 102      | 70-130 |
| 56-23-5    | Carbon tetrachloride      | 50            | 52.9        | 106      | 70-130 |
| 108-90-7   | Chlorobenzene             | 50            | 59.3        | 119      | 70-130 |
| 75-00-3    | Chloroethane              | 50            | 54.7        | 109      | 70-130 |
| 110-75-8   | 2-Chloroethyl vinyl ether | 50            | 33.2        | 66* a    | 70-130 |
| 67-66-3    | Chloroform                | 50            | 55.0        | 110      | 70-130 |
| 74-87-3    | Chloromethane             | 50            | 57.3        | 115      | 70-130 |
| 95-49-8    | o-Chlorotoluene           | 50            | 49.0        | 98       | 70-130 |
| 106-43-4   | p-Chlorotoluene           | 50            | 51.9        | 104      | 70-130 |
| 124-48-1   | Dibromochloromethane      | 50            | 54.2        | 108      | 70-130 |
| 95-50-1    | 1,2-Dichlorobenzene       | 50            | 53.7        | 107      | 70-130 |
| 541-73-1   | 1,3-Dichlorobenzene       | 50            | 53.4        | 107      | 70-130 |
| 106-46-7   | 1,4-Dichlorobenzene       | 50            | 49.4        | 99       | 70-130 |
| 75-71-8    | Dichlorodifluoromethane   | 50            | 55.1        | 110      | 70-130 |
| 75-34-3    | 1,1-Dichloroethane        | 50            | 54.2        | 108      | 70-130 |
| 107-06-2   | 1,2-Dichloroethane        | 50            | 48.6        | 97       | 70-130 |
| 75-35-4    | 1,1-Dichloroethene        | 50            | 51.5        | 103      | 70-130 |
| 156-59-2   | cis-1,2-Dichloroethene    | 50            | 53.5        | 107      | 70-130 |
| 156-60-5   | trans-1,2-Dichloroethene  | 50            | 54.5        | 109      | 70-130 |
| 78-87-5    | 1,2-Dichloropropane       | 50            | 47.0        | 94       | 70-130 |
| 142-28-9   | 1,3-Dichloropropane       | 50            | 51.7        | 103      | 70-130 |
| 594-20-7   | 2,2-Dichloropropane       | 50            | 58.3        | 117      | 70-130 |
| 563-58-6   | 1,1-Dichloropropene       | 50            | 48.9        | 98       | 70-130 |
| 10061-01-5 | cis-1,3-Dichloropropene   | 50            | 47.0        | 94       | 70-130 |

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2364-BS | K72593.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-5

| CAS No.    | Compound                    | Spike ug/l | BSP ug/l | BSP % | Limits |
|------------|-----------------------------|------------|----------|-------|--------|
| 10061-02-6 | trans-1,3-Dichloropropene   | 50         | 50.3     | 101   | 70-130 |
| 123-91-1   | 1,4-Dioxane                 | 250        | 227      | 91    | 70-130 |
| 97-63-2    | Ethyl methacrylate          | 50         | 48.5     | 97    | 77-137 |
| 100-41-4   | Ethylbenzene                | 50         | 50.9     | 102   | 70-130 |
| 87-68-3    | Hexachlorobutadiene         | 50         | 48.5     | 97    | 70-130 |
| 591-78-6   | 2-Hexanone                  | 50         | 58.5     | 117   | 70-130 |
| 98-82-8    | Isopropylbenzene            | 50         | 51.3     | 103   | 70-130 |
| 99-87-6    | p-Isopropyltoluene          | 50         | 50.7     | 101   | 70-130 |
| 1634-04-4  | Methyl Tert Butyl Ether     | 50         | 49.7     | 99    | 70-130 |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | 50         | 43.5     | 87    | 70-130 |
| 74-95-3    | Methylene bromide           | 50         | 50.2     | 100   | 70-130 |
| 75-09-2    | Methylene chloride          | 50         | 55.1     | 110   | 70-130 |
| 91-20-3    | Naphthalene                 | 50         | 58.0     | 116   | 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         | 55.7     | 111   | 70-130 |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | 50         | 48.6     | 97    | 70-130 |
| 127-18-4   | Tetrachloroethene           | 50         | 57.7     | 115   | 70-130 |
| 108-88-3   | Toluene                     | 50         | 50.0     | 100   | 70-130 |
| 87-61-6    | 1,2,3-Trichlorobenzene      | 50         | 62.9     | 126   | 70-130 |
| 120-82-1   | 1,2,4-Trichlorobenzene      | 50         | 54.8     | 110   | 70-130 |
| 71-55-6    | 1,1,1-Trichloroethane       | 50         | 52.4     | 105   | 70-130 |
| 79-00-5    | 1,1,2-Trichloroethane       | 50         | 48.5     | 97    | 70-130 |
| 79-01-6    | Trichloroethene             | 50         | 48.8     | 98    | 70-130 |
| 75-69-4    | Trichlorofluoromethane      | 50         | 50.0     | 100   | 70-130 |
| 96-18-4    | 1,2,3-Trichloropropane      | 50         | 42.1     | 84    | 70-130 |
| 95-63-6    | 1,2,4-Trimethylbenzene      | 50         | 47.9     | 96    | 70-130 |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 50         | 46.8     | 94    | 70-130 |
| 108-05-4   | Vinyl Acetate               | 50         | 34.5     | 69* a | 70-130 |
| 75-01-4    | Vinyl chloride              | 50         | 41.2     | 82    | 70-130 |
|            | m,p-Xylene                  | 100        | 106      | 106   | 70-130 |
| 95-47-6    | o-Xylene                    | 50         | 54.5     | 109   | 70-130 |
| 1330-20-7  | Xylene (total)              | 150        | 160      | 107   | 70-130 |

\* = Outside of Control Limits.

## Blank Spike Summary

Job Number: MC22808  
Account: SHELLWIC Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2364-BS | K72593.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-5

| CAS No.   | Surrogate Recoveries | BSP  | Limits  |
|-----------|----------------------|------|---------|
| 1868-53-7 | Dibromofluoromethane | 103% | 70-130% |
| 2037-26-5 | Toluene-D8           | 100% | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 94%  | 70-130% |

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

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2366-BS | K72648.D | 1  | 07/31/13 | GK | n/a       | n/a        | MSK2366          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-3, MC22808-4

| CAS No. | Compound | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | Limits |
|---------|----------|---------------|-------------|----------|--------|
| 71-43-2 | Benzene  | 50            | 53.0        | 106      | 70-130 |

| CAS No.   | Surrogate Recoveries | BSP  | Limits  |
|-----------|----------------------|------|---------|
| 1868-53-7 | Dibromofluoromethane | 105% | 70-130% |
| 2037-26-5 | Toluene-D8           | 100% | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 93%  | 70-130% |

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2368-BS | K72700.D | 1  | 08/01/13 | GK | n/a       | n/a        | MSK2368          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-2

| CAS No. | Compound | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | Limits |
|---------|----------|---------------|-------------|----------|--------|
| 71-43-2 | Benzene  | 50            | 54.9        | 110      | 70-130 |

| CAS No.   | Surrogate Recoveries | BSP  | Limits  |
|-----------|----------------------|------|---------|
| 1868-53-7 | Dibromofluoromethane | 104% | 70-130% |
| 2037-26-5 | Toluene-D8           | 100% | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 93%  | 70-130% |

\* = Outside of Control Limits.



# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|----|-----------|------------|------------------|
| MC23063-7MS  | K72601.D | 5  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |
| MC23063-7MSD | K72602.D | 5  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |
| MC23063-7    | K72600.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-5

| CAS No.    | Compound                  | MC23063-7<br>ug/l | Spike<br>Q<br>ug/l | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|------------|---------------------------|-------------------|--------------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 67-64-1    | Acetone                   | 7.6               | 250                | 165        | 63* a   | 250           | 167         | 64* a    | 1   | 70-130/30         |
| 107-13-1   | Acrylonitrile             | ND                | 250                | 232        | 93      | 250           | 225         | 90       | 3   | 70-130/30         |
| 71-43-2    | Benzene                   | ND                | 250                | 244        | 98      | 250           | 237         | 95       | 3   | 70-130/30         |
| 108-86-1   | Bromobenzene              | ND                | 250                | 223        | 89      | 250           | 228         | 91       | 2   | 70-130/30         |
| 74-97-5    | Bromochloromethane        | ND                | 250                | 243        | 97      | 250           | 238         | 95       | 2   | 70-130/30         |
| 75-27-4    | Bromodichloromethane      | ND                | 250                | 232        | 93      | 250           | 227         | 91       | 2   | 70-130/30         |
| 75-25-2    | Bromoform                 | ND                | 250                | 234        | 94      | 250           | 234         | 94       | 0   | 70-130/30         |
| 74-83-9    | Bromomethane              | ND                | 250                | 249        | 100     | 250           | 239         | 96       | 4   | 70-130/30         |
| 78-93-3    | 2-Butanone (MEK)          | ND                | 250                | 219        | 88      | 250           | 216         | 86       | 1   | 70-130/30         |
| 104-51-8   | n-Butylbenzene            | ND                | 250                | 233        | 93      | 250           | 234         | 94       | 0   | 70-130/30         |
| 135-98-8   | sec-Butylbenzene          | ND                | 250                | 231        | 92      | 250           | 231         | 92       | 0   | 70-130/30         |
| 98-06-6    | tert-Butylbenzene         | ND                | 250                | 225        | 90      | 250           | 225         | 90       | 0   | 70-130/30         |
| 75-15-0    | Carbon disulfide          | ND                | 250                | 217        | 87      | 250           | 207         | 83       | 5   | 70-130/30         |
| 56-23-5    | Carbon tetrachloride      | ND                | 250                | 253        | 101     | 250           | 244         | 98       | 4   | 70-130/30         |
| 108-90-7   | Chlorobenzene             | ND                | 250                | 254        | 102     | 250           | 252         | 101      | 1   | 70-130/30         |
| 75-00-3    | Chloroethane              | ND                | 250                | 240        | 96      | 250           | 230         | 92       | 4   | 70-130/30         |
| 110-75-8   | 2-Chloroethyl vinyl ether | ND                | 250                | 211        | 84      | 250           | 205         | 82       | 3   | 70-130/30         |
| 67-66-3    | Chloroform                | ND                | 250                | 260        | 104     | 250           | 253         | 101      | 3   | 70-130/30         |
| 74-87-3    | Chloromethane             | ND                | 250                | 207        | 83      | 250           | 201         | 80       | 3   | 70-130/30         |
| 95-49-8    | o-Chlorotoluene           | ND                | 250                | 217        | 87      | 250           | 217         | 87       | 0   | 70-130/30         |
| 106-43-4   | p-Chlorotoluene           | ND                | 250                | 219        | 88      | 250           | 220         | 88       | 0   | 70-130/30         |
| 124-48-1   | Dibromochloromethane      | ND                | 250                | 245        | 98      | 250           | 245         | 98       | 0   | 70-130/30         |
| 95-50-1    | 1,2-Dichlorobenzene       | ND                | 250                | 231        | 92      | 250           | 234         | 94       | 1   | 70-130/30         |
| 541-73-1   | 1,3-Dichlorobenzene       | ND                | 250                | 231        | 92      | 250           | 231         | 92       | 0   | 70-130/30         |
| 106-46-7   | 1,4-Dichlorobenzene       | ND                | 250                | 226        | 90      | 250           | 228         | 91       | 1   | 70-130/30         |
| 75-71-8    | Dichlorodifluoromethane   | ND                | 250                | 222        | 89      | 250           | 208         | 83       | 7   | 70-130/30         |
| 75-34-3    | 1,1-Dichloroethane        | ND                | 250                | 249        | 100     | 250           | 241         | 96       | 3   | 70-130/30         |
| 107-06-2   | 1,2-Dichloroethane        | ND                | 250                | 223        | 89      | 250           | 218         | 87       | 2   | 70-130/30         |
| 75-35-4    | 1,1-Dichloroethene        | ND                | 250                | 236        | 94      | 250           | 223         | 89       | 6   | 70-130/30         |
| 156-59-2   | cis-1,2-Dichloroethene    | ND                | 250                | 256        | 102     | 250           | 249         | 100      | 3   | 70-130/30         |
| 156-60-5   | trans-1,2-Dichloroethene  | ND                | 250                | 254        | 102     | 250           | 246         | 98       | 3   | 70-130/30         |
| 78-87-5    | 1,2-Dichloropropane       | ND                | 250                | 219        | 88      | 250           | 215         | 86       | 2   | 70-130/30         |
| 142-28-9   | 1,3-Dichloropropane       | ND                | 250                | 243        | 97      | 250           | 240         | 96       | 1   | 70-130/30         |
| 594-20-7   | 2,2-Dichloropropane       | ND                | 250                | 265        | 106     | 250           | 253         | 101      | 5   | 70-130/30         |
| 563-58-6   | 1,1-Dichloropropene       | ND                | 250                | 229        | 92      | 250           | 223         | 89       | 3   | 70-130/30         |
| 10061-01-5 | cis-1,3-Dichloropropene   | ND                | 250                | 218        | 87      | 250           | 217         | 87       | 0   | 70-130/30         |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22808

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|----|-----------|------------|------------------|
| MC23063-7MS  | K72601.D | 5  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |
| MC23063-7MSD | K72602.D | 5  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |
| MC23063-7    | K72600.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-5

| CAS No.    | Compound                    | MC23063-7<br>ug/l | Spike<br>Q<br>ug/l | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|------------|-----------------------------|-------------------|--------------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 10061-02-6 | trans-1,3-Dichloropropene   | ND                | 250                | 219        | 88      | 250           | 216         | 86       | 1   | 70-130/30         |
| 123-91-1   | 1,4-Dioxane                 | ND                | 1250               | 1080       | 86      | 1250          | 1130        | 90       | 5   | 70-130/30         |
| 97-63-2    | Ethyl methacrylate          | ND                | 250                | 222        | 89      | 250           | 218         | 87       | 2   | 72-139/30         |
| 100-41-4   | Ethylbenzene                | ND                | 250                | 238        | 95      | 250           | 236         | 94       | 1   | 70-130/30         |
| 87-68-3    | Hexachlorobutadiene         | ND                | 250                | 234        | 94      | 250           | 235         | 94       | 0   | 70-130/30         |
| 591-78-6   | 2-Hexanone                  | ND                | 250                | 177        | 71      | 250           | 174         | 70       | 2   | 70-130/30         |
| 98-82-8    | Isopropylbenzene            | ND                | 250                | 225        | 90      | 250           | 226         | 90       | 0   | 70-130/30         |
| 99-87-6    | p-Isopropyltoluene          | ND                | 250                | 231        | 92      | 250           | 233         | 93       | 1   | 70-130/30         |
| 1634-04-4  | Methyl Tert Butyl Ether     | ND                | 250                | 236        | 94      | 250           | 230         | 92       | 3   | 70-130/30         |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | ND                | 250                | 191        | 76      | 250           | 188         | 75       | 2   | 70-130/30         |
| 74-95-3    | Methylene bromide           | ND                | 250                | 232        | 93      | 250           | 228         | 91       | 2   | 70-130/30         |
| 75-09-2    | Methylene chloride          | ND                | 250                | 256        | 102     | 250           | 247         | 99       | 4   | 70-130/30         |
| 91-20-3    | Naphthalene                 | 1.3               | 250                | 264        | 105     | 250           | 269         | 107      | 2   | 70-130/30         |
| 103-65-1   | n-Propylbenzene             | ND                | 250                | 224        | 90      | 250           | 223         | 89       | 0   | 70-130/30         |
| 100-42-5   | Styrene                     | ND                | 250                | 253        | 101     | 250           | 254         | 102      | 0   | 70-130/30         |
| 630-20-6   | 1,1,1,2-Tetrachloroethane   | ND                | 250                | 258        | 103     | 250           | 258         | 103      | 0   | 70-130/30         |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | ND                | 250                | 224        | 90      | 250           | 225         | 90       | 0   | 70-130/30         |
| 127-18-4   | Tetrachloroethene           | ND                | 250                | 263        | 105     | 250           | 264         | 106      | 0   | 70-130/30         |
| 108-88-3   | Toluene                     | 0.50              | 250                | 231        | 92      | 250           | 226         | 90       | 2   | 70-130/30         |
| 87-61-6    | 1,2,3-Trichlorobenzene      | ND                | 250                | 279        | 112     | 250           | 291         | 116      | 4   | 70-130/30         |
| 120-82-1   | 1,2,4-Trichlorobenzene      | ND                | 250                | 247        | 99      | 250           | 253         | 101      | 2   | 70-130/30         |
| 71-55-6    | 1,1,1-Trichloroethane       | ND                | 250                | 250        | 100     | 250           | 240         | 96       | 4   | 70-130/30         |
| 79-00-5    | 1,1,2-Trichloroethane       | ND                | 250                | 227        | 91      | 250           | 219         | 88       | 4   | 70-130/30         |
| 79-01-6    | Trichloroethene             | ND                | 250                | 229        | 92      | 250           | 225         | 90       | 2   | 70-130/30         |
| 75-69-4    | Trichlorofluoromethane      | ND                | 250                | 258        | 103     | 250           | 244         | 98       | 6   | 70-130/30         |
| 96-18-4    | 1,2,3-Trichloropropane      | ND                | 250                | 193        | 77      | 250           | 190         | 76       | 2   | 70-130/30         |
| 95-63-6    | 1,2,4-Trimethylbenzene      | 1.3               | 250                | 231        | 92      | 250           | 231         | 92       | 0   | 70-130/30         |
| 108-67-8   | 1,3,5-Trimethylbenzene      | ND                | 250                | 226        | 90      | 250           | 229         | 92       | 1   | 70-130/30         |
| 108-05-4   | Vinyl Acetate               | ND                | 250                | 214        | 86      | 250           | 209         | 84       | 2   | 70-130/30         |
| 75-01-4    | Vinyl chloride              | ND                | 250                | 226        | 90      | 250           | 217         | 87       | 4   | 70-130/30         |
|            | m,p-Xylene                  | ND                | 500                | 474        | 95      | 500           | 476         | 95       | 0   | 70-130/30         |
| 95-47-6    | o-Xylene                    | ND                | 250                | 235        | 94      | 250           | 236         | 94       | 0   | 70-130/30         |
| 1330-20-7  | Xylene (total)              | 0.80              | 750                | 709        | 94      | 750           | 712         | 95       | 0   | 70-130/30         |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|----|-----------|------------|------------------|
| MC23063-7MS  | K72601.D | 5  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |
| MC23063-7MSD | K72602.D | 5  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |
| MC23063-7    | K72600.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-5

6.3.1  
6

| CAS No.   | Surrogate Recoveries | MS   | MSD  | MC23063-7 | Limits  |
|-----------|----------------------|------|------|-----------|---------|
| 1868-53-7 | Dibromofluoromethane | 105% | 104% | 113%      | 70-130% |
| 2037-26-5 | Toluene-D8           | 100% | 99%  | 97%       | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 93%  | 95%  | 93%       | 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: MC22808

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample        | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---------------|----------|----|----------|----|-----------|------------|------------------|
| MC22841-37MS  | L76163.D | 5  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |
| MC22841-37MSD | L76164.D | 5  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |
| MC22841-37    | L76149.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-5

| CAS No.    | Compound                  | MC22841-37 Spike |        | MS ug/l | MS %  | Spike ug/l | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|------------|---------------------------|------------------|--------|---------|-------|------------|----------|-------|-----|----------------|
|            |                           | ug/l             | Q ug/l |         |       |            |          |       |     |                |
| 67-64-1    | Acetone                   | 11.1             | 250    | 119     | 43* a | 250        | 130      | 48* a | 9   | 70-130/30      |
| 107-02-8   | Acrolein                  | ND               | 1250   | 1190    | 95    | 1250       | 1280     | 102   | 7   | 70-130/30      |
| 107-13-1   | Acrylonitrile             | ND               | 250    | 157     | 63* a | 250        | 168      | 67* a | 7   | 70-130/30      |
| 108-86-1   | Bromobenzene              | ND               | 250    | 258     | 103   | 250        | 261      | 104   | 1   | 70-130/30      |
| 74-97-5    | Bromochloromethane        | ND               | 250    | 218     | 87    | 250        | 216      | 86    | 1   | 70-130/30      |
| 75-27-4    | Bromodichloromethane      | ND               | 250    | 227     | 91    | 250        | 228      | 91    | 0   | 70-130/30      |
| 75-25-2    | Bromoform                 | ND               | 250    | 221     | 88    | 250        | 230      | 92    | 4   | 70-130/30      |
| 74-83-9    | Bromomethane              | ND               | 250    | 223     | 89    | 250        | 246      | 98    | 10  | 70-130/30      |
| 78-93-3    | 2-Butanone (MEK)          | ND               | 250    | 145     | 58* a | 250        | 160      | 64* a | 10  | 70-130/30      |
| 104-51-8   | n-Butylbenzene            | ND               | 250    | 261     | 104   | 250        | 271      | 108   | 4   | 70-130/30      |
| 135-98-8   | sec-Butylbenzene          | ND               | 250    | 285     | 114   | 250        | 291      | 116   | 2   | 70-130/30      |
| 98-06-6    | tert-Butylbenzene         | ND               | 250    | 283     | 113   | 250        | 281      | 112   | 1   | 70-130/30      |
| 75-15-0    | Carbon disulfide          | ND               | 250    | 196     | 78    | 250        | 194      | 78    | 1   | 70-130/30      |
| 56-23-5    | Carbon tetrachloride      | ND               | 250    | 228     | 91    | 250        | 237      | 95    | 4   | 70-130/30      |
| 108-90-7   | Chlorobenzene             | ND               | 250    | 272     | 109   | 250        | 267      | 107   | 2   | 70-130/30      |
| 75-00-3    | Chloroethane              | ND               | 250    | 218     | 87    | 250        | 211      | 84    | 3   | 70-130/30      |
| 67-66-3    | Chloroform                | ND               | 250    | 208     | 83    | 250        | 209      | 84    | 0   | 70-130/30      |
| 74-87-3    | Chloromethane             | ND               | 250    | 166     | 66* a | 250        | 162      | 65* a | 2   | 70-130/30      |
| 95-49-8    | o-Chlorotoluene           | ND               | 250    | 258     | 103   | 250        | 257      | 103   | 0   | 70-130/30      |
| 106-43-4   | p-Chlorotoluene           | ND               | 250    | 268     | 107   | 250        | 270      | 108   | 1   | 70-130/30      |
| 124-48-1   | Dibromochloromethane      | ND               | 250    | 252     | 101   | 250        | 253      | 101   | 0   | 70-130/30      |
| 95-50-1    | 1,2-Dichlorobenzene       | ND               | 250    | 273     | 109   | 250        | 278      | 111   | 2   | 70-130/30      |
| 541-73-1   | 1,3-Dichlorobenzene       | ND               | 250    | 265     | 106   | 250        | 268      | 107   | 1   | 70-130/30      |
| 106-46-7   | 1,4-Dichlorobenzene       | ND               | 250    | 241     | 96    | 250        | 247      | 99    | 2   | 70-130/30      |
| 75-71-8    | Dichlorodifluoromethane   | ND               | 250    | 213     | 85    | 250        | 212      | 85    | 0   | 70-130/30      |
| 75-34-3    | 1,1-Dichloroethane        | ND               | 250    | 205     | 82    | 250        | 202      | 81    | 1   | 70-130/30      |
| 107-06-2   | 1,2-Dichloroethane        | ND               | 250    | 211     | 84    | 250        | 214      | 86    | 1   | 70-130/30      |
| 75-35-4    | 1,1-Dichloroethene        | ND               | 250    | 242     | 97    | 250        | 239      | 96    | 1   | 70-130/30      |
| 156-59-2   | cis-1,2-Dichloroethene    | ND               | 250    | 212     | 85    | 250        | 211      | 84    | 0   | 70-130/30      |
| 156-60-5   | trans-1,2-Dichloroethene  | ND               | 250    | 214     | 86    | 250        | 209      | 84    | 2   | 70-130/30      |
| 78-87-5    | 1,2-Dichloropropane       | ND               | 250    | 210     | 84    | 250        | 206      | 82    | 2   | 70-130/30      |
| 142-28-9   | 1,3-Dichloropropane       | ND               | 250    | 251     | 100   | 250        | 249      | 100   | 1   | 70-130/30      |
| 594-20-7   | 2,2-Dichloropropane       | ND               | 250    | 212     | 85    | 250        | 210      | 84    | 1   | 70-130/30      |
| 563-58-6   | 1,1-Dichloropropene       | ND               | 250    | 242     | 97    | 250        | 239      | 96    | 1   | 70-130/30      |
| 10061-01-5 | cis-1,3-Dichloropropene   | ND               | 250    | 190     | 76    | 250        | 194      | 78    | 2   | 70-130/30      |
| 10061-02-6 | trans-1,3-Dichloropropene | ND               | 250    | 207     | 83    | 250        | 212      | 85    | 2   | 70-130/30      |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22808

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample        | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---------------|----------|----|----------|----|-----------|------------|------------------|
| MC22841-37MS  | L76163.D | 5  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |
| MC22841-37MSD | L76164.D | 5  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |
| MC22841-37    | L76149.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-5

| CAS No.   | Compound                    | MC22841-37 Spike |      | MS ug/l | MS %   | Spike ug/l | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|-----------|-----------------------------|------------------|------|---------|--------|------------|----------|-------|-----|----------------|
|           |                             | ug/l             | Q    |         |        |            |          |       |     |                |
| 123-91-1  | 1,4-Dioxane                 | ND               | 1250 | 950     | 76     | 1250       | 1010     | 81    | 6   | 70-130/30      |
| 97-63-2   | Ethyl methacrylate          | ND               | 250  | 225     | 90     | 250        | 234      | 94    | 4   | 72-139/30      |
| 100-41-4  | Ethylbenzene                | ND               | 250  | 335     | 134* a | 250        | 275      | 110   | 20  | 70-130/30      |
| 87-68-3   | Hexachlorobutadiene         | ND               | 250  | 252     | 101    | 250        | 269      | 108   | 7   | 70-130/30      |
| 591-78-6  | 2-Hexanone                  | ND               | 250  | 178     | 71     | 250        | 186      | 74    | 4   | 70-130/30      |
| 98-82-8   | Isopropylbenzene            | ND               | 250  | 274     | 110    | 250        | 274      | 110   | 0   | 70-130/30      |
| 99-87-6   | p-Isopropyltoluene          | ND               | 250  | 270     | 108    | 250        | 275      | 110   | 2   | 70-130/30      |
| 1634-04-4 | Methyl Tert Butyl Ether     | ND               | 250  | 181     | 72     | 250        | 183      | 73    | 1   | 70-130/30      |
| 108-10-1  | 4-Methyl-2-pentanone (MIBK) | ND               | 250  | 164     | 66* a  | 250        | 175      | 70    | 6   | 70-130/30      |
| 74-95-3   | Methylene bromide           | ND               | 250  | 225     | 90     | 250        | 229      | 92    | 2   | 70-130/30      |
| 75-09-2   | Methylene chloride          | ND               | 250  | 190     | 76     | 250        | 208      | 83    | 9   | 70-130/30      |
| 91-20-3   | Naphthalene                 | ND               | 250  | 248     | 99     | 250        | 237      | 95    | 5   | 70-130/30      |
| 103-65-1  | n-Propylbenzene             | ND               | 250  | 271     | 108    | 250        | 271      | 108   | 0   | 70-130/30      |
| 100-42-5  | Styrene                     | ND               | 250  | 256     | 102    | 250        | 253      | 101   | 1   | 70-130/30      |
| 630-20-6  | 1,1,1,2-Tetrachloroethane   | ND               | 250  | 257     | 103    | 250        | 251      | 100   | 2   | 70-130/30      |
| 79-34-5   | 1,1,2,2-Tetrachloroethane   | ND               | 250  | 227     | 91     | 250        | 241      | 96    | 6   | 70-130/30      |
| 127-18-4  | Tetrachloroethene           | ND               | 250  | 290     | 116    | 250        | 285      | 114   | 2   | 70-130/30      |
| 108-88-3  | Toluene                     | ND               | 250  | 237     | 95     | 250        | 224      | 90    | 6   | 70-130/30      |
| 87-61-6   | 1,2,3-Trichlorobenzene      | ND               | 250  | 221     | 88     | 250        | 236      | 94    | 7   | 70-130/30      |
| 120-82-1  | 1,2,4-Trichlorobenzene      | ND               | 250  | 224     | 90     | 250        | 237      | 95    | 6   | 70-130/30      |
| 71-55-6   | 1,1,1-Trichloroethane       | ND               | 250  | 246     | 98     | 250        | 244      | 98    | 1   | 70-130/30      |
| 79-00-5   | 1,1,2-Trichloroethane       | ND               | 250  | 223     | 89     | 250        | 230      | 92    | 3   | 70-130/30      |
| 79-01-6   | Trichloroethene             | ND               | 250  | 206     | 82     | 250        | 210      | 84    | 2   | 70-130/30      |
| 75-69-4   | Trichlorofluoromethane      | ND               | 250  | 214     | 86     | 250        | 215      | 86    | 0   | 70-130/30      |
| 96-18-4   | 1,2,3-Trichloropropane      | ND               | 250  | 235     | 94     | 250        | 248      | 99    | 5   | 70-130/30      |
| 95-63-6   | 1,2,4-Trimethylbenzene      | ND               | 250  | 283     | 113    | 250        | 256      | 102   | 10  | 70-130/30      |
| 108-67-8  | 1,3,5-Trimethylbenzene      | ND               | 250  | 247     | 99     | 250        | 243      | 97    | 2   | 70-130/30      |
| 108-05-4  | Vinyl Acetate               | ND               | 250  | 112     | 45* a  | 250        | 120      | 48* a | 7   | 70-130/30      |
| 75-01-4   | Vinyl chloride              | ND               | 250  | 169     | 68* a  | 250        | 168      | 67* a | 1   | 70-130/30      |
|           | m,p-Xylene                  | ND               | 500  | 616     | 123    | 500        | 569      | 114   | 8   | 70-130/30      |
| 95-47-6   | o-Xylene                    | ND               | 250  | 304     | 122    | 250        | 287      | 115   | 6   | 70-130/30      |
| 1330-20-7 | Xylene (total)              | ND               | 750  | 920     | 123    | 750        | 855      | 114   | 7   | 70-130/30      |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample        | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---------------|----------|----|----------|----|-----------|------------|------------------|
| MC22841-37MS  | L76163.D | 5  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |
| MC22841-37MSD | L76164.D | 5  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |
| MC22841-37    | L76149.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-5

| CAS No.   | Surrogate Recoveries | MS  | MSD | MC22841-37 | Limits  |
|-----------|----------------------|-----|-----|------------|---------|
| 1868-53-7 | Dibromofluoromethane | 78% | 77% | 86%        | 70-130% |
| 2037-26-5 | Toluene-D8           | 89% | 90% | 91%        | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 99% | 99% | 110%       | 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: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF  | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|-----|----------|----|-----------|------------|------------------|
| MC22784-4MS  | K72663.D | 100 | 07/31/13 | GK | n/a       | n/a        | MSK2366          |
| MC22784-4MSD | K72664.D | 100 | 07/31/13 | GK | n/a       | n/a        | MSK2366          |
| MC22784-4    | K72660.D | 100 | 07/31/13 | GK | n/a       | n/a        | MSK2366          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-1, MC22808-3, MC22808-4

| CAS No. | Compound | MC22784-4<br>ug/l | Spike<br>Q<br>ug/l | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|---------|----------|-------------------|--------------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 71-43-2 | Benzene  | 16600             | 5000               | 18900      | 46* a   | 5000          | 18200       | 32* a    | 4   | 70-130/30         |

| CAS No.   | Surrogate Recoveries | MS   | MSD  | MC22784-4 | Limits  |
|-----------|----------------------|------|------|-----------|---------|
| 1868-53-7 | Dibromofluoromethane | 103% | 102% | 112%      | 70-130% |
| 2037-26-5 | Toluene-D8           | 100% | 100% | 100%      | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 93%  | 94%  | 93%       | 70-130% |

(a) 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: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|----|-----------|------------|------------------|
| MC22975-2MS  | K72719.D | 5  | 08/01/13 | GK | n/a       | n/a        | MSK2368          |
| MC22975-2MSD | K72720.D | 5  | 08/01/13 | GK | n/a       | n/a        | MSK2368          |
| MC22975-2    | K72717.D | 1  | 08/01/13 | GK | n/a       | n/a        | MSK2368          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22808-2

| CAS No. | Compound | MC22975-2<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|---------|----------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 71-43-2 | Benzene  | ND                | 250        | 239        | 96      | 250           | 259         | 104      | 8   | 70-130/30         |

| CAS No.   | Surrogate Recoveries | MS   | MSD  | MC22975-2 | Limits  |
|-----------|----------------------|------|------|-----------|---------|
| 1868-53-7 | Dibromofluoromethane | 107% | 106% | 118%      | 70-130% |
| 2037-26-5 | Toluene-D8           | 99%  | 99%  | 96%       | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 93%  | 93%  | 93%       | 70-130% |

\* = Outside of Control Limits.



# Volatile Internal Standard Area Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSK2364-CC2349 | Injection Date: | 07/30/13    |
| Lab File ID:   | K72592.D       | Injection Time: | 09:08       |
| Instrument ID: | GCMSK          | Method:         | SW846 8260B |

|                          | IS 1   |      | IS 2   |       | IS 3   |       | IS 4   |       | IS 5   |      |
|--------------------------|--------|------|--------|-------|--------|-------|--------|-------|--------|------|
|                          | AREA   | RT   | AREA   | RT    | AREA   | RT    | AREA   | RT    | AREA   | RT   |
| Check Std                | 320544 | 8.84 | 489795 | 9.69  | 219173 | 12.94 | 243128 | 15.50 | 60132  | 6.42 |
| Upper Limit <sup>a</sup> | 641088 | 9.34 | 979590 | 10.19 | 438346 | 13.44 | 486256 | 16.00 | 120264 | 6.92 |
| Lower Limit <sup>b</sup> | 160272 | 8.34 | 244898 | 9.19  | 109587 | 12.44 | 121564 | 15.00 | 30066  | 5.92 |

| Lab          | IS 1   |      | IS 2   |      | IS 3   |       | IS 4   |       | IS 5  |      |
|--------------|--------|------|--------|------|--------|-------|--------|-------|-------|------|
| Sample ID    | AREA   | RT   | AREA   | RT   | AREA   | RT    | AREA   | RT    | AREA  | RT   |
| MSK2364-BS   | 329119 | 8.84 | 495483 | 9.69 | 221013 | 12.94 | 245955 | 15.50 | 61791 | 6.42 |
| MSK2364-MB   | 326556 | 8.84 | 499615 | 9.69 | 207915 | 12.95 | 229665 | 15.50 | 62604 | 6.42 |
| ZZZZZZ       | 318533 | 8.84 | 495077 | 9.69 | 207202 | 12.94 | 223099 | 15.50 | 53397 | 6.42 |
| ZZZZZZ       | 320700 | 8.84 | 497824 | 9.69 | 209451 | 12.95 | 227612 | 15.50 | 54784 | 6.42 |
| ZZZZZZ       | 318185 | 8.84 | 495775 | 9.69 | 209475 | 12.95 | 227266 | 15.50 | 57473 | 6.42 |
| MC23063-7    | 315918 | 8.84 | 490255 | 9.69 | 207127 | 12.95 | 227071 | 15.50 | 54974 | 6.42 |
| MC23063-7MS  | 320430 | 8.84 | 487202 | 9.69 | 219534 | 12.94 | 244640 | 15.50 | 58048 | 6.42 |
| MC23063-7MSD | 333458 | 8.84 | 503292 | 9.69 | 222584 | 12.94 | 248245 | 15.50 | 58675 | 6.42 |
| ZZZZZZ       | 345938 | 8.84 | 526637 | 9.69 | 220526 | 12.94 | 246576 | 15.50 | 61922 | 6.42 |
| MC22808-1    | 351026 | 8.84 | 520496 | 9.69 | 224354 | 12.95 | 245895 | 15.50 | 61640 | 6.42 |
| MC22808-2    | 330184 | 8.84 | 500727 | 9.69 | 220475 | 12.94 | 244985 | 15.50 | 61439 | 6.42 |
| MC22808-3    | 332970 | 8.84 | 508447 | 9.69 | 219135 | 12.95 | 245836 | 15.50 | 59067 | 6.42 |
| MC22808-4    | 328972 | 8.84 | 496261 | 9.69 | 214671 | 12.95 | 235203 | 15.50 | 57585 | 6.42 |
| MC22808-5    | 330012 | 8.84 | 506267 | 9.69 | 210703 | 12.95 | 228576 | 15.50 | 60120 | 6.42 |
| ZZZZZZ       | 314407 | 8.84 | 472708 | 9.69 | 203934 | 12.95 | 223361 | 15.50 | 56194 | 6.42 |
| ZZZZZZ       | 319137 | 8.84 | 488448 | 9.69 | 204600 | 12.95 | 226441 | 15.50 | 59090 | 6.42 |
| ZZZZZZ       | 322075 | 8.84 | 490581 | 9.69 | 207458 | 12.94 | 225171 | 15.50 | 57134 | 6.42 |
| ZZZZZZ       | 320148 | 8.84 | 496157 | 9.69 | 210782 | 12.95 | 233189 | 15.50 | 66713 | 6.42 |
| ZZZZZZ       | 312325 | 8.84 | 479212 | 9.69 | 204466 | 12.95 | 222858 | 15.50 | 62442 | 6.43 |
| ZZZZZZ       | 314999 | 8.84 | 485504 | 9.69 | 205334 | 12.94 | 224129 | 15.50 | 49710 | 6.42 |
| ZZZZZZ       | 315661 | 8.84 | 492867 | 9.69 | 207420 | 12.95 | 223862 | 15.50 | 48795 | 6.42 |
| ZZZZZZ       | 308741 | 8.84 | 477769 | 9.69 | 203653 | 12.94 | 221439 | 15.50 | 52240 | 6.42 |
| ZZZZZZ       | 298703 | 8.84 | 463327 | 9.69 | 198679 | 12.94 | 215736 | 15.50 | 52037 | 6.42 |
| ZZZZZZ       | 295815 | 8.84 | 461445 | 9.69 | 198982 | 12.95 | 216406 | 15.50 | 52646 | 6.42 |

- IS 1 = Pentafluorobenzene
- IS 2 = 1,4-Difluorobenzene
- IS 3 = Chlorobenzene-D5
- IS 4 = 1,4-Dichlorobenzene-d4
- IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

6.4.1  
6

# Volatile Internal Standard Area Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSK2366-CC2349 | Injection Date: | 07/31/13    |
| Lab File ID:   | K72647.D       | Injection Time: | 10:30       |
| Instrument ID: | GCMSK          | Method:         | SW846 8260B |

|                          | IS 1   |      | IS 2   |       | IS 3   |       | IS 4   |       | IS 5   |      |
|--------------------------|--------|------|--------|-------|--------|-------|--------|-------|--------|------|
|                          | AREA   | RT   | AREA   | RT    | AREA   | RT    | AREA   | RT    | AREA   | RT   |
| Check Std                | 300765 | 8.84 | 460487 | 9.68  | 210233 | 12.94 | 232953 | 15.50 | 59404  | 6.42 |
| Upper Limit <sup>a</sup> | 601530 | 9.34 | 920974 | 10.18 | 420466 | 13.44 | 465906 | 16.00 | 118808 | 6.92 |
| Lower Limit <sup>b</sup> | 150383 | 8.34 | 230244 | 9.18  | 105117 | 12.44 | 116477 | 15.00 | 29702  | 5.92 |

| Lab          | IS 1   |      | IS 2   |      | IS 3   |       | IS 4   |       | IS 5  |      |
|--------------|--------|------|--------|------|--------|-------|--------|-------|-------|------|
| Sample ID    | AREA   | RT   | AREA   | RT   | AREA   | RT    | AREA   | RT    | AREA  | RT   |
| MSK2366-BS   | 321156 | 8.84 | 485759 | 9.69 | 216661 | 12.94 | 244551 | 15.50 | 60842 | 6.42 |
| MSK2366-MB   | 322053 | 8.84 | 494666 | 9.69 | 208747 | 12.95 | 228574 | 15.50 | 56746 | 6.42 |
| ZZZZZZ       | 316797 | 8.84 | 494861 | 9.69 | 203839 | 12.95 | 219531 | 15.50 | 52179 | 6.42 |
| ZZZZZZ       | 314783 | 8.84 | 480402 | 9.69 | 203033 | 12.95 | 218166 | 15.50 | 52445 | 6.42 |
| ZZZZZZ       | 311733 | 8.84 | 483482 | 9.69 | 203382 | 12.95 | 221351 | 15.50 | 54956 | 6.42 |
| MC22808-1    | 305518 | 8.84 | 469152 | 9.69 | 202287 | 12.95 | 218582 | 15.50 | 53555 | 6.42 |
| MC22808-4    | 295330 | 8.84 | 456894 | 9.69 | 197310 | 12.95 | 214363 | 15.50 | 51132 | 6.42 |
| MC22808-3    | 303383 | 8.84 | 462409 | 9.69 | 199162 | 12.95 | 218726 | 15.50 | 56337 | 6.42 |
| ZZZZZZ       | 297819 | 8.84 | 464055 | 9.69 | 199537 | 12.95 | 215408 | 15.50 | 54806 | 6.42 |
| MC22784-4    | 301445 | 8.84 | 457655 | 9.69 | 201576 | 12.95 | 227421 | 15.50 | 57409 | 6.42 |
| ZZZZZZ       | 310446 | 8.84 | 468211 | 9.69 | 203076 | 12.95 | 221825 | 15.50 | 53974 | 6.42 |
| ZZZZZZ       | 306430 | 8.84 | 473624 | 9.69 | 210766 | 12.95 | 226847 | 15.50 | 52623 | 6.42 |
| MC22784-4MS  | 312806 | 8.84 | 470114 | 9.69 | 213915 | 12.94 | 240223 | 15.50 | 58864 | 6.42 |
| MC22784-4MSD | 323610 | 8.84 | 481447 | 9.69 | 218500 | 12.94 | 241809 | 15.50 | 54738 | 6.42 |
| ZZZZZZ       | 312926 | 8.84 | 472847 | 9.69 | 205908 | 12.95 | 225930 | 15.50 | 57423 | 6.42 |
| ZZZZZZ       | 315857 | 8.84 | 480763 | 9.69 | 207366 | 12.95 | 226233 | 15.51 | 57091 | 6.42 |

- 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: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSK2368-CC2349 | Injection Date: | 08/01/13    |
| Lab File ID:   | K72699.D       | Injection Time: | 10:29       |
| Instrument ID: | GCMSK          | Method:         | SW846 8260B |

|                          | IS 1   | RT   | IS 2   | RT    | IS 3   | RT    | IS 4   | RT    | IS 5   | RT   |
|--------------------------|--------|------|--------|-------|--------|-------|--------|-------|--------|------|
|                          | AREA   |      | AREA   |       | AREA   |       | AREA   |       | AREA   |      |
| Check Std                | 307215 | 8.84 | 470810 | 9.69  | 211357 | 12.94 | 235543 | 15.50 | 55629  | 6.42 |
| Upper Limit <sup>a</sup> | 614430 | 9.34 | 941620 | 10.19 | 422714 | 13.44 | 471086 | 16.00 | 111258 | 6.92 |
| Lower Limit <sup>b</sup> | 153608 | 8.34 | 235405 | 9.19  | 105679 | 12.44 | 117772 | 15.00 | 27815  | 5.92 |

| Lab                    | IS 1   | RT   | IS 2   | RT   | IS 3   | RT    | IS 4   | RT    | IS 5  | RT   |
|------------------------|--------|------|--------|------|--------|-------|--------|-------|-------|------|
| Sample ID              | AREA   |      | AREA   |      | AREA   |       | AREA   |       | AREA  |      |
| MSK2368-BS             | 312632 | 8.84 | 473849 | 9.69 | 213192 | 12.94 | 240676 | 15.51 | 55789 | 6.42 |
| MSK2368-MB             | 307884 | 8.84 | 474067 | 9.69 | 200383 | 12.95 | 220646 | 15.51 | 55798 | 6.42 |
| ZZZZZZ                 | 315487 | 8.84 | 486749 | 9.69 | 203623 | 12.95 | 222804 | 15.51 | 50708 | 6.42 |
| MC22808-2 <sup>c</sup> | 295201 | 8.84 | 454612 | 9.69 | 193348 | 12.95 | 216610 | 15.51 | 54576 | 6.42 |
| ZZZZZZ                 | 294983 | 8.84 | 453286 | 9.69 | 195650 | 12.95 | 211953 | 15.51 | 50716 | 6.42 |
| ZZZZZZ                 | 296266 | 8.84 | 455045 | 9.69 | 195865 | 12.95 | 212070 | 15.51 | 46063 | 6.42 |
| ZZZZZZ                 | 292984 | 8.84 | 456887 | 9.69 | 193361 | 12.95 | 213007 | 15.51 | 49067 | 6.42 |
| ZZZZZZ                 | 291242 | 8.84 | 455211 | 9.69 | 191986 | 12.95 | 207157 | 15.51 | 45152 | 6.42 |
| ZZZZZZ                 | 282978 | 8.84 | 434228 | 9.69 | 187555 | 12.95 | 208940 | 15.51 | 44246 | 6.42 |
| ZZZZZZ                 | 293680 | 8.84 | 449871 | 9.69 | 193834 | 12.95 | 216871 | 15.51 | 51181 | 6.42 |
| ZZZZZZ                 | 292420 | 8.84 | 449533 | 9.69 | 195041 | 12.95 | 210601 | 15.51 | 49403 | 6.42 |
| ZZZZZZ                 | 297966 | 8.84 | 459006 | 9.69 | 197045 | 12.95 | 219588 | 15.51 | 43739 | 6.42 |
| ZZZZZZ                 | 293029 | 8.84 | 456879 | 9.69 | 193142 | 12.95 | 210831 | 15.51 | 44215 | 6.42 |
| ZZZZZZ                 | 286475 | 8.84 | 444285 | 9.69 | 191506 | 12.95 | 206548 | 15.51 | 47318 | 6.42 |
| ZZZZZZ                 | 289995 | 8.84 | 457260 | 9.69 | 195110 | 12.95 | 205503 | 15.51 | 47403 | 6.42 |
| MC22975-2              | 279661 | 8.84 | 441830 | 9.69 | 190304 | 12.95 | 203733 | 15.51 | 47467 | 6.42 |
| ZZZZZZ                 | 280332 | 8.84 | 443730 | 9.69 | 190340 | 12.95 | 202643 | 15.51 | 50180 | 6.42 |
| MC22975-2MS            | 286861 | 8.84 | 447386 | 9.69 | 201892 | 12.94 | 226849 | 15.51 | 48881 | 6.42 |
| MC22975-2MSD           | 303985 | 8.84 | 462670 | 9.69 | 209337 | 12.94 | 233287 | 15.50 | 50184 | 6.42 |
| ZZZZZZ                 | 315342 | 8.84 | 476603 | 9.69 | 207795 | 12.95 | 241185 | 15.51 | 55851 | 6.42 |
| ZZZZZZ                 | 302566 | 8.84 | 469502 | 9.69 | 201059 | 12.95 | 221494 | 15.51 | 63648 | 6.42 |
| ZZZZZZ                 | 296581 | 8.84 | 463781 | 9.69 | 198530 | 12.95 | 221998 | 15.51 | 65984 | 6.42 |
| ZZZZZZ                 | 304152 | 8.84 | 478054 | 9.69 | 203936 | 12.95 | 219477 | 15.51 | 62863 | 6.42 |

- IS 1 = Pentafluorobenzene
- IS 2 = 1,4-Difluorobenzene
- IS 3 = Chlorobenzene-D5
- IS 4 = 1,4-Dichlorobenzene-d4
- IS 5 = Tert Butyl Alcohol-D9

- (a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
- (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
- (c) Sample reanalyzed past recommended hold time.

6.4.3  
6

# Volatile Internal Standard Area Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSL3537-CC3534 | Injection Date: | 07/30/13    |
| Lab File ID:   | L76141.D       | Injection Time: | 08:33       |
| Instrument ID: | GCMSL          | Method:         | SW846 8260B |

|                          | IS 1   |      | IS 2   |      | IS 3   |       | IS 4   |       | IS 5  |      |
|--------------------------|--------|------|--------|------|--------|-------|--------|-------|-------|------|
|                          | AREA   | RT   | AREA   | RT   | AREA   | RT    | AREA   | RT    | AREA  | RT   |
| Check Std                | 99478  | 8.06 | 132933 | 8.89 | 69228  | 12.13 | 71450  | 14.68 | 27078 | 5.75 |
| Upper Limit <sup>a</sup> | 198956 | 8.56 | 265866 | 9.39 | 138456 | 12.63 | 142900 | 15.18 | 54156 | 6.25 |
| Lower Limit <sup>b</sup> | 49739  | 7.56 | 66467  | 8.39 | 34614  | 11.63 | 35725  | 14.18 | 13539 | 5.25 |

| Lab           | IS 1   |      | IS 2   |      | IS 3  |       | IS 4  |       | IS 5  |      |
|---------------|--------|------|--------|------|-------|-------|-------|-------|-------|------|
| Sample ID     | AREA   | RT   | AREA   | RT   | AREA  | RT    | AREA  | RT    | AREA  | RT   |
| MSL3537-BS    | 105109 | 8.06 | 140042 | 8.89 | 72455 | 12.13 | 74271 | 14.68 | 32829 | 5.75 |
| MSL3537-MB    | 104362 | 8.07 | 138887 | 8.90 | 70706 | 12.13 | 67181 | 14.69 | 36489 | 5.79 |
| ZZZZZZ        | 106821 | 8.06 | 142227 | 8.90 | 71838 | 12.13 | 70133 | 14.69 | 31405 | 5.79 |
| ZZZZZZ        | 105001 | 8.06 | 143376 | 8.90 | 70875 | 12.13 | 68210 | 14.69 | 34256 | 5.79 |
| ZZZZZZ        | 104929 | 8.06 | 138084 | 8.90 | 70282 | 12.13 | 67733 | 14.68 | 30817 | 5.79 |
| MC22841-37    | 103547 | 8.06 | 140464 | 8.90 | 70497 | 12.13 | 66221 | 14.69 | 35115 | 5.79 |
| ZZZZZZ        | 102249 | 8.06 | 136745 | 8.90 | 68886 | 12.13 | 65926 | 14.68 | 30179 | 5.79 |
| ZZZZZZ        | 102778 | 8.06 | 135832 | 8.90 | 69093 | 12.13 | 66855 | 14.68 | 34368 | 5.79 |
| MC22808-1     | 100661 | 8.06 | 128582 | 8.89 | 67366 | 12.13 | 69471 | 14.68 | 34083 | 5.78 |
| MC22808-2     | 107511 | 8.21 | 92723  | 9.00 | 73523 | 12.14 | 81280 | 14.68 | 31596 | 5.75 |
| MC22808-3     | 111049 | 8.12 | 112101 | 8.94 | 75584 | 12.13 | 81338 | 14.68 | 33046 | 5.74 |
| MC22808-4     | 115175 | 8.12 | 116261 | 8.94 | 77796 | 12.13 | 82840 | 14.68 | 30211 | 5.73 |
| MC22808-5     | 112803 | 8.06 | 142810 | 8.89 | 73110 | 12.13 | 72785 | 14.68 | 35753 | 5.78 |
| ZZZZZZ        | 118405 | 8.11 | 126283 | 8.93 | 79927 | 12.13 | 86679 | 14.68 | 34473 | 5.75 |
| ZZZZZZ        | 121680 | 8.07 | 146112 | 8.90 | 77682 | 12.13 | 81351 | 14.68 | 32423 | 5.78 |
| ZZZZZZ        | 121449 | 8.07 | 147670 | 8.90 | 78778 | 12.13 | 82083 | 14.68 | 33107 | 5.78 |
| ZZZZZZ        | 120042 | 8.08 | 138085 | 8.92 | 79280 | 12.13 | 85721 | 14.68 | 35628 | 5.73 |
| ZZZZZZ        | 114085 | 8.06 | 150175 | 8.89 | 76708 | 12.13 | 85592 | 14.68 | 54138 | 5.70 |
| ZZZZZZ        | 114350 | 8.06 | 147597 | 8.89 | 73655 | 12.13 | 79674 | 14.68 | 42291 | 5.76 |
| MC22841-37MS  | 114003 | 8.06 | 146262 | 8.89 | 73467 | 12.13 | 78233 | 14.68 | 34748 | 5.75 |
| MC22841-37MSD | 113198 | 8.06 | 144863 | 8.89 | 74017 | 12.13 | 77378 | 14.68 | 37539 | 5.76 |

- 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.

6.4.4  
6

# Volatile Surrogate Recovery Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 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  |
|---------------|-------------|-----|--------|-----|
| MC22808-1     | L76152.D    | 86  | 94     | 107 |
| MC22808-1     | K72655.D    | 113 | 98     | 93  |
| MC22808-1     | K72604.D    | 108 | 100    | 94  |
| MC22808-2     | L76153.D    | 82  | 139* a | 100 |
| MC22808-2     | K72705.D    | 113 | 99     | 92  |
| MC22808-2     | K72605.D    | 110 | 103    | 94  |
| MC22808-3     | K72606.D    | 109 | 100    | 93  |
| MC22808-3     | L76154.D    | 81  | 119    | 99  |
| MC22808-3     | K72657.D    | 113 | 100    | 93  |
| MC22808-4     | K72607.D    | 110 | 100    | 94  |
| MC22808-4     | K72656.D    | 115 | 98     | 94  |
| MC22808-4     | L76155.D    | 80  | 118    | 100 |
| MC22808-5     | K72608.D    | 110 | 95     | 94  |
| MC22808-5     | L76156.D    | 79  | 93     | 105 |
| MC22784-4MS   | K72663.D    | 103 | 100    | 93  |
| MC22784-4MSD  | K72664.D    | 102 | 100    | 94  |
| MC22841-37MS  | L76163.D    | 78  | 89     | 99  |
| MC22841-37MSD | L76164.D    | 77  | 90     | 99  |
| MC22975-2MS   | K72719.D    | 107 | 99     | 93  |
| MC22975-2MSD  | K72720.D    | 106 | 99     | 93  |
| MC23063-7MS   | K72601.D    | 105 | 100    | 93  |
| MC23063-7MSD  | K72602.D    | 104 | 99     | 95  |
| MSK2364-BS    | K72593.D    | 103 | 100    | 94  |
| MSK2364-MB    | K72596.D    | 112 | 96     | 94  |
| MSK2366-BS    | K72648.D    | 105 | 100    | 93  |
| MSK2366-MB    | K72651.D    | 111 | 97     | 92  |
| MSK2368-BS    | K72700.D    | 104 | 100    | 93  |
| MSK2368-MB    | K72703.D    | 112 | 97     | 93  |
| MSL3537-BS    | L76142.D    | 85  | 90     | 101 |
| MSL3537-MB    | L76145.D    | 85  | 90     | 108 |

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

(a) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

6.5.1  
6

## GC/MS Semi-volatiles

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### QC Data Summaries

7

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

# Method Blank Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34099-MB | R32367.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22808-1, MC22808-2, MC22808-3, MC22808-4

| CAS No.   | Compound                    | Result | RL  | MDL  | Units | Q |
|-----------|-----------------------------|--------|-----|------|-------|---|
| 65-85-0   | Benzoic Acid                | ND     | 10  | 1.3  | ug/l  |   |
| 95-57-8   | 2-Chlorophenol              | ND     | 5.0 | 0.38 | ug/l  |   |
| 59-50-7   | 4-Chloro-3-methyl phenol    | ND     | 10  | 0.49 | ug/l  |   |
| 120-83-2  | 2,4-Dichlorophenol          | ND     | 10  | 0.33 | ug/l  |   |
| 105-67-9  | 2,4-Dimethylphenol          | ND     | 10  | 1.1  | ug/l  |   |
| 51-28-5   | 2,4-Dinitrophenol           | ND     | 20  | 2.5  | ug/l  |   |
| 534-52-1  | 4,6-Dinitro-o-cresol        | ND     | 10  | 1.2  | ug/l  |   |
| 95-48-7   | 2-Methylphenol              | ND     | 10  | 1.3  | ug/l  |   |
|           | 3&4-Methylphenol            | ND     | 10  | 2.0  | ug/l  |   |
| 88-75-5   | 2-Nitrophenol               | ND     | 10  | 0.50 | ug/l  |   |
| 100-02-7  | 4-Nitrophenol               | ND     | 20  | 0.58 | ug/l  |   |
| 87-86-5   | Pentachlorophenol           | ND     | 10  | 1.3  | ug/l  |   |
| 108-95-2  | Phenol                      | ND     | 5.0 | 0.51 | ug/l  |   |
| 95-95-4   | 2,4,5-Trichlorophenol       | ND     | 10  | 0.57 | ug/l  |   |
| 88-06-2   | 2,4,6-Trichlorophenol       | ND     | 10  | 0.32 | ug/l  |   |
| 62-53-3   | Aniline                     | ND     | 10  | 0.64 | ug/l  |   |
| 101-55-3  | 4-Bromophenyl phenyl ether  | ND     | 5.0 | 0.20 | ug/l  |   |
| 85-68-7   | Butyl benzyl phthalate      | ND     | 5.0 | 0.85 | ug/l  |   |
| 100-51-6  | Benzyl Alcohol              | ND     | 10  | 0.57 | ug/l  |   |
| 91-58-7   | 2-Chloronaphthalene         | ND     | 5.0 | 0.92 | ug/l  |   |
| 106-47-8  | 4-Chloroaniline             | ND     | 10  | 0.25 | ug/l  |   |
| 111-91-1  | bis(2-Chloroethoxy)methane  | ND     | 5.0 | 0.21 | ug/l  |   |
| 111-44-4  | bis(2-Chloroethyl)ether     | ND     | 5.0 | 0.23 | ug/l  |   |
| 108-60-1  | bis(2-Chloroisopropyl)ether | ND     | 5.0 | 0.13 | ug/l  |   |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND     | 5.0 | 0.20 | ug/l  |   |
| 122-66-7  | 1,2-Diphenylhydrazine       | ND     | 5.0 | 0.65 | ug/l  |   |
| 121-14-2  | 2,4-Dinitrotoluene          | ND     | 10  | 0.68 | ug/l  |   |
| 606-20-2  | 2,6-Dinitrotoluene          | ND     | 10  | 0.64 | ug/l  |   |
| 91-94-1   | 3,3'-Dichlorobenzidine      | 2.6    | 5.0 | 0.50 | ug/l  | J |
| 132-64-9  | Dibenzofuran                | ND     | 2.0 | 0.16 | ug/l  |   |
| 84-74-2   | Di-n-butyl phthalate        | 0.40   | 5.0 | 0.39 | ug/l  | J |
| 117-84-0  | Di-n-octyl phthalate        | 5.7    | 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  | 2.5    | 2.0 | 0.49 | ug/l  |   |
| 118-74-1  | Hexachlorobenzene           | ND     | 5.0 | 0.30 | ug/l  |   |

7.1.1  
7

# Method Blank Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34099-MB | R32367.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22808-1, MC22808-2, MC22808-3, MC22808-4

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

| CAS No.   | Surrogate Recoveries | Limits |         |
|-----------|----------------------|--------|---------|
| 367-12-4  | 2-Fluorophenol       | 51%    | 15-110% |
| 4165-62-2 | Phenol-d5            | 18%    | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 89%    | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 78%    | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 91%    | 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         |      |            | ug/l  |   |

7.1.1  
7



# Method Blank Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34100-MB | W14158.D | 1  | 07/25/13 | WK | 07/23/13  | OP34100    | MSW640           |

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

MC22808-1, MC22808-2, MC22808-3, MC22808-4

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | 0.015  | 0.10  | 0.014 | ug/l  | J |
| 208-96-8 | Acenaphthylene         | ND     | 0.10  | 0.013 | ug/l  |   |
| 120-12-7 | Anthracene             | ND     | 0.10  | 0.018 | ug/l  |   |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.050 | 0.030 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.10  | 0.017 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.050 | 0.024 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.10  | 0.038 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.10  | 0.059 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.10  | 0.073 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.10  | 0.042 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.10  | 0.033 | ug/l  |   |
| 86-73-7  | Fluorene               | ND     | 0.10  | 0.046 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.10  | 0.046 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | ND     | 0.20  | 0.14  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | ND     | 0.20  | 0.052 | ug/l  |   |
| 85-01-8  | Phenanthrene           | 0.024  | 0.050 | 0.013 | ug/l  | J |
| 129-00-0 | Pyrene                 | ND     | 0.10  | 0.036 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Limits |         |
|-----------|----------------------|--------|---------|
| 367-12-4  | 2-Fluorophenol       | 52%    | 15-110% |
| 4165-62-2 | Phenol-d5            | 19%    | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 96%    | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 88%    | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 84%    | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 91%    | 30-130% |

7.1.2  
7

# Blank Spike Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34099-BS | R32368.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22808-1, MC22808-2, MC22808-3, MC22808-4

| CAS No.   | Compound                    | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | Limits |
|-----------|-----------------------------|---------------|-------------|----------|--------|
| 65-85-0   | Benzoic Acid                | 50            | 19.0        | 38       | 30-130 |
| 95-57-8   | 2-Chlorophenol              | 50            | 45.0        | 90       | 30-130 |
| 59-50-7   | 4-Chloro-3-methyl phenol    | 50            | 49.4        | 99       | 30-130 |
| 120-83-2  | 2,4-Dichlorophenol          | 50            | 47.1        | 94       | 30-130 |
| 105-67-9  | 2,4-Dimethylphenol          | 50            | 42.5        | 85       | 30-130 |
| 51-28-5   | 2,4-Dinitrophenol           | 50            | 37.2        | 74       | 30-130 |
| 534-52-1  | 4,6-Dinitro-o-cresol        | 50            | 46.6        | 93       | 30-130 |
| 95-48-7   | 2-Methylphenol              | 50            | 40.7        | 81       | 30-130 |
|           | 3&4-Methylphenol            | 100           | 74.6        | 75       | 30-130 |
| 88-75-5   | 2-Nitrophenol               | 50            | 48.9        | 98       | 30-130 |
| 100-02-7  | 4-Nitrophenol               | 50            | 19.9        | 40       | 30-130 |
| 87-86-5   | Pentachlorophenol           | 50            | 43.0        | 86       | 30-130 |
| 108-95-2  | Phenol                      | 50            | 22.8        | 46       | 30-130 |
| 95-95-4   | 2,4,5-Trichlorophenol       | 50            | 52.7        | 105      | 30-130 |
| 88-06-2   | 2,4,6-Trichlorophenol       | 50            | 51.6        | 103      | 30-130 |
| 62-53-3   | Aniline                     | 50            | 34.1        | 68       | 40-140 |
| 101-55-3  | 4-Bromophenyl phenyl ether  | 50            | 46.7        | 93       | 40-140 |
| 85-68-7   | Butyl benzyl phthalate      | 50            | 48.1        | 96       | 40-140 |
| 100-51-6  | Benzyl Alcohol              | 50            | 34.9        | 70       | 40-140 |
| 91-58-7   | 2-Chloronaphthalene         | 50            | 44.3        | 89       | 40-140 |
| 106-47-8  | 4-Chloroaniline             | 50            | 39.5        | 79       | 40-140 |
| 111-91-1  | bis(2-Chloroethoxy)methane  | 50            | 40.1        | 80       | 40-140 |
| 111-44-4  | bis(2-Chloroethyl)ether     | 50            | 38.5        | 77       | 40-140 |
| 108-60-1  | bis(2-Chloroisopropyl)ether | 50            | 40.2        | 80       | 40-140 |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | 50            | 49.5        | 99       | 40-140 |
| 122-66-7  | 1,2-Diphenylhydrazine       | 50            | 40.6        | 81       | 40-140 |
| 121-14-2  | 2,4-Dinitrotoluene          | 50            | 51.1        | 102      | 40-140 |
| 606-20-2  | 2,6-Dinitrotoluene          | 50            | 47.1        | 94       | 40-140 |
| 91-94-1   | 3,3'-Dichlorobenzidine      | 50            | 48.4        | 97       | 40-140 |
| 132-64-9  | Dibenzofuran                | 50            | 46.7        | 93       | 40-140 |
| 84-74-2   | Di-n-butyl phthalate        | 50            | 47.7        | 95       | 40-140 |
| 117-84-0  | Di-n-octyl phthalate        | 50            | 51.7        | 103      | 40-140 |
| 84-66-2   | Diethyl phthalate           | 50            | 42.6        | 85       | 40-140 |
| 131-11-3  | Dimethyl phthalate          | 50            | 26.9        | 54       | 40-140 |
| 117-81-7  | bis(2-Ethylhexyl)phthalate  | 50            | 47.2        | 94       | 40-140 |
| 118-74-1  | Hexachlorobenzene           | 50            | 45.5        | 91       | 40-140 |

\* = Outside of Control Limits.

7.2.1  
7

# Blank Spike Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34099-BS | R32368.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22808-1, MC22808-2, MC22808-3, MC22808-4

| CAS No.  | Compound                   | Spike ug/l | BSP ug/l | BSP % | Limits |
|----------|----------------------------|------------|----------|-------|--------|
| 77-47-4  | Hexachlorocyclopentadiene  | 50         | 14.4     | 29* a | 40-140 |
| 67-72-1  | Hexachloroethane           | 50         | 35.1     | 70    | 40-140 |
| 78-59-1  | Isophorone                 | 50         | 40.1     | 80    | 40-140 |
| 88-74-4  | 2-Nitroaniline             | 50         | 52.1     | 104   | 40-140 |
| 99-09-2  | 3-Nitroaniline             | 50         | 47.3     | 95    | 40-140 |
| 100-01-6 | 4-Nitroaniline             | 50         | 51.1     | 102   | 40-140 |
| 98-95-3  | Nitrobenzene               | 50         | 36.7     | 73    | 40-140 |
| 62-75-9  | n-Nitrosodimethylamine     | 50         | 24.4     | 49    | 40-140 |
| 621-64-7 | N-Nitroso-di-n-propylamine | 50         | 39.4     | 79    | 40-140 |
| 86-30-6  | N-Nitrosodiphenylamine     | 50         | 44.1     | 88    | 40-140 |
| 110-86-1 | Pyridine                   | 50         | 22.7     | 45    | 40-140 |

| CAS No.   | Surrogate Recoveries | BSP | Limits  |
|-----------|----------------------|-----|---------|
| 367-12-4  | 2-Fluorophenol       | 56% | 15-110% |
| 4165-62-2 | Phenol-d5            | 20% | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 99% | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 81% | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 91% | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 89% | 30-130% |

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

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34100-BS | W14159.D | 1  | 07/25/13 | WK | 07/23/13  | OP34100    | MSW640           |

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

MC22808-1, MC22808-2, MC22808-3, MC22808-4

| CAS No.  | Compound               | Spike ug/l | BSP ug/l | BSP % | Limits |
|----------|------------------------|------------|----------|-------|--------|
| 83-32-9  | Acenaphthene           | 50         | 43.7     | 87    | 40-140 |
| 208-96-8 | Acenaphthylene         | 50         | 36.0     | 72    | 40-140 |
| 120-12-7 | Anthracene             | 50         | 43.4     | 87    | 40-140 |
| 56-55-3  | Benzo(a)anthracene     | 50         | 47.8     | 96    | 40-140 |
| 50-32-8  | Benzo(a)pyrene         | 50         | 46.6     | 93    | 40-140 |
| 205-99-2 | Benzo(b)fluoranthene   | 50         | 52.2     | 104   | 40-140 |
| 191-24-2 | Benzo(g,h,i)perylene   | 50         | 51.0     | 102   | 40-140 |
| 207-08-9 | Benzo(k)fluoranthene   | 50         | 46.9     | 94    | 40-140 |
| 218-01-9 | Chrysene               | 50         | 44.4     | 89    | 40-140 |
| 53-70-3  | Dibenzo(a,h)anthracene | 50         | 50.9     | 102   | 40-140 |
| 206-44-0 | Fluoranthene           | 50         | 46.8     | 94    | 40-140 |
| 86-73-7  | Fluorene               | 50         | 45.0     | 90    | 40-140 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 50         | 50.1     | 100   | 40-140 |
| 90-12-0  | 1-Methylnaphthalene    | 50         | 42.2     | 84    | 40-140 |
| 91-57-6  | 2-Methylnaphthalene    | 50         | 40.2     | 80    | 40-140 |
| 85-01-8  | Phenanthrene           | 50         | 43.2     | 86    | 40-140 |
| 129-00-0 | Pyrene                 | 50         | 44.4     | 89    | 40-140 |

| CAS No.   | Surrogate Recoveries | BSP  | Limits  |
|-----------|----------------------|------|---------|
| 367-12-4  | 2-Fluorophenol       | 57%  | 15-110% |
| 4165-62-2 | Phenol-d5            | 20%  | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 104% | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 91%  | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 88%  | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 93%  | 30-130% |

\* = Outside of Control Limits.

7.2.2  
7

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| OP34099-MS  | R32369.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |
| OP34099-MSD | R32370.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |
| MC22900-7   | R32371.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22808-1, MC22808-2, MC22808-3, MC22808-4

| CAS No.   | Compound                    | MC22900-7<br>ug/l | Spike<br>Q<br>ug/l | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|-----------|-----------------------------|-------------------|--------------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 65-85-0   | Benzoic Acid                | ND                | 50                 | 18.4       | 37      | 50            | 16.5        | 33       | 11  | 30-130/20         |
| 95-57-8   | 2-Chlorophenol              | ND                | 50                 | 43.5       | 87      | 50            | 39.1        | 78       | 11  | 30-130/20         |
| 59-50-7   | 4-Chloro-3-methyl phenol    | ND                | 50                 | 45.9       | 92      | 50            | 44.2        | 88       | 4   | 30-130/20         |
| 120-83-2  | 2,4-Dichlorophenol          | ND                | 50                 | 45.5       | 91      | 50            | 42.2        | 84       | 8   | 30-130/20         |
| 105-67-9  | 2,4-Dimethylphenol          | ND                | 50                 | 37.4       | 75      | 50            | 34.6        | 69       | 8   | 30-130/20         |
| 51-28-5   | 2,4-Dinitrophenol           | ND                | 50                 | 36.2       | 72      | 50            | 35.3        | 71       | 3   | 30-130/20         |
| 534-52-1  | 4,6-Dinitro-o-cresol        | ND                | 50                 | 48.0       | 96      | 50            | 45.7        | 91       | 5   | 30-130/20         |
| 95-48-7   | 2-Methylphenol              | ND                | 50                 | 38.9       | 78      | 50            | 35.9        | 72       | 8   | 30-130/20         |
|           | 3&4-Methylphenol            | ND                | 100                | 72.2       | 72      | 100           | 64.7        | 65       | 11  | 30-130/20         |
| 88-75-5   | 2-Nitrophenol               | ND                | 50                 | 46.1       | 92      | 50            | 42.5        | 85       | 8   | 30-130/20         |
| 100-02-7  | 4-Nitrophenol               | ND                | 50                 | 19.5       | 39      | 50            | 19.4        | 39       | 1   | 30-130/20         |
| 87-86-5   | Pentachlorophenol           | ND                | 50                 | 44.2       | 88      | 50            | 43.2        | 86       | 2   | 30-130/20         |
| 108-95-2  | Phenol                      | ND                | 50                 | 18.7       | 37      | 50            | 16.6        | 33       | 12  | 30-130/20         |
| 95-95-4   | 2,4,5-Trichlorophenol       | ND                | 50                 | 50.7       | 101     | 50            | 50.9        | 102      | 0   | 30-130/20         |
| 88-06-2   | 2,4,6-Trichlorophenol       | ND                | 50                 | 49.1       | 98      | 50            | 48.7        | 97       | 1   | 30-130/20         |
| 62-53-3   | Aniline                     | ND                | 50                 | 33.6       | 67      | 50            | 29.9        | 60       | 12  | 40-140/20         |
| 101-55-3  | 4-Bromophenyl phenyl ether  | ND                | 50                 | 48.4       | 97      | 50            | 45.3        | 91       | 7   | 40-140/20         |
| 85-68-7   | Butyl benzyl phthalate      | ND                | 50                 | 48.6       | 97      | 50            | 45.3        | 91       | 7   | 40-140/20         |
| 100-51-6  | Benzyl Alcohol              | ND                | 50                 | 33.5       | 67      | 50            | 30.9        | 62       | 8   | 40-140/20         |
| 91-58-7   | 2-Chloronaphthalene         | ND                | 50                 | 42.1       | 84      | 50            | 41.3        | 83       | 2   | 40-140/20         |
| 106-47-8  | 4-Chloroaniline             | ND                | 50                 | 39.1       | 78      | 50            | 35.4        | 71       | 10  | 40-140/20         |
| 111-91-1  | bis(2-Chloroethoxy)methane  | ND                | 50                 | 38.3       | 77      | 50            | 34.5        | 69       | 10  | 40-140/20         |
| 111-44-4  | bis(2-Chloroethyl)ether     | ND                | 50                 | 36.7       | 73      | 50            | 33.1        | 66       | 10  | 40-140/20         |
| 108-60-1  | bis(2-Chloroisopropyl)ether | ND                | 50                 | 37.3       | 75      | 50            | 34.0        | 68       | 9   | 40-140/20         |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND                | 50                 | 48.6       | 97      | 50            | 48.3        | 97       | 1   | 40-140/20         |
| 122-66-7  | 1,2-Diphenylhydrazine       | ND                | 50                 | 41.0       | 82      | 50            | 38.5        | 77       | 6   | 40-140/20         |
| 121-14-2  | 2,4-Dinitrotoluene          | ND                | 50                 | 49.9       | 100     | 50            | 49.6        | 99       | 1   | 40-140/20         |
| 606-20-2  | 2,6-Dinitrotoluene          | ND                | 50                 | 46.3       | 93      | 50            | 46.0        | 92       | 1   | 40-140/20         |
| 91-94-1   | 3,3'-Dichlorobenzidine      | ND                | 50                 | 50.0       | 100     | 50            | 46.9        | 94       | 6   | 40-140/20         |
| 132-64-9  | Dibenzofuran                | ND                | 50                 | 44.6       | 89      | 50            | 44.6        | 89       | 0   | 40-140/20         |
| 84-74-2   | Di-n-butyl phthalate        | ND                | 50                 | 48.8       | 98      | 50            | 44.5        | 89       | 9   | 40-140/20         |
| 117-84-0  | Di-n-octyl phthalate        | ND                | 50                 | 51.6       | 103     | 50            | 49.7        | 99       | 4   | 40-140/20         |
| 84-66-2   | Diethyl phthalate           | ND                | 50                 | 42.4       | 85      | 50            | 42.1        | 84       | 1   | 40-140/20         |
| 131-11-3  | Dimethyl phthalate          | ND                | 50                 | 27.4       | 55      | 50            | 28.8        | 58       | 5   | 40-140/20         |
| 117-81-7  | bis(2-Ethylhexyl)phthalate  | ND                | 50                 | 46.7       | 93      | 50            | 44.4        | 89       | 5   | 40-140/20         |
| 118-74-1  | Hexachlorobenzene           | ND                | 50                 | 45.8       | 92      | 50            | 42.6        | 85       | 7   | 40-140/20         |

\* = Outside of Control Limits.

7.3.1  
7

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| OP34099-MS  | R32369.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |
| OP34099-MSD | R32370.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |
| MC22900-7   | R32371.D | 1  | 07/25/13 | WK | 07/23/13  | OP34099    | MSR1181          |

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

MC22808-1, MC22808-2, MC22808-3, MC22808-4

| CAS No.  | Compound                   | MC22900-7<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|----------|----------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 77-47-4  | Hexachlorocyclopentadiene  | ND                | 50         | 13.9       | 28* a   | 50            | 13.2        | 26* a    | 5   | 40-140/20         |
| 67-72-1  | Hexachloroethane           | ND                | 50         | 32.8       | 66      | 50            | 30.2        | 60       | 8   | 40-140/20         |
| 78-59-1  | Isophorone                 | ND                | 50         | 38.5       | 77      | 50            | 35.2        | 70       | 9   | 40-140/20         |
| 88-74-4  | 2-Nitroaniline             | ND                | 50         | 49.5       | 99      | 50            | 50.0        | 100      | 1   | 40-140/20         |
| 99-09-2  | 3-Nitroaniline             | ND                | 50         | 46.0       | 92      | 50            | 45.7        | 91       | 1   | 40-140/20         |
| 100-01-6 | 4-Nitroaniline             | ND                | 50         | 49.2       | 98      | 50            | 48.0        | 96       | 2   | 40-140/20         |
| 98-95-3  | Nitrobenzene               | ND                | 50         | 33.6       | 67      | 50            | 30.6        | 61       | 9   | 40-140/20         |
| 62-75-9  | n-Nitrosodimethylamine     | ND                | 50         | 23.9       | 48      | 50            | 21.1        | 42       | 12  | 40-140/20         |
| 621-64-7 | N-Nitroso-di-n-propylamine | ND                | 50         | 38.7       | 77      | 50            | 35.9        | 72       | 8   | 40-140/20         |
| 86-30-6  | N-Nitrosodiphenylamine     | ND                | 50         | 45.4       | 91      | 50            | 43.1        | 86       | 5   | 40-140/20         |
| 110-86-1 | Pyridine                   | ND                | 50         | 21.0       | 42      | 50            | 19.3        | 39* a    | 8   | 40-140/20         |

| CAS No.   | Surrogate Recoveries | MS   | MSD | MC22900-7 | Limits  |
|-----------|----------------------|------|-----|-----------|---------|
| 367-12-4  | 2-Fluorophenol       | 52%  | 48% | 43%       | 15-110% |
| 4165-62-2 | Phenol-d5            | 19%  | 18% | 15%       | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 100% | 95% | 75%       | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 75%  | 70% | 62%       | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 87%  | 86% | 74%       | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 88%  | 84% | 81%       | 30-130% |

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

\* = Outside of Control Limits.

7.3.1  
7

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| OP34100-MS  | W14160.D | 1  | 07/25/13 | WK | 07/23/13  | OP34100    | MSW640           |
| OP34100-MSD | W14161.D | 1  | 07/25/13 | WK | 07/23/13  | OP34100    | MSW640           |
| MC22900-8   | W14162.D | 1  | 07/25/13 | WK | 07/23/13  | OP34100    | MSW640           |

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

MC22808-1, MC22808-2, MC22808-3, MC22808-4

| CAS No.  | Compound               | MC22900-8<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |           |
|----------|------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|-----------|
| 83-32-9  | Acenaphthene           | 0.016             | J          | 50         | 42.5    | 85            | 50          | 40.2     | 80  | 6                 | 40-140/20 |
| 208-96-8 | Acenaphthylene         | ND                |            | 50         | 35.1    | 70            | 50          | 33.1     | 66  | 6                 | 40-140/20 |
| 120-12-7 | Anthracene             | ND                |            | 50         | 43.1    | 86            | 50          | 40.8     | 82  | 5                 | 40-140/20 |
| 56-55-3  | Benzo(a)anthracene     | 0.063             |            | 50         | 47.9    | 96            | 50          | 44.4     | 89  | 8                 | 40-140/20 |
| 50-32-8  | Benzo(a)pyrene         | 0.077             | J          | 50         | 46.7    | 93            | 50          | 44.4     | 89  | 5                 | 40-140/20 |
| 205-99-2 | Benzo(b)fluoranthene   | 0.083             |            | 50         | 52.3    | 104           | 50          | 47.9     | 96  | 9                 | 40-140/20 |
| 191-24-2 | Benzo(g,h,i)perylene   | 0.10              |            | 50         | 50.8    | 101           | 50          | 48.2     | 96  | 5                 | 40-140/20 |
| 207-08-9 | Benzo(k)fluoranthene   | 0.089             | J          | 50         | 47.1    | 94            | 50          | 46.0     | 92  | 2                 | 40-140/20 |
| 218-01-9 | Chrysene               | ND                |            | 50         | 45.1    | 90            | 50          | 41.9     | 84  | 7                 | 40-140/20 |
| 53-70-3  | Dibenzo(a,h)anthracene | 0.086             | J          | 50         | 51.5    | 103           | 50          | 48.6     | 97  | 6                 | 40-140/20 |
| 206-44-0 | Fluoranthene           | ND                |            | 50         | 46.8    | 94            | 50          | 43.8     | 88  | 7                 | 40-140/20 |
| 86-73-7  | Fluorene               | ND                |            | 50         | 43.7    | 87            | 50          | 42.2     | 84  | 3                 | 40-140/20 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.099             | J          | 50         | 50.1    | 100           | 50          | 47.3     | 94  | 6                 | 40-140/20 |
| 90-12-0  | 1-Methylnaphthalene    | ND                |            | 50         | 41.4    | 83            | 50          | 37.9     | 76  | 9                 | 40-140/20 |
| 91-57-6  | 2-Methylnaphthalene    | ND                |            | 50         | 38.8    | 78            | 50          | 35.4     | 71  | 9                 | 40-140/20 |
| 85-01-8  | Phenanthrene           | 0.025             | J          | 50         | 43.2    | 86            | 50          | 40.5     | 81  | 6                 | 40-140/20 |
| 129-00-0 | Pyrene                 | ND                |            | 50         | 44.4    | 89            | 50          | 41.6     | 83  | 7                 | 40-140/20 |

| CAS No.   | Surrogate Recoveries | MS   | MSD | MC22900-8 | Limits  |
|-----------|----------------------|------|-----|-----------|---------|
| 367-12-4  | 2-Fluorophenol       | 51%  | 48% | 44%       | 15-110% |
| 4165-62-2 | Phenol-d5            | 19%  | 18% | 16%       | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 102% | 99% | 80%       | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 86%  | 78% | 70%       | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 84%  | 79% | 69%       | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 92%  | 88% | 86%       | 30-130% |

\* = Outside of Control Limits.

7.3.2  
7

# Semivolatile Internal Standard Area Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSF3050-CC3031 | Injection Date: | 07/31/13    |
| Lab File ID:   | F65881.D       | Injection Time: | 10:30       |
| 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                | 65224  | 4.28 | 241368 | 5.41 | 155474 | 7.05 | 292526 | 8.52 | 327179 | 11.31 | 312264 | 12.84 |
| Upper Limit <sup>a</sup> | 130448 | 4.78 | 482736 | 5.91 | 310948 | 7.55 | 585052 | 9.02 | 654358 | 11.81 | 624528 | 13.34 |
| Lower Limit <sup>b</sup> | 32612  | 3.78 | 120684 | 4.91 | 77737  | 6.55 | 146263 | 8.02 | 163590 | 10.81 | 156132 | 12.34 |

| Lab Sample ID | IS 1   |      | IS 2   |      | IS 3   |      | IS 4   |      | IS 5   |       | IS 6   |       |
|---------------|--------|------|--------|------|--------|------|--------|------|--------|-------|--------|-------|
|               | AREA   | RT   | AREA   | RT   | AREA   | RT   | AREA   | RT   | AREA   | RT    | AREA   | RT    |
| ZZZZZZ        | 94598  | 4.28 | 350924 | 5.41 | 215180 | 7.05 | 370087 | 8.52 | 393258 | 11.31 | 376529 | 12.84 |
| ZZZZZZ        | 120872 | 4.28 | 445646 | 5.41 | 278310 | 7.05 | 493582 | 8.52 | 535493 | 11.32 | 536429 | 12.84 |
| MC22808-3     | 103145 | 4.28 | 378038 | 5.41 | 239508 | 7.05 | 416550 | 8.52 | 462422 | 11.31 | 458506 | 12.84 |
| MC22808-4     | 91381  | 4.28 | 341754 | 5.41 | 216140 | 7.05 | 389410 | 8.52 | 440868 | 11.31 | 440111 | 12.84 |
| ZZZZZZ        | 84780  | 4.28 | 320953 | 5.41 | 207903 | 7.05 | 386682 | 8.51 | 447783 | 11.32 | 439901 | 12.84 |
| OP34192-MB    | 92681  | 4.28 | 344679 | 5.41 | 220160 | 7.05 | 392675 | 8.51 | 429672 | 11.31 | 437141 | 12.84 |
| OP34192-BS    | 89669  | 4.28 | 335101 | 5.41 | 214116 | 7.05 | 395262 | 8.52 | 430533 | 11.32 | 427035 | 12.84 |
| OP34198-MB    | 72214  | 4.28 | 273744 | 5.41 | 173140 | 7.05 | 322697 | 8.52 | 358641 | 11.31 | 347610 | 12.84 |
| OP34198-BS    | 78488  | 4.28 | 286841 | 5.41 | 184365 | 7.05 | 345011 | 8.51 | 379707 | 11.32 | 362610 | 12.84 |
| MC22854-1     | 80929  | 4.28 | 302216 | 5.41 | 185927 | 7.05 | 327582 | 8.51 | 365869 | 11.31 | 352869 | 12.84 |
| OP34198-MS    | 77533  | 4.28 | 294466 | 5.41 | 181775 | 7.05 | 322177 | 8.51 | 356052 | 11.32 | 344746 | 12.84 |
| OP34198-MSD   | 75057  | 4.28 | 280556 | 5.41 | 173376 | 7.05 | 313692 | 8.52 | 347567 | 11.32 | 341239 | 12.84 |
| ZZZZZZ        | 53621  | 4.28 | 197501 | 5.41 | 126429 | 7.05 | 240826 | 8.51 | 265815 | 11.31 | 262236 | 12.84 |
| ZZZZZZ        | 46608  | 4.28 | 175111 | 5.41 | 112352 | 7.05 | 207830 | 8.52 | 229612 | 11.31 | 228773 | 12.83 |
| ZZZZZZ        | 55439  | 4.28 | 206945 | 5.41 | 132536 | 7.05 | 245219 | 8.52 | 275859 | 11.31 | 276007 | 12.83 |
| OP34192-MS    | 46451  | 4.28 | 173933 | 5.41 | 112098 | 7.05 | 211036 | 8.52 | 240971 | 11.31 | 236350 | 12.83 |
| OP34192-MSD   | 53096  | 4.28 | 201440 | 5.41 | 130354 | 7.05 | 243852 | 8.51 | 273840 | 11.32 | 271297 | 12.84 |
| MC23000-12    | 61034  | 4.28 | 234516 | 5.41 | 149660 | 7.05 | 276402 | 8.51 | 310276 | 11.31 | 316041 | 12.84 |
| ZZZZZZ        | 57989  | 4.28 | 221742 | 5.41 | 145040 | 7.05 | 274776 | 8.51 | 303552 | 11.31 | 307428 | 12.84 |
| ZZZZZZ        | 54637  | 4.28 | 204289 | 5.41 | 130621 | 7.05 | 241515 | 8.52 | 273740 | 11.31 | 276897 | 12.84 |
| ZZZZZZ        | 64504  | 4.28 | 248416 | 5.41 | 159656 | 7.05 | 296275 | 8.52 | 333984 | 11.31 | 339989 | 12.84 |
| ZZZZZZ        | 67685  | 4.28 | 252180 | 5.41 | 162247 | 7.05 | 293980 | 8.51 | 337333 | 11.31 | 343931 | 12.84 |
| ZZZZZZ        | 75363  | 4.28 | 290668 | 5.41 | 182970 | 7.05 | 324335 | 8.51 | 378340 | 11.31 | 405058 | 12.84 |
| ZZZZZZ        | 74327  | 4.28 | 281245 | 5.41 | 181499 | 7.05 | 341817 | 8.52 | 386510 | 11.31 | 399782 | 12.84 |
| ZZZZZZ        | 84822  | 4.28 | 317569 | 5.41 | 207391 | 7.05 | 386239 | 8.51 | 449316 | 11.32 | 462932 | 12.84 |

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.4.1  
7



# Semivolatile Internal Standard Area Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSR1181-CC1159 | Injection Date: | 07/25/13    |
| Lab File ID:   | R32366.D       | Injection Time: | 09:10       |
| Instrument ID: | GCMSR          | 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                | 91960  | 4.31 | 348159 | 5.37 | 206505 | 6.91 | 380929 | 8.33 | 435773 | 11.31 | 400128 | 12.91 |
| Upper Limit <sup>a</sup> | 183920 | 4.81 | 696318 | 5.87 | 413010 | 7.41 | 761858 | 8.83 | 871546 | 11.81 | 800256 | 13.41 |
| Lower Limit <sup>b</sup> | 45980  | 3.81 | 174080 | 4.87 | 103253 | 6.41 | 190465 | 7.83 | 217887 | 10.81 | 200064 | 12.41 |

| 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    |
| OP34099-MB    | 78660 | 4.31 | 288087 | 5.37 | 172062 | 6.91 | 321141 | 8.32 | 373747 | 11.31 | 418554 | 12.90 |
| OP34099-BS    | 69703 | 4.31 | 259840 | 5.37 | 157973 | 6.91 | 289204 | 8.32 | 323984 | 11.31 | 302608 | 12.90 |
| OP34099-MS    | 79397 | 4.31 | 301780 | 5.37 | 183889 | 6.91 | 326659 | 8.32 | 372602 | 11.31 | 350917 | 12.90 |
| OP34099-MSD   | 79356 | 4.31 | 299801 | 5.37 | 174762 | 6.91 | 328046 | 8.32 | 367379 | 11.31 | 343502 | 12.90 |
| MC22900-7     | 73442 | 4.31 | 273692 | 5.37 | 164607 | 6.91 | 304082 | 8.32 | 347163 | 11.31 | 324634 | 12.90 |
| MC22808-1     | 80186 | 4.31 | 300029 | 5.37 | 181395 | 6.91 | 329218 | 8.32 | 373093 | 11.31 | 358676 | 12.90 |
| MC22808-2     | 87575 | 4.31 | 331612 | 5.37 | 197868 | 6.91 | 358566 | 8.32 | 402336 | 11.31 | 370553 | 12.90 |
| MC22808-3     | 80571 | 4.31 | 302689 | 5.37 | 180475 | 6.91 | 323846 | 8.32 | 361731 | 11.31 | 337354 | 12.90 |
| MC22808-4     | 66848 | 4.31 | 249641 | 5.37 | 154354 | 6.91 | 270360 | 8.32 | 306626 | 11.31 | 283874 | 12.90 |
| ZZZZZZ        | 83207 | 4.31 | 311706 | 5.37 | 184206 | 6.91 | 344386 | 8.32 | 384883 | 11.31 | 353774 | 12.90 |
| ZZZZZZ        | 82537 | 4.31 | 303506 | 5.37 | 182883 | 6.91 | 337051 | 8.32 | 379257 | 11.31 | 358102 | 12.90 |
| ZZZZZZ        | 84436 | 4.31 | 318433 | 5.37 | 190440 | 6.91 | 349582 | 8.32 | 392685 | 11.31 | 367731 | 12.90 |
| ZZZZZZ        | 63947 | 4.31 | 241663 | 5.37 | 143707 | 6.91 | 262008 | 8.32 | 294635 | 11.31 | 278779 | 12.90 |
| ZZZZZZ        | 94576 | 4.31 | 352434 | 5.37 | 214088 | 6.91 | 393479 | 8.32 | 433790 | 11.31 | 413556 | 12.90 |
| ZZZZZZ        | 68290 | 4.31 | 248776 | 5.37 | 151158 | 6.91 | 275847 | 8.32 | 306188 | 11.31 | 289568 | 12.90 |
| ZZZZZZ        | 85482 | 4.31 | 324823 | 5.37 | 194291 | 6.91 | 361907 | 8.32 | 398334 | 11.31 | 371773 | 12.90 |
| ZZZZZZ        | 82286 | 4.31 | 301271 | 5.37 | 185069 | 6.91 | 333873 | 8.32 | 379965 | 11.31 | 356403 | 12.90 |
| ZZZZZZ        | 91686 | 4.31 | 339407 | 5.37 | 205341 | 6.91 | 372050 | 8.32 | 420247 | 11.31 | 388882 | 12.90 |
| ZZZZZZ        | 83786 | 4.31 | 312905 | 5.37 | 188789 | 6.91 | 344819 | 8.32 | 386848 | 11.31 | 361742 | 12.90 |
| ZZZZZZ        | 79395 | 4.31 | 291169 | 5.37 | 175498 | 6.91 | 324376 | 8.32 | 360857 | 11.31 | 343127 | 12.90 |

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.4.2  
7

# Semivolatile Internal Standard Area Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |                    |
|----------------|--------------|-----------------|--------------------|
| Check Std:     | MSW640-CC633 | Injection Date: | 07/25/13           |
| Lab File ID:   | W14151.D     | Injection Time: | 18:35              |
| Instrument ID: | GCMSW        | 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                | 147497 | 3.61 | 398872 | 4.59 | 208639 | 6.02 | 342779 | 7.29 | 227027 | 10.07 | 529874  | 11.50 |
| Upper Limit <sup>a</sup> | 294994 | 4.11 | 797744 | 5.09 | 417278 | 6.52 | 685558 | 7.79 | 454054 | 10.57 | 1059748 | 12.00 |
| Lower Limit <sup>b</sup> | 73749  | 3.11 | 199436 | 4.09 | 104320 | 5.52 | 171390 | 6.79 | 113514 | 9.57  | 264937  | 11.00 |

| Lab Sample ID | IS 1   |      | IS 2   |      | IS 3   |      | IS 4   |      | IS 5   |       | IS 6   |       |
|---------------|--------|------|--------|------|--------|------|--------|------|--------|-------|--------|-------|
|               | AREA   | RT   | AREA   | RT   | AREA   | RT   | AREA   | RT   | AREA   | RT    | AREA   | RT    |
| ZZZZZZ        | 158745 | 3.61 | 425524 | 4.59 | 213604 | 6.02 | 346415 | 7.29 | 232783 | 10.07 | 543569 | 11.50 |
| ZZZZZZ        | 194520 | 3.61 | 515293 | 4.59 | 260518 | 6.02 | 417802 | 7.29 | 279816 | 10.07 | 658876 | 11.50 |
| ZZZZZZ        | 196440 | 3.61 | 518923 | 4.59 | 261994 | 6.02 | 419768 | 7.29 | 284721 | 10.07 | 663360 | 11.50 |
| ZZZZZZ        | 200445 | 3.61 | 534915 | 4.59 | 268836 | 6.02 | 435263 | 7.29 | 293127 | 10.07 | 686870 | 11.50 |
| ZZZZZZ        | 208743 | 3.61 | 546944 | 4.59 | 280484 | 6.02 | 455571 | 7.29 | 309603 | 10.07 | 724509 | 11.50 |
| ZZZZZZ        | 185330 | 3.61 | 486542 | 4.59 | 248902 | 6.02 | 399659 | 7.29 | 273217 | 10.07 | 637959 | 11.50 |
| OP34100-MB    | 198321 | 3.61 | 517561 | 4.59 | 261699 | 6.02 | 420643 | 7.29 | 279529 | 10.07 | 659112 | 11.50 |
| OP34100-BS    | 189704 | 3.61 | 497215 | 4.59 | 252552 | 6.02 | 411478 | 7.30 | 267104 | 10.07 | 627403 | 11.50 |
| OP34100-MS    | 177507 | 3.61 | 462181 | 4.59 | 235898 | 6.02 | 383095 | 7.30 | 250045 | 10.07 | 590000 | 11.50 |
| OP34100-MSD   | 208887 | 3.61 | 550082 | 4.59 | 276879 | 6.02 | 451205 | 7.30 | 295162 | 10.08 | 680742 | 11.50 |
| MC22900-8     | 162797 | 3.61 | 431326 | 4.59 | 219242 | 6.02 | 354061 | 7.29 | 238052 | 10.07 | 556597 | 11.50 |
| MC22808-1     | 188542 | 3.61 | 489659 | 4.59 | 250563 | 6.02 | 407276 | 7.29 | 269328 | 10.07 | 627769 | 11.50 |
| MC22808-2     | 203693 | 3.61 | 535266 | 4.59 | 269964 | 6.02 | 435447 | 7.29 | 289638 | 10.07 | 681676 | 11.50 |
| MC22808-3     | 245202 | 3.61 | 653423 | 4.59 | 327618 | 6.02 | 521551 | 7.30 | 351569 | 10.07 | 816313 | 11.50 |
| MC22808-4     | 235507 | 3.61 | 622308 | 4.59 | 315386 | 6.02 | 499519 | 7.30 | 338232 | 10.08 | 786483 | 11.50 |
| ZZZZZZ        | 208736 | 3.61 | 544236 | 4.59 | 276551 | 6.02 | 440110 | 7.29 | 301138 | 10.07 | 704483 | 11.50 |
| ZZZZZZ        | 254629 | 3.61 | 663285 | 4.59 | 335801 | 6.02 | 541986 | 7.29 | 364075 | 10.07 | 864021 | 11.50 |
| ZZZZZZ        | 206303 | 3.61 | 538383 | 4.59 | 270265 | 6.02 | 437418 | 7.29 | 294928 | 10.07 | 700763 | 11.50 |
| ZZZZZZ        | 148489 | 3.61 | 385691 | 4.59 | 202899 | 6.02 | 342455 | 7.29 | 243249 | 10.07 | 586632 | 11.50 |
| ZZZZZZ        | 174837 | 3.61 | 457545 | 4.59 | 234655 | 6.02 | 372204 | 7.29 | 254741 | 10.07 | 599746 | 11.50 |
| ZZZZZZ        | 203167 | 3.61 | 533001 | 4.59 | 270126 | 6.02 | 438002 | 7.29 | 297994 | 10.07 | 703835 | 11.50 |
| ZZZZZZ        | 205127 | 3.61 | 532499 | 4.59 | 269824 | 6.02 | 437980 | 7.29 | 296556 | 10.07 | 708155 | 11.50 |
| ZZZZZZ        | 158871 | 3.61 | 418493 | 4.59 | 215462 | 6.02 | 351732 | 7.29 | 245145 | 10.07 | 597327 | 11.50 |

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.4.3  
7

# Semivolatile Surrogate Recovery Summary

Job Number: MC22808

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 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 |
|---------------|-------------|----|----|-----|----|----|----|
| MC22808-1     | R32372.D    | 37 | 17 | 76  | 65 | 75 | 81 |
| MC22808-2     | R32373.D    | 40 | 21 | 85  | 56 | 73 | 79 |
| MC22808-3     | F65884.D    | 61 | 31 | 98  | 99 | 93 | 89 |
| MC22808-3     | R32374.D    | 50 | 23 | 92  | 68 | 80 | 75 |
| MC22808-4     | F65885.D    | 54 | 27 | 97  | 82 | 81 | 84 |
| MC22808-4     | R32375.D    | 45 | 22 | 94  | 59 | 72 | 75 |
| OP34099-BS    | R32368.D    | 56 | 20 | 99  | 81 | 91 | 89 |
| OP34099-MB    | R32367.D    | 51 | 18 | 89  | 78 | 91 | 86 |
| OP34099-MS    | R32369.D    | 52 | 19 | 100 | 75 | 87 | 88 |
| OP34099-MSD   | R32370.D    | 48 | 18 | 95  | 70 | 86 | 84 |

**Surrogate Compounds**                      **Recovery Limits**

|                           |         |
|---------------------------|---------|
| S1 = 2-Fluorophenol       | 15-110% |
| S2 = Phenol-d5            | 15-110% |
| S3 = 2,4,6-Tribromophenol | 15-110% |
| S4 = Nitrobenzene-d5      | 30-130% |
| S5 = 2-Fluorobiphenyl     | 30-130% |
| S6 = Terphenyl-d14        | 30-130% |

7.5.1

7

# Semivolatile Surrogate Recovery Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 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 |
|---------------|-------------|----|----|-----|----|----|----|
| MC22808-1     | W14163.D    | 37 | 17 | 83  | 68 | 72 | 85 |
| MC22808-2     | W14164.D    | 40 | 20 | 91  | 65 | 69 | 83 |
| MC22808-3     | W14165.D    | 52 | 23 | 94  | 77 | 74 | 77 |
| MC22808-4     | W14166.D    | 46 | 21 | 99  | 65 | 68 | 79 |
| OP34100-BS    | W14159.D    | 57 | 20 | 104 | 91 | 88 | 93 |
| OP34100-MB    | W14158.D    | 52 | 19 | 96  | 88 | 84 | 91 |
| OP34100-MS    | W14160.D    | 51 | 19 | 102 | 86 | 84 | 92 |
| OP34100-MSD   | W14161.D    | 48 | 18 | 99  | 78 | 79 | 88 |

**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

## 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: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| OP34095-MB | BK27122.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |

The QC reported here applies to the following samples: Method: SW846 8011

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-6

| CAS No.  | Compound                    | Result | RL    | MDL    | Units | Q |
|----------|-----------------------------|--------|-------|--------|-------|---|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND     | 0.015 | 0.0045 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.015 | 0.0097 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Limits |         |
|----------|------------------------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 138%   | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 123%   | 36-173% |

8.1.1  
8

# Blank Spike Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| OP34095-BS | BK27123.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |

The QC reported here applies to the following samples:

Method: SW846 8011

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-6

| CAS No.  | Compound                    | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | Limits |
|----------|-----------------------------|---------------|-------------|----------|--------|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | 0.071         | 0.085       | 120      | 60-140 |
| 106-93-4 | 1,2-Dibromoethane           | 0.071         | 0.077       | 108      | 60-140 |

| CAS No.  | Surrogate Recoveries   | BSP  | Limits  |
|----------|------------------------|------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 125% | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 107% | 36-173% |

8.2.1  
8

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|-----------|----|----------|----|-----------|------------|------------------|
| OP34095-MS  | BK27124.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |
| OP34095-MSD | BK27125.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |
| MC22692-3   | BK27129.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |

The QC reported here applies to the following samples: Method: SW846 8011

MC22808-1, MC22808-2, MC22808-3, MC22808-4, MC22808-6

| CAS No.  | Compound                    | MC22692-3<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|----------|-----------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND                | 0.0677     | 0.060      | 89      | 0.0675        | 0.057       | 84       | 5   | 64-141/29         |
| 106-93-4 | 1,2-Dibromoethane           | ND                | 0.0677     | 0.071      | 105     | 0.0675        | 0.073       | 108      | 3   | 63-163/27         |

| CAS No.  | Surrogate Recoveries   | MS  | MSD | MC22692-3 | Limits  |
|----------|------------------------|-----|-----|-----------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 89% | 87% | 123%      | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 76% | 64% | 91%       | 36-173% |

8.3.1  
8

\* = Outside of Control Limits.



# Volatile Surrogate Recovery Summary

Job Number: MC22808

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

Method: SW846 8011

Matrix: AQ

Samples and QC shown here apply to the above method

| Lab Sample ID | Lab File ID | S1 <sup>a</sup> | S1 <sup>b</sup> |
|---------------|-------------|-----------------|-----------------|
| MC22808-1     | BK27135.D   | 89              | 95              |
| MC22808-2     | BK27136.D   | 51              | 50              |
| MC22808-3     | BK27137.D   | 104             | 99              |
| MC22808-4     | BK27139.D   | 121             | 107             |
| MC22808-6     | BK27140.D   | 86              | 73              |
| OP34095-BS    | BK27123.D   | 125             | 107             |
| OP34095-MB    | BK27122.D   | 138             | 123             |
| OP34095-MS    | BK27124.D   | 89              | 76              |
| OP34095-MSD   | BK27125.D   | 87              | 64              |

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: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |            |
|----------------|--------------|-----------------|------------|
| Check Std:     | GBK930-CC929 | Injection Date: | 07/25/13   |
| Lab File ID:   | BK27116A.D   | Injection Time: | 05:10      |
| Instrument ID: | GCBK         | Method:         | SW846 8011 |

S1<sup>a</sup>    S1<sup>b</sup>  
 RT      RT

|           |      |      |
|-----------|------|------|
| Check Std | 4.58 | 4.94 |
|-----------|------|------|

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 <sup>a</sup> RT | S1 <sup>b</sup> RT |
|---------------|-------------|---------------|---------------|--------------------|--------------------|
| ZZZZZZ        | BK27117.D   | 07/25/13      | 05:36         | 4.58               | 4.94               |
| ZZZZZZ        | BK27118.D   | 07/25/13      | 06:00         | 4.58               | 4.94               |
| ZZZZZZ        | BK27119.D   | 07/25/13      | 06:24         | 4.58               | 4.94               |
| ZZZZZZ        | BK27120.D   | 07/25/13      | 06:48         | 4.58               | 4.94               |
| ZZZZZZ        | BK27121.D   | 07/25/13      | 07:12         | 4.58               | 4.94               |
| OP34095-MB    | BK27122.D   | 07/25/13      | 07:35         | 4.58               | 4.94               |
| OP34095-BS    | BK27123.D   | 07/25/13      | 07:59         | 4.58               | 4.94               |
| OP34095-MS    | BK27124.D   | 07/25/13      | 08:23         | 4.58               | 4.94               |
| OP34095-MSD   | BK27125.D   | 07/25/13      | 08:47         | 4.58               | 4.94               |
| ZZZZZZ        | BK27126.D   | 07/25/13      | 09:11         | 4.58               | 4.94               |

## Surrogate Compounds

S1 = Bromofluorobenzene (S)

- (a) Retention time from GC signal #2
- (b) Retention time from GC signal #1

8.5.1  
8

# GC Surrogate Retention Time Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |            |
|----------------|--------------|-----------------|------------|
| Check Std:     | GBK930-CC929 | Injection Date: | 07/25/13   |
| Lab File ID:   | BK27127.D    | Injection Time: | 09:36      |
| Instrument ID: | GCBK         | Method:         | SW846 8011 |

S1<sup>a</sup>    S1<sup>b</sup>  
 RT      RT

|           |      |      |
|-----------|------|------|
| Check Std | 4.58 | 4.94 |
|-----------|------|------|

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 <sup>a</sup> RT | S1 <sup>b</sup> RT |
|---------------|-------------|---------------|---------------|--------------------|--------------------|
| ZZZZZZ        | BK27128.D   | 07/25/13      | 10:00         | 4.58               | 4.94               |
| MC22692-3     | BK27129.D   | 07/25/13      | 10:24         | 4.58               | 4.94               |
| ZZZZZZ        | BK27130.D   | 07/25/13      | 10:49         | 4.58               | 4.94               |
| ZZZZZZ        | BK27131.D   | 07/25/13      | 11:13         | 4.58               | 4.94               |
| ZZZZZZ        | BK27132.D   | 07/25/13      | 11:37         | 4.58               | 4.94               |
| ZZZZZZ        | BK27133.D   | 07/25/13      | 12:01         | 4.58               | 4.94               |
| ZZZZZZ        | BK27134.D   | 07/25/13      | 12:25         | 4.58               | 4.94               |
| MC22808-1     | BK27135.D   | 07/25/13      | 12:50         | 4.58               | 4.94               |
| MC22808-2     | BK27136.D   | 07/25/13      | 13:14         | 4.58               | 4.94               |
| MC22808-3     | BK27137.D   | 07/25/13      | 13:38         | 4.58               | 4.94               |

## Surrogate Compounds

S1 = Bromofluorobenzene (S)

- (a) Retention time from GC signal #2
- (b) Retention time from GC signal #1

8.5.2  
8

# GC Surrogate Retention Time Summary

Job Number: MC22808  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |            |
|----------------|--------------|-----------------|------------|
| Check Std:     | GBK930-CC929 | Injection Date: | 07/25/13   |
| Lab File ID:   | BK27138.D    | Injection Time: | 14:02      |
| Instrument ID: | GCBK         | Method:         | SW846 8011 |

S1<sup>a</sup>    S1<sup>b</sup>  
 RT      RT

|           |      |      |
|-----------|------|------|
| Check Std | 4.58 | 4.94 |
|-----------|------|------|

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 <sup>a</sup> RT | S1 <sup>b</sup> RT |
|---------------|-------------|---------------|---------------|--------------------|--------------------|
| MC22808-4     | BK27139.D   | 07/25/13      | 14:26         | 4.58               | 4.94               |
| MC22808-6     | BK27140.D   | 07/25/13      | 14:51         | 4.58               | 4.94               |
| ZZZZZZ        | BK27141.D   | 07/25/13      | 15:15         | 4.58               | 4.94               |
| ZZZZZZ        | BK27142.D   | 07/25/13      | 15:39         | 4.58               | 4.94               |
| ZZZZZZ        | BK27143.D   | 07/25/13      | 16:04         | 4.58               | 4.94               |
| ZZZZZZ        | BK27144.D   | 07/25/13      | 16:28         | 4.58               | 4.94               |
| ZZZZZZ        | BK27145.D   | 07/25/13      | 16:52         | 4.58               | 4.94               |
| ZZZZZZ        | BK27146.D   | 07/25/13      | 17:16         | 4.58               | 4.94               |
| GBK930-ECC929 | BK27147.D   | 07/25/13      | 17:41         | 4.58               | 4.94               |

## Surrogate Compounds

S1 = Bromofluorobenzene (S)

- (a) Retention time from GC signal #2
- (b) Retention time from GC signal #1

8.5.3  
8

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*e-Hardcopy 2.0  
Automated Report*

### Technical Report for

### Shell Oil

URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana,

SGS Accutest Job Number: MC22834

Sampling Date: 07/18/13

#### Report to:

AECOM, INC.

Melissa.mansker@aecom.com

ATTN: Melissa Mansker

Total number of pages in report: 147



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.

*H. Madadian*  
H. (Brad) Madadian  
Lab Director

Client Service contact: Jeremy Vienneau 508-481-6200

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

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ACCUTEST

October 25, 2016

AECOM  
1001 Highlands Plaza Drive West Suite 300  
St. Louis, MO 63110

RE: SGS Accutest Job # MC22834

Dear Elizabeth Kunkel

As you are aware, SGS Accutest Inc. - Marlborough has been conducting an extensive review of data associated with some historical Gas Chromatography-Mass Spectroscopy volatiles analyses. As a result of this review it was determined that some revisions of the original test report for this job were needed. These corrections have been incorporated into the revised report.

Please be assured that corrective actions have been put in place to address this matter and prevent a recurrence.

We apologize for any inconvenience that this issue may have caused. Please don't hesitate to contact us if we can be of further assistance.

Sincerely,

**H. (Brad) Madadian**

Regional Laboratory Director  
SGS Accutest Inc. - Marlborough

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TESTING AND CERTIFICATION COMPANY.

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## Sample Summary

Shell Oil

Job No: MC22834

URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample Number | Collected |            | Received | Matrix |                  | Client Sample ID    |
|---------------|-----------|------------|----------|--------|------------------|---------------------|
|               | Date      | Time By    |          | Code   | Type             |                     |
| MC22834-1     | 07/18/13  | 10:25 LRDM | 07/19/13 | AQ     | Ground Water     | P93B-ROX-071813     |
| MC22834-2     | 07/18/13  | 11:10 LRDM | 07/19/13 | AQ     | Ground Water     | P93C-ROX-071813     |
| MC22834-3     | 07/18/13  | 12:00 LRDM | 07/19/13 | AQ     | Ground Water     | P93A-ROX-071813     |
| MC22834-4     | 07/18/13  | 14:35 LRDM | 07/19/13 | AQ     | Ground Water     | P114-ROX-071813     |
| MC22834-5     | 07/18/13  | 14:35 LRDM | 07/19/13 | AQ     | Ground Water     | P114-ROX-071813-DUP |
| MC22834-6     | 07/18/13  | 00:00 LRDM | 07/19/13 | AQ     | Trip Blank Water | TB-ROX-071813-HCL   |
| MC22834-7     | 07/18/13  | 00:00 LRDM | 07/19/13 | AQ     | Trip Blank Water | TB-ROX-071813-ST    |



## SAMPLE DELIVERY GROUP CASE NARRATIVE

2

**Client:** Shell Oil

**Job No** MC22834

**Site:** URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Centra

**Report Date** 10/25/2016 11:32:56 A

5 Sample(s), 2 Trip Blank(s) and 0 Field Blank(s) were collected on 07/18/2013 and were received at SGS Accutest New England on 07/19/2013 properly preserved, at 1.2 Deg. C and intact. These Samples received a job number of MC22834. 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:** MSK2364

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC23063-7MS, MC23063-7MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for 2-Butanone (MEK), 2-Chloroethyl vinyl ether, Vinyl Acetate are outside control limits.
- Matrix Spike/ Matrix Spike Duplicate Recovery(s) for Acetone are outside control limits. Outside control limits due to possible matrix interference.
- MC22834-4, 5 for 4-Bromofluorobenzene: Outside control limits due to possible matrix interference. Confirmed by reanalysis.
- MC22834-4, 5 for Acetone: Initial Calibration Verification outside of acceptance criteria. Sample result may be biased high.

**Matrix:** AQ

**Batch ID:** MSL3537

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC22841-37MS, MC22841-37MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for Vinyl Acetate are outside control limits.
- Matrix Spike Recovery(s) for 2-Butanone (MEK), 4-Methyl-2-pentanone (MIBK), Acetone, Acrylonitrile, Chloromethane, Ethylbenzene, Vinyl Acetate, Vinyl chloride are outside control limits. Outside control limits due to possible matrix interference.
- Matrix Spike Duplicate Recovery(s) for 2-Butanone (MEK), Acetone, Acrylonitrile, Chloromethane, Vinyl Acetate, Vinyl chloride are outside control limits. Probable cause due to matrix interference.
- Vinyl Acetate: Initial calibration verification outside acceptance limits. Sample results may be biased low.  
Acrolein: Initial calibration verification outside acceptance limits, biased high. Associated samples are non detect.
- MC22834-4,5 for 4-Bromofluorobenzene: Outside control limits due to possible matrix interference. Confirmed by reanalysis.

### Extractables by GCMS By Method SW846 8270C

**Matrix:** AQ

**Batch ID:** OP34111

- 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) MC22900-14MS, MC22900-14MSD were used as the QC samples indicated.
- Blank Spike Recovery(s) for Benzoic Acid, Hexachlorocyclopentadiene are outside control limits.
- Matrix Spike/ Matrix Spike Duplicate Recovery(s) for Benzoic Acid, Hexachlorocyclopentadiene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.

Tuesday, October 25, 2016

Page 1 of 2

## Extractables by GCMS By Method SW846 8270C BY SIM

**Matrix:** AQ

**Batch ID:** OP34112

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC22900-15MS, MC22900-15MSD were used as the QC samples indicated.
- Sample(s) MC22834-2, MC22834-4 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.

## Volatiles by GC By Method SW846 8011

**Matrix:** AQ

**Batch ID:** OP34095

- 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) MC22692-3MS, MC22692-3MSD were used as the QC samples indicated.

SGS Accutest 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 Laboratory Director for SGS Accutest New England or assignee as verified by the signature on the cover page has authorized the release of this report(MC22834).

# Summary of Hits

Job Number: MC22834  
 Account: Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
 Collected: 07/18/13



| Lab Sample ID | Client Sample ID | Result/<br>Analyte | RL | MDL | Units | Method |
|---------------|------------------|--------------------|----|-----|-------|--------|
|---------------|------------------|--------------------|----|-----|-------|--------|

**MC22834-1 P93B-ROX-071813**

|                            |         |       |       |      |                    |
|----------------------------|---------|-------|-------|------|--------------------|
| Benzene                    | 296000  | 500   | 450   | ug/l | SW846 8260B        |
| Ethylbenzene               | 65.2    | 1.0   | 0.38  | ug/l | SW846 8260B        |
| Isopropylbenzene           | 24.7    | 5.0   | 0.64  | ug/l | SW846 8260B        |
| Methyl Tert Butyl Ether    | 3.5     | 1.0   | 0.43  | ug/l | SW846 8260B        |
| Naphthalene                | 9.3     | 5.0   | 0.79  | ug/l | SW846 8260B        |
| n-Propylbenzene            | 35.7    | 5.0   | 0.59  | ug/l | SW846 8260B        |
| Toluene                    | 64.6    | 1.0   | 0.46  | ug/l | SW846 8260B        |
| 1,2,4-Trimethylbenzene     | 25.0    | 5.0   | 0.47  | ug/l | SW846 8260B        |
| 1,3,5-Trimethylbenzene     | 6.9     | 5.0   | 1.1   | ug/l | SW846 8260B        |
| Vinyl Acetate <sup>a</sup> | 17.6    | 5.0   | 1.3   | ug/l | SW846 8260B        |
| m,p-Xylene                 | 195     | 1.0   | 0.70  | ug/l | SW846 8260B        |
| o-Xylene                   | 41.8    | 1.0   | 0.41  | ug/l | SW846 8260B        |
| Xylene (total)             | 236     | 1.0   | 0.41  | ug/l | SW846 8260B        |
| Phenol                     | 151     | 5.6   | 0.57  | ug/l | SW846 8270C        |
| Di-n-butyl phtalate        | 0.50 J  | 5.6   | 0.43  | ug/l | SW846 8270C        |
| Phenanthrene               | 0.034 J | 0.056 | 0.014 | ug/l | SW846 8270C BY SIM |

**MC22834-2 P93C-ROX-071813**

|                         |          |       |       |      |                    |
|-------------------------|----------|-------|-------|------|--------------------|
| Benzene                 | 101000   | 500   | 450   | ug/l | SW846 8260B        |
| Ethylbenzene            | 4.1      | 1.0   | 0.38  | ug/l | SW846 8260B        |
| Isopropylbenzene        | 2.0 J    | 5.0   | 0.64  | ug/l | SW846 8260B        |
| Methyl Tert Butyl Ether | 4.9      | 1.0   | 0.43  | ug/l | SW846 8260B        |
| n-Propylbenzene         | 2.0 J    | 5.0   | 0.59  | ug/l | SW846 8260B        |
| Toluene                 | 7.0      | 1.0   | 0.46  | ug/l | SW846 8260B        |
| 1,2,4-Trimethylbenzene  | 1.6 J    | 5.0   | 0.47  | ug/l | SW846 8260B        |
| m,p-Xylene              | 7.6      | 1.0   | 0.70  | ug/l | SW846 8260B        |
| o-Xylene                | 1.5      | 1.0   | 0.41  | ug/l | SW846 8260B        |
| Xylene (total)          | 9.1      | 1.0   | 0.41  | ug/l | SW846 8260B        |
| Phenol                  | 35.2     | 5.6   | 0.58  | ug/l | SW846 8270C        |
| Acenaphthene            | 0.045 JB | 0.11  | 0.015 | ug/l | SW846 8270C BY SIM |
| Anthracene              | 0.021 J  | 0.11  | 0.020 | ug/l | SW846 8270C BY SIM |
| Benzo(a)pyrene          | 0.15     | 0.11  | 0.020 | ug/l | SW846 8270C BY SIM |
| Phenanthrene            | 0.026 J  | 0.056 | 0.014 | ug/l | SW846 8270C BY SIM |

**MC22834-3 P93A-ROX-071813**

|                   |       |     |      |      |             |
|-------------------|-------|-----|------|------|-------------|
| Acetone           | 5.3 J | 10  | 2.8  | ug/l | SW846 8260B |
| Benzene           | 89100 | 500 | 450  | ug/l | SW846 8260B |
| sec-Butylbenzene  | 5.6   | 5.0 | 0.58 | ug/l | SW846 8260B |
| tert-Butylbenzene | 91.6  | 5.0 | 0.87 | ug/l | SW846 8260B |
| Ethylbenzene      | 162   | 1.0 | 0.38 | ug/l | SW846 8260B |
| Isopropylbenzene  | 10.1  | 5.0 | 0.64 | ug/l | SW846 8260B |

# Summary of Hits

Job Number: MC22834  
 Account: Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
 Collected: 07/18/13



| Lab Sample ID | Client Sample ID | Result/<br>Analyte      | RL      | MDL   | Units | Method |                    |
|---------------|------------------|-------------------------|---------|-------|-------|--------|--------------------|
|               |                  | p-Isopropyltoluene      | 2.4 J   | 5.0   | 0.55  | ug/l   | SW846 8260B        |
|               |                  | Methyl Tert Butyl Ether | 5.4     | 1.0   | 0.43  | ug/l   | SW846 8260B        |
|               |                  | Naphthalene             | 30.3    | 5.0   | 0.79  | ug/l   | SW846 8260B        |
|               |                  | n-Propylbenzene         | 11.3    | 5.0   | 0.59  | ug/l   | SW846 8260B        |
|               |                  | Toluene                 | 7.2     | 1.0   | 0.46  | ug/l   | SW846 8260B        |
|               |                  | 1,2,4-Trimethylbenzene  | 91.5    | 5.0   | 0.47  | ug/l   | SW846 8260B        |
|               |                  | 1,3,5-Trimethylbenzene  | 11.6    | 5.0   | 1.1   | ug/l   | SW846 8260B        |
|               |                  | m,p-Xylene              | 273     | 1.0   | 0.70  | ug/l   | SW846 8260B        |
|               |                  | o-Xylene                | 42.6    | 1.0   | 0.41  | ug/l   | SW846 8260B        |
|               |                  | Xylene (total)          | 316     | 1.0   | 0.41  | ug/l   | SW846 8260B        |
|               |                  | Phenol                  | 107     | 5.6   | 0.58  | ug/l   | SW846 8270C        |
|               |                  | Dibenzofuran            | 0.24 J  | 2.2   | 0.18  | ug/l   | SW846 8270C        |
|               |                  | Acenaphthylene          | 0.032 J | 0.11  | 0.015 | ug/l   | SW846 8270C BY SIM |
|               |                  | Anthracene              | 0.030 J | 0.11  | 0.020 | ug/l   | SW846 8270C BY SIM |
|               |                  | Fluorene                | 0.23    | 0.11  | 0.052 | ug/l   | SW846 8270C BY SIM |
|               |                  | 1-Methylnaphthalene     | 8.9     | 0.22  | 0.16  | ug/l   | SW846 8270C BY SIM |
|               |                  | 2-Methylnaphthalene     | 6.2     | 0.22  | 0.058 | ug/l   | SW846 8270C BY SIM |
|               |                  | Phenanthrene            | 0.21    | 0.056 | 0.014 | ug/l   | SW846 8270C BY SIM |

**MC22834-4 P114-ROX-071813**

|  |  |                         |         |       |       |      |                    |
|--|--|-------------------------|---------|-------|-------|------|--------------------|
|  |  | Acetone <sup>b</sup>    | 251     | 10    | 2.8   | ug/l | SW846 8260B        |
|  |  | Methyl Tert Butyl Ether | 2.3     | 1.0   | 0.43  | ug/l | SW846 8260B        |
|  |  | Acenaphthene            | 0.13 B  | 0.11  | 0.015 | ug/l | SW846 8270C BY SIM |
|  |  | Anthracene              | 0.11    | 0.11  | 0.019 | ug/l | SW846 8270C BY SIM |
|  |  | Benzo(a)anthracene      | 0.045 J | 0.055 | 0.033 | ug/l | SW846 8270C BY SIM |
|  |  | Benzo(a)pyrene          | 0.034 J | 0.11  | 0.019 | ug/l | SW846 8270C BY SIM |
|  |  | Benzo(b)fluoranthene    | 0.064   | 0.055 | 0.026 | ug/l | SW846 8270C BY SIM |
|  |  | Benzo(g,h,i)perylene    | 0.067 J | 0.11  | 0.041 | ug/l | SW846 8270C BY SIM |
|  |  | Dibenzo(a,h)anthracene  | 0.073 J | 0.11  | 0.046 | ug/l | SW846 8270C BY SIM |
|  |  | Indeno(1,2,3-cd)pyrene  | 0.071 J | 0.11  | 0.051 | ug/l | SW846 8270C BY SIM |
|  |  | Phenanthrene            | 0.059   | 0.055 | 0.014 | ug/l | SW846 8270C BY SIM |

**MC22834-5 P114-ROX-071813-DUP**

|  |  |                         |         |       |       |      |                    |
|--|--|-------------------------|---------|-------|-------|------|--------------------|
|  |  | Acetone <sup>b</sup>    | 245     | 10    | 2.8   | ug/l | SW846 8260B        |
|  |  | Methyl Tert Butyl Ether | 2.2     | 1.0   | 0.43  | ug/l | SW846 8260B        |
|  |  | Anthracene              | 0.13    | 0.11  | 0.019 | ug/l | SW846 8270C BY SIM |
|  |  | Phenanthrene            | 0.052 J | 0.053 | 0.013 | ug/l | SW846 8270C BY SIM |

**MC22834-6 TB-ROX-071813-HCL**

No hits reported in this sample.

## Summary of Hits

Job Number: MC22834  
Account: Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
Collected: 07/18/13



| Lab Sample ID | Client Sample ID | Result/<br>Analyte | Qual | RL | MDL | Units | Method |
|---------------|------------------|--------------------|------|----|-----|-------|--------|
|---------------|------------------|--------------------|------|----|-----|-------|--------|

MC22834-7 TB-ROX-071813-ST

No hits reported in this sample.

- (a) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low.
- (b) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased high.

Sample Results

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Report of Analysis

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## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P93B-ROX-071813   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-1  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF   | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|------|----------|----|-----------|------------|------------------|
| Run #1 | L76157.D | 1    | 07/30/13 | KR | n/a       | n/a        | MSL3537          |
| Run #2 | K72609.D | 1000 | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

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

## VOA Special List

| CAS No.  | Compound                  | Result              | RL   | MDL  | Units | Q |
|----------|---------------------------|---------------------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND                  | 10   | 2.8  | 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                   | 296000 <sup>a</sup> | 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            | 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 <sup>a</sup>     | 5000 | 1100 | 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: | P93B-ROX-071813   | Date Sampled:   | 07/18/13 |
| Lab Sample ID:    | MC22834-1         | Date Received:  | 07/19/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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     | 1.0  | 0.29 | ug/l  |   |
| 123-91-1   | 1,4-Dioxane                 | ND     | 50   | 16   | ug/l  |   |
| 97-63-2    | Ethyl methacrylate          | ND     | 5.0  | 0.81 | ug/l  |   |
| 100-41-4   | Ethylbenzene                | 65.2   | 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            | 24.7   | 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     | 3.5    | 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                 | 9.3    | 5.0  | 0.79 | ug/l  |   |
| 103-65-1   | n-Propylbenzene             | 35.7   | 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                     | 64.6   | 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      | 25.0   | 5.0  | 0.47 | ug/l  |   |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 6.9    | 5.0  | 1.1  | ug/l  |   |
| 108-05-4   | Vinyl Acetate <sup>b</sup>  | 17.6   | 5.0  | 1.3  | ug/l  |   |
| 75-01-4    | Vinyl chloride              | ND     | 1.0  | 0.61 | ug/l  |   |
|            | m,p-Xylene                  | 195    | 1.0  | 0.70 | ug/l  |   |
| 95-47-6    | o-Xylene                    | 41.8   | 1.0  | 0.41 | ug/l  |   |
| 1330-20-7  | Xylene (total)              | 236    | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> P93B-ROX-071813   |  | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-1  |  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 80%    | 111%   | 70-130% |
| 2037-26-5 | Toluene-D8           | 113%   | 100%   | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 100%   | 94%    | 70-130% |

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

- (a) Result is from Run# 2
- (b) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low.

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P93B-ROX-071813   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-1  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | R32544.D | 1  | 07/31/13 | KR | 07/24/13  | OP34111    | MSR1186          |
| Run #2 |          |    |          |    |           |            |                  |

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

## ABN Special List

| CAS No.   | Compound                    | Result | RL  | MDL  | Units | Q |
|-----------|-----------------------------|--------|-----|------|-------|---|
| 65-85-0   | Benzoic Acid                | ND     | 11  | 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  | 0.36 | 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  | 0.65 | ug/l  |   |
| 87-86-5   | Pentachlorophenol           | ND     | 11  | 1.4  | ug/l  |   |
| 108-95-2  | Phenol                      | 151    | 5.6 | 0.57 | ug/l  |   |
| 95-95-4   | 2,4,5-Trichlorophenol       | ND     | 11  | 0.64 | ug/l  |   |
| 88-06-2   | 2,4,6-Trichlorophenol       | ND     | 11  | 0.35 | ug/l  |   |
| 62-53-3   | Aniline                     | ND     | 11  | 0.71 | 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 | 0.95 | ug/l  |   |
| 100-51-6  | Benzyl Alcohol              | ND     | 11  | 0.64 | 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 | 0.23 | 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 | 0.72 | ug/l  |   |
| 121-14-2  | 2,4-Dinitrotoluene          | ND     | 11  | 0.75 | ug/l  |   |
| 606-20-2  | 2,6-Dinitrotoluene          | ND     | 11  | 0.71 | ug/l  |   |
| 91-94-1   | 3,3'-Dichlorobenzidine      | ND     | 5.6 | 0.56 | ug/l  |   |
| 132-64-9  | Dibenzofuran                | ND     | 2.2 | 0.17 | ug/l  |   |
| 84-74-2   | Di-n-butyl phthalate        | 0.50   | 5.6 | 0.43 | ug/l  | J |
| 117-84-0  | Di-n-octyl phthalate        | ND     | 5.6 | 0.48 | ug/l  |   |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

|                   |                         |  |          |
|-------------------|-------------------------|--|----------|
| Client Sample ID: | P93B-ROX-071813         | Date Sampled:  | 07/18/13 |
| Lab Sample ID:    | MC22834-1               | Date Received:   | 07/19/13 |
| Matrix:           | AQ - Ground Water       | Percent Solids:  | n/a      |
| Method:           | SW846 8270C SW846 3510C | Project: URMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## ABN Special List

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.6 | 0.56 | ug/l  |   |
| 131-11-3 | Dimethyl phthalate         | ND     | 5.6 | 0.56 | ug/l  |   |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | ND     | 2.2 | 0.54 | 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  | 4.8  | 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 | 0.90 | ug/l  |   |
| 86-30-6  | N-Nitrosodiphenylamine     | ND     | 5.6 | 0.60 | 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       | 54%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 23%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 99%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 87%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 103%   |        | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P93B-ROX-071813   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-1  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14192.D | 1  | 07/29/13 | WK | 07/24/13  | OP34112    | MSW642           |
| Run #2 |          |    |          |    |           |            |                  |

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

## BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | ND     | 0.11  | 0.015 | ug/l  |   |
| 208-96-8 | Acenaphthylene         | ND     | 0.11  | 0.015 | ug/l  |   |
| 120-12-7 | Anthracene             | ND     | 0.11  | 0.020 | ug/l  |   |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.056 | 0.033 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.11  | 0.019 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.056 | 0.026 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.11  | 0.042 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.065 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.081 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.11  | 0.046 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.11  | 0.036 | ug/l  |   |
| 86-73-7  | Fluorene               | ND     | 0.11  | 0.051 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.11  | 0.051 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | ND     | 0.22  | 0.16  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | ND     | 0.22  | 0.058 | ug/l  |   |
| 85-01-8  | Phenanthrene           | 0.034  | 0.056 | 0.014 | ug/l  | J |
| 129-00-0 | Pyrene                 | ND     | 0.11  | 0.039 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 4165-60-0 | Nitrobenzene-d5      | 97%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 97%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 95%    |        | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P93B-ROX-071813   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-1  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27141.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |
| 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 | 0.0044 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.014 | 0.0093 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 108%   |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 110%   |        | 36-173% |

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

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

4.1  
4

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P93C-ROX-071813   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-2  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF   | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|------|----------|----|-----------|------------|------------------|
| Run #1 | L76158.D | 1    | 07/30/13 | KR | n/a       | n/a        | MSL3537          |
| Run #2 | K72610.D | 1000 | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

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

## VOA Special List

| CAS No.  | Compound                  | Result              | RL   | MDL  | Units | Q |
|----------|---------------------------|---------------------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND                  | 10   | 2.8  | 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                   | 101000 <sup>a</sup> | 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            | 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 <sup>a</sup>     | 5000 | 1100 | 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: | P93C-ROX-071813   | Date Sampled:   | 07/18/13 |
| Lab Sample ID:    | MC22834-2         | Date Received:  | 07/19/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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     | 1.0  | 0.29 | ug/l  |   |
| 123-91-1   | 1,4-Dioxane                 | ND     | 50   | 16   | ug/l  |   |
| 97-63-2    | Ethyl methacrylate          | ND     | 5.0  | 0.81 | ug/l  |   |
| 100-41-4   | Ethylbenzene                | 4.1    | 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            | 2.0    | 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     | 4.9    | 1.0  | 0.43 | ug/l  |   |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | ND     | 5.0  | 1.3  | ug/l  |   |
| 74-95-3    | Methylene bromide           | ND     | 5.0  | 0.43 | ug/l  |   |
| 75-09-2    | Methylene chloride          | ND     | 2.0  | 0.41 | ug/l  |   |
| 91-20-3    | Naphthalene                 | ND     | 5.0  | 0.79 | ug/l  |   |
| 103-65-1   | n-Propylbenzene             | 2.0    | 5.0  | 0.59 | ug/l  | J |
| 100-42-5   | Styrene                     | ND     | 5.0  | 0.49 | ug/l  |   |
| 630-20-6   | 1,1,1,2-Tetrachloroethane   | ND     | 1.0  | 0.46 | ug/l  |   |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | ND     | 0.50 | 0.42 | ug/l  |   |
| 127-18-4   | Tetrachloroethene           | ND     | 1.0  | 0.61 | ug/l  |   |
| 108-88-3   | Toluene                     | 7.0    | 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 | ug/l  |   |
| 71-55-6    | 1,1,1-Trichloroethane       | ND     | 1.0  | 0.94 | ug/l  |   |
| 79-00-5    | 1,1,2-Trichloroethane       | ND     | 1.0  | 0.49 | ug/l  |   |
| 79-01-6    | Trichloroethene             | ND     | 1.0  | 0.45 | ug/l  |   |
| 75-69-4    | Trichlorofluoromethane      | ND     | 1.0  | 0.61 | ug/l  |   |
| 96-18-4    | 1,2,3-Trichloropropane      | ND     | 5.0  | 0.70 | ug/l  |   |
| 95-63-6    | 1,2,4-Trimethylbenzene      | 1.6    | 5.0  | 0.47 | ug/l  | J |
| 108-67-8   | 1,3,5-Trimethylbenzene      | ND     | 5.0  | 1.1  | ug/l  |   |
| 108-05-4   | Vinyl Acetate <sup>b</sup>  | ND     | 5.0  | 1.3  | ug/l  |   |
| 75-01-4    | Vinyl chloride              | ND     | 1.0  | 0.61 | ug/l  |   |
|            | m,p-Xylene                  | 7.6    | 1.0  | 0.70 | ug/l  |   |
| 95-47-6    | o-Xylene                    | 1.5    | 1.0  | 0.41 | ug/l  |   |
| 1330-20-7  | Xylene (total)              | 9.1    | 1.0  | 0.41 | ug/l  |   |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> P93C-ROX-071813   |  | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-2  |  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

4.2  
4

**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 77%    | 112%   | 70-130% |
| 2037-26-5 | Toluene-D8           | 97%    | 98%    | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 104%   | 93%    | 70-130% |

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

- (a) Result is from Run# 2
- (b) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low.

---

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



## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P93C-ROX-071813   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-2  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | R32545.D | 1  | 07/31/13 | KR | 07/24/13  | OP34111    | MSR1186          |
| Run #2 |          |    |          |    |           |            |                  |

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

## ABN Special List

| CAS No.   | Compound                    | Result | RL  | MDL  | Units | Q |
|-----------|-----------------------------|--------|-----|------|-------|---|
| 65-85-0   | Benzoic Acid                | ND     | 11  | 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                      | 35.2   | 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  |   |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P93C-ROX-071813   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-2  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

**ABN Special List**

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.6 | 0.56 | 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       | 40%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 18%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 89%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 79%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 93%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 85%    |        | 30-130% |

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

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

4.2  
4

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P93C-ROX-071813   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-2  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14193.D | 1  | 07/29/13 | WK | 07/24/13  | OP34112    | MSW642           |
| Run #2 |          |    |          |    |           |            |                  |

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

## BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q  |
|----------|------------------------|--------|-------|-------|-------|----|
| 83-32-9  | Acenaphthene           | 0.045  | 0.11  | 0.015 | ug/l  | JB |
| 208-96-8 | Acenaphthylene         | ND     | 0.11  | 0.015 | ug/l  |    |
| 120-12-7 | Anthracene             | 0.021  | 0.11  | 0.020 | ug/l  | J  |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.056 | 0.034 | ug/l  |    |
| 50-32-8  | Benzo(a)pyrene         | 0.15   | 0.11  | 0.020 | ug/l  |    |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.056 | 0.027 | ug/l  |    |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.11  | 0.042 | ug/l  |    |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.066 | ug/l  |    |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.082 | ug/l  |    |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.11  | 0.047 | ug/l  |    |
| 206-44-0 | Fluoranthene           | ND     | 0.11  | 0.037 | ug/l  |    |
| 86-73-7  | Fluorene               | ND     | 0.11  | 0.052 | ug/l  |    |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.11  | 0.052 | ug/l  |    |
| 90-12-0  | 1-Methylnaphthalene    | ND     | 0.22  | 0.16  | ug/l  |    |
| 91-57-6  | 2-Methylnaphthalene    | ND     | 0.22  | 0.058 | ug/l  |    |
| 85-01-8  | Phenanthrene           | 0.026  | 0.056 | 0.014 | ug/l  | J  |
| 129-00-0 | Pyrene                 | ND     | 0.11  | 0.040 | ug/l  |    |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 4165-60-0 | Nitrobenzene-d5      | 88%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 87%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 86%    |        | 30-130% |

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

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P93C-ROX-071813   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-2  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27142.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |
| Run #2 |           |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 36.0 ml        | 2.0 ml       |
| Run #2 |                |              |

**VOA Special List**

| CAS No.  | Compound                    | Result | RL    | MDL    | Units | Q |
|----------|-----------------------------|--------|-------|--------|-------|---|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND     | 0.015 | 0.0044 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.015 | 0.0094 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 120%   |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 93%    |        | 36-173% |

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

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

4.2  
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## Report of Analysis

|                   |                   |   |          |
|-------------------|-------------------|---|----------|
| Client Sample ID: | P93A-ROX-071813   | Date Sampled:   | 07/18/13 |
| Lab Sample ID:    | MC22834-3         | Date Received:  | 07/19/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF   | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|------|----------|----|-----------|------------|------------------|
| Run #1 | L76159.D | 1    | 07/30/13 | KR | n/a       | n/a        | MSL3537          |
| Run #2 | K72611.D | 1000 | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

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

## VOA Special List

| CAS No.  | Compound                  | Result             | RL   | MDL  | Units | Q |
|----------|---------------------------|--------------------|------|------|-------|---|
| 67-64-1  | Acetone                   | 5.3                | 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                   | 89100 <sup>a</sup> | 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            | ND                 | 5.0  | 0.54 | ug/l  |   |
| 135-98-8 | sec-Butylbenzene          | 5.6                | 5.0  | 0.58 | ug/l  |   |
| 98-06-6  | tert-Butylbenzene         | 91.6               | 5.0  | 0.87 | ug/l  |   |
| 75-15-0  | Carbon disulfide          | ND                 | 5.0  | 0.59 | ug/l  |   |
| 56-23-5  | Carbon tetrachloride      | ND                 | 1.0  | 0.62 | ug/l  |   |
| 108-90-7 | Chlorobenzene             | ND                 | 1.0  | 0.48 | ug/l  |   |
| 75-00-3  | Chloroethane              | ND                 | 2.0  | 0.84 | ug/l  |   |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND <sup>a</sup>    | 5000 | 1100 | 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-071813   | Date Sampled:   | 07/18/13 |
| Lab Sample ID:    | MC22834-3         | Date Received:  | 07/19/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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     | 1.0  | 0.29 | ug/l  |   |
| 123-91-1   | 1,4-Dioxane                 | ND     | 50   | 16   | ug/l  |   |
| 97-63-2    | Ethyl methacrylate          | ND     | 5.0  | 0.81 | ug/l  |   |
| 100-41-4   | Ethylbenzene                | 162    | 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            | 10.1   | 5.0  | 0.64 | ug/l  |   |
| 99-87-6    | p-Isopropyltoluene          | 2.4    | 5.0  | 0.55 | ug/l  | J |
| 1634-04-4  | Methyl Tert Butyl Ether     | 5.4    | 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                 | 30.3   | 5.0  | 0.79 | ug/l  |   |
| 103-65-1   | n-Propylbenzene             | 11.3   | 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                     | 7.2    | 1.0  | 0.46 | ug/l  |   |
| 87-61-6    | 1,2,3-Trichlorobenzene      | ND     | 5.0  | 0.76 | ug/l  |   |
| 120-82-1   | 1,2,4-Trichlorobenzene      | ND     | 5.0  | 0.45 | ug/l  |   |
| 71-55-6    | 1,1,1-Trichloroethane       | ND     | 1.0  | 0.94 | ug/l  |   |
| 79-00-5    | 1,1,2-Trichloroethane       | ND     | 1.0  | 0.49 | ug/l  |   |
| 79-01-6    | Trichloroethene             | ND     | 1.0  | 0.45 | ug/l  |   |
| 75-69-4    | Trichlorofluoromethane      | ND     | 1.0  | 0.61 | ug/l  |   |
| 96-18-4    | 1,2,3-Trichloropropane      | ND     | 5.0  | 0.70 | ug/l  |   |
| 95-63-6    | 1,2,4-Trimethylbenzene      | 91.5   | 5.0  | 0.47 | ug/l  |   |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 11.6   | 5.0  | 1.1  | ug/l  |   |
| 108-05-4   | Vinyl Acetate <sup>b</sup>  | ND     | 5.0  | 1.3  | ug/l  |   |
| 75-01-4    | Vinyl chloride              | ND     | 1.0  | 0.61 | ug/l  |   |
|            | m,p-Xylene                  | 273    | 1.0  | 0.70 | ug/l  |   |
| 95-47-6    | o-Xylene                    | 42.6   | 1.0  | 0.41 | ug/l  |   |
| 1330-20-7  | Xylene (total)              | 316    | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> P93A-ROX-071813   |  | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-3  |  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 77%    | 111%   | 70-130% |
| 2037-26-5 | Toluene-D8           | 96%    | 98%    | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 102%   | 95%    | 70-130% |

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

- (a) Result is from Run# 2
- (b) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low.

---

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P93A-ROX-071813   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-3  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | R32546.D | 1  | 07/31/13 | KR | 07/24/13  | OP34111    | MSR1186          |
| Run #2 |          |    |          |    |           |            |                  |

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

## ABN Special List

| CAS No.   | Compound                    | Result | RL  | MDL  | Units | Q |
|-----------|-----------------------------|--------|-----|------|-------|---|
| 65-85-0   | Benzoic Acid                | ND     | 11  | 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                      | 107    | 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                | 0.24   | 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

|   |  |                                |
|---|--|--------------------------------|
| <b>Client Sample ID:</b> P93A-ROX-071813  |  | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-3   |  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water  |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C  |  |                                |
| <b>Project:</b> URMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

**ABN Special List**

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.6 | 0.56 | 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       | 50%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 23%    |        | 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     | 93%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 82%    |        | 30-130% |

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

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

4.3  
4

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P93A-ROX-071813   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-3  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14194.D | 1  | 07/29/13 | WK | 07/24/13  | OP34112    | MSW642           |
| Run #2 |          |    |          |    |           |            |                  |

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

## BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | ND     | 0.11  | 0.015 | ug/l  |   |
| 208-96-8 | Acenaphthylene         | 0.032  | 0.11  | 0.015 | ug/l  | J |
| 120-12-7 | Anthracene             | 0.030  | 0.11  | 0.020 | ug/l  | J |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.056 | 0.034 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.11  | 0.020 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.056 | 0.027 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.11  | 0.042 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.066 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.082 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.11  | 0.047 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.11  | 0.037 | ug/l  |   |
| 86-73-7  | Fluorene               | 0.23   | 0.11  | 0.052 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.11  | 0.052 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | 8.9    | 0.22  | 0.16  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | 6.2    | 0.22  | 0.058 | ug/l  |   |
| 85-01-8  | Phenanthrene           | 0.21   | 0.056 | 0.014 | 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      | 86%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 84%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 83%    |        | 30-130% |

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

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P93A-ROX-071813   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-3  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27143.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |
| 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 | 0.0045 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.015 | 0.0096 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 133%   |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 118%   |        | 36-173% |

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

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

4.3  
4

## Report of Analysis

|                   |                   |   |          |
|-------------------|-------------------|---|----------|
| Client Sample ID: | P114-ROX-071813   | Date Sampled:   | 07/18/13 |
| Lab Sample ID:    | MC22834-4         | Date Received:  | 07/19/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | K72612.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |
| Run #2 | L76150.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

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

## VOA Special List

| CAS No.  | Compound                  | Result          | RL   | MDL  | Units | Q |
|----------|---------------------------|-----------------|------|------|-------|---|
| 67-64-1  | Acetone <sup>a</sup>      | 251             | 10   | 2.8  | ug/l  |   |
| 107-02-8 | Acrolein                  | ND <sup>b</sup> | 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  | 1.1  | 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-071813   | Date Sampled:   | 07/18/13 |
| Lab Sample ID:    | MC22834-4         | Date Received:  | 07/19/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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     | 2.3    | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> P114-ROX-071813   |  | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-4  |  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1            | Run# 2            | Limits  |
|-----------|----------------------|-------------------|-------------------|---------|
| 1868-53-7 | Dibromofluoromethane | 112%              | 86%               | 70-130% |
| 2037-26-5 | Toluene-D8           | 97%               | 91%               | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 138% <sup>c</sup> | 147% <sup>c</sup> | 70-130% |

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

- (a) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased high.
- (b) Result is from Run# 2
- (c) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

---

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P114-ROX-071813   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-4  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | R32547.D | 1  | 07/31/13 | KR | 07/24/13  | OP34111    | MSR1186          |
| Run #2 |          |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 910 ml         | 1.0 ml       |
| Run #2 |                |              |

## ABN Special List

| CAS No.   | Compound                    | Result | RL  | MDL  | Units | Q |
|-----------|-----------------------------|--------|-----|------|-------|---|
| 65-85-0   | Benzoic Acid                | ND     | 11  | 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 method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> P114-ROX-071813   |  | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-4  |  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

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**ABN Special List**

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.5 | 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       | 43%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 17%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 87%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 72%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 84%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 79%    |        | 30-130% |

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

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



## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P114-ROX-071813   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-4  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14195.D | 1  | 07/29/13 | WK | 07/24/13  | OP34112    | MSW642           |
| Run #2 |          |    |          |    |           |            |                  |

| Run #  | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 910 ml         | 1.0 ml       |
| Run #2 |                |              |

## BN Special List

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | 0.13   | 0.11  | 0.015 | ug/l  | B |
| 208-96-8 | Acenaphthylene         | ND     | 0.11  | 0.015 | ug/l  |   |
| 120-12-7 | Anthracene             | 0.11   | 0.11  | 0.019 | ug/l  |   |
| 56-55-3  | Benzo(a)anthracene     | 0.045  | 0.055 | 0.033 | ug/l  | J |
| 50-32-8  | Benzo(a)pyrene         | 0.034  | 0.11  | 0.019 | ug/l  | J |
| 205-99-2 | Benzo(b)fluoranthene   | 0.064  | 0.055 | 0.026 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | 0.067  | 0.11  | 0.041 | ug/l  | J |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.064 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.080 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | 0.073  | 0.11  | 0.046 | ug/l  | J |
| 206-44-0 | Fluoranthene           | ND     | 0.11  | 0.036 | ug/l  |   |
| 86-73-7  | Fluorene               | ND     | 0.11  | 0.051 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.071  | 0.11  | 0.051 | ug/l  | J |
| 90-12-0  | 1-Methylnaphthalene    | ND     | 0.22  | 0.15  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | ND     | 0.22  | 0.057 | ug/l  |   |
| 85-01-8  | Phenanthrene           | 0.059  | 0.055 | 0.014 | ug/l  |   |
| 129-00-0 | Pyrene                 | ND     | 0.11  | 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     | 80%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 81%    |        | 30-130% |

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

MDL = Method Detection Limit

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P114-ROX-071813   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-4  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27144.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |
| Run #2 |           |    |          |    |           |            |                  |

|        | Initial Volume | Final Volume |
|--------|----------------|--------------|
| Run #1 | 37.3 ml        | 2.0 ml       |
| Run #2 |                |              |

### VOA Special List

| CAS No.  | Compound                    | Result | RL    | MDL    | Units | Q |
|----------|-----------------------------|--------|-------|--------|-------|---|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND     | 0.014 | 0.0043 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.014 | 0.0091 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 88%    |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 58%    |        | 36-173% |

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

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

4.4  
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## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P114-ROX-071813-DUP   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-5  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | K72613.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |
| Run #2 | L76151.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

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

## VOA Special List

| CAS No.  | Compound                  | Result          | RL   | MDL  | Units | Q |
|----------|---------------------------|-----------------|------|------|-------|---|
| 67-64-1  | Acetone <sup>a</sup>      | 245             | 10   | 2.8  | ug/l  |   |
| 107-02-8 | Acrolein                  | ND <sup>b</sup> | 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  | 1.1  | 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-071813-DUP | Date Sampled:   | 07/18/13 |
| Lab Sample ID:    | MC22834-5           | Date Received:  | 07/19/13 |
| Matrix:           | AQ - Ground Water   | Percent Solids:   | n/a      |
| Method:           | SW846 8260B         | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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     | 2.2    | 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  |   |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P114-ROX-071813-DUP   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-5  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

4.5  
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**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1            | Run# 2            | Limits  |
|-----------|----------------------|-------------------|-------------------|---------|
| 1868-53-7 | Dibromofluoromethane | 112%              | 85%               | 70-130% |
| 2037-26-5 | Toluene-D8           | 98%               | 92%               | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 138% <sup>c</sup> | 148% <sup>c</sup> | 70-130% |

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

- (a) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased high.
- (b) Result is from Run# 2
- (c) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

---

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P114-ROX-071813-DUP   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-5  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | R32550.D | 1  | 07/31/13 | KR | 07/24/13  | OP34111    | MSR1186          |
| Run #2 |          |    |          |    |           |            |                  |

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

## ABN Special List

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

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P114-ROX-071813-DUP   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-5  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C SW846 3510C   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

## ABN Special List

| CAS No.  | Compound                   | Result | RL  | MDL  | Units | Q |
|----------|----------------------------|--------|-----|------|-------|---|
| 84-66-2  | Diethyl phthalate          | ND     | 5.3 | 0.53 | ug/l  |   |
| 131-11-3 | Dimethyl phthalate         | ND     | 5.3 | 0.53 | ug/l  |   |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | ND     | 2.1 | 0.52 | ug/l  |   |
| 118-74-1 | Hexachlorobenzene          | ND     | 5.3 | 0.32 | ug/l  |   |
| 77-47-4  | Hexachlorocyclopentadiene  | ND     | 11  | 2.7  | ug/l  |   |
| 67-72-1  | Hexachloroethane           | ND     | 5.3 | 0.47 | ug/l  |   |
| 78-59-1  | Isophorone                 | ND     | 5.3 | 0.21 | ug/l  |   |
| 88-74-4  | 2-Nitroaniline             | ND     | 11  | 0.30 | ug/l  |   |
| 99-09-2  | 3-Nitroaniline             | ND     | 11  | 0.53 | ug/l  |   |
| 100-01-6 | 4-Nitroaniline             | ND     | 11  | 4.6  | ug/l  |   |
| 98-95-3  | Nitrobenzene               | ND     | 5.3 | 0.26 | ug/l  |   |
| 62-75-9  | n-Nitrosodimethylamine     | ND     | 5.3 | 0.53 | ug/l  |   |
| 621-64-7 | N-Nitroso-di-n-propylamine | ND     | 5.3 | 0.86 | ug/l  |   |
| 86-30-6  | N-Nitrosodiphenylamine     | ND     | 5.3 | 0.58 | ug/l  |   |
| 110-86-1 | Pyridine                   | ND     | 11  | 0.55 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 367-12-4  | 2-Fluorophenol       | 46%    |        | 15-110% |
| 4165-62-2 | Phenol-d5            | 20%    |        | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 96%    |        | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 77%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 93%    |        | 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  |   |

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

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

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P114-ROX-071813-DUP   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-5  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8270C BY SIM SW846 3510C  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | W14196.D | 1  | 07/29/13 | WK | 07/24/13  | OP34112    | MSW642           |
| Run #2 |          |    |          |    |           |            |                  |

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

**BN Special List**

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | ND     | 0.11  | 0.014 | ug/l  |   |
| 208-96-8 | Acenaphthylene         | ND     | 0.11  | 0.014 | ug/l  |   |
| 120-12-7 | Anthracene             | 0.13   | 0.11  | 0.019 | ug/l  |   |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.053 | 0.032 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.11  | 0.019 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.053 | 0.025 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.11  | 0.040 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.11  | 0.062 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.11  | 0.077 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.11  | 0.044 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.11  | 0.035 | ug/l  |   |
| 86-73-7  | Fluorene               | ND     | 0.11  | 0.049 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.11  | 0.049 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | ND     | 0.21  | 0.15  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | ND     | 0.21  | 0.055 | ug/l  |   |
| 85-01-8  | Phenanthrene           | 0.052  | 0.053 | 0.013 | ug/l  | J |
| 129-00-0 | Pyrene                 | ND     | 0.11  | 0.038 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 4165-60-0 | Nitrobenzene-d5      | 86%    |        | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 85%    |        | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 88%    |        | 30-130% |

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

4.5  
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## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> P114-ROX-071813-DUP   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-5  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Ground Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27146.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |
| 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 | 0.0043 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.014 | 0.0092 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 91%    |        | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 56%    |        | 36-173% |

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

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

4.5  
4

## Report of Analysis

|                          |                       |  |          |
|--------------------------|-----------------------|--|----------|
| <b>Client Sample ID:</b> | TB-ROX-071813-HCL     | <b>Date Sampled:</b>   | 07/18/13 |
| <b>Lab Sample ID:</b>    | MC22834-6             | <b>Date Received:</b>  | 07/19/13 |
| <b>Matrix:</b>           | AQ - Trip Blank Water | <b>Percent Solids:</b>   | n/a      |
| <b>Method:</b>           | SW846 8260B           | <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|----|-----------|------------|------------------|
| Run #1 | K72598.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |
| Run #2 | L76146.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

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

## VOA Special List

| CAS No.  | Compound                  | Result          | RL   | MDL  | Units | Q |
|----------|---------------------------|-----------------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND              | 10   | 2.8  | ug/l  |   |
| 107-02-8 | Acrolein                  | ND <sup>a</sup> | 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  | 1.1  | 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-071813-HCL     | Date Sampled:   | 07/18/13 |
| Lab Sample ID:    | MC22834-6             | Date Received:  | 07/19/13 |
| Matrix:           | AQ - Trip Blank Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B           | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> TB-ROX-071813-HCL   | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-6  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Trip Blank Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

4.6  
4

**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 112%   | 86%    | 70-130% |
| 2037-26-5 | Toluene-D8           | 96%    | 91%    | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 93%    | 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 | J = Indicates an estimated value                       |
| RL = Reporting Limit                          |                              | B = Indicates analyte found in associated method blank |
| E = Indicates value exceeds calibration range |                              | N = Indicates presumptive evidence of a compound       |

## Report of Analysis

|  |                                |
|--|--------------------------------|
| <b>Client Sample ID:</b> TB-ROX-071813-ST  | <b>Date Sampled:</b> 07/18/13  |
| <b>Lab Sample ID:</b> MC22834-7  | <b>Date Received:</b> 07/19/13 |
| <b>Matrix:</b> AQ - Trip Blank Water   | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8011 SW846 8011   |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |                                |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | BK27145.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |
| 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 | 0.0044 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.014 | 0.0093 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 74%    |        | 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

4.7  
4

**Misc. Forms****Custody Documents and Other Forms**

---

Includes the following where applicable:

- Chain of Custody
- REPROC Form: Reprocessed/Corrected Data
- Sample Tracking Chronicle
- Internal Chain of Custody



# Shell Oil Products Chain Of Custody Record

**URS**

LAB (LOCATION)

XENCO

CALSCEIN

OTHER: Accutest Labs, 495 Technology Cir W, Marlborough, MA 01752 (508-481-6200)

SPL: Lab Vendor # \_\_\_\_\_

Please Check Appropriate Box:

ENV. SERVICES     MOTIVA RETAIL     SHELL RETAIL

MOTIVA SDBCM     CONSULTANT     LUBES

SHELL PIPELINE     OTHER \_\_\_\_\_

Print Bill To Contact Name: Bob Billman

INCIDENT # (ENV SERVICES): 9 7 2 1 8 6 4 0

PO # \_\_\_\_\_ SAP # \_\_\_\_\_

State: 3 4 0 0 8 1    FEDERAL ID NO. \_\_\_\_\_

DATE: 7/18/13    CHECK IF NO INCIDENT # APPLIES

PAGE: 1 of 1

Lab Vendor # \_\_\_\_\_

SPARKING COMPANY: URS CORPORATION

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

PROJECT CONTACT (Identify by PDF Report): Elizabeth Kunkel, Wendy Pennington, Bob Billman

TELEPHONE: 314-429-0100    FAX: 314-429-0462

TURNAROUND TIME (CALENDAR DAYS):  STANDARD (10 DAYS)     5 DAYS     3 DAYS     2 DAYS     24 HOURS     RESULTS NEEDED ON 7/22/END

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.

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

EDF EQUIPPABLE TO: Name, Company, Office Location: \_\_\_\_\_ PHONE NO. \_\_\_\_\_ FAX NO. \_\_\_\_\_

CONSULTANT PROJECT NO.: Roxana Quarterly GW / 21562850.03003

SAMPLER NUMBER(s) (photo): L Rathnow, D Mattingly

LAB USE ONLY: MC22834

| LAB USE ONLY | Field Sample Identification | SAMPLING |      | MATRIX | PRESERVATIVE |      |      |      |       | NO. OF CONT. | VOC 8260B SL+TICS | SVOC 8270C SL+TICS | PAH 8270LL | PID (ppm) | FIELD NOTES:<br>TEMPERATURE ON RECEIPT C°<br><br>Container PID Readings or Laboratory Notes |
|--------------|-----------------------------|----------|------|--------|--------------|------|------|------|-------|--------------|-------------------|--------------------|------------|-----------|---|
|              |                             | DATE     | TIME |        | HCL          | ANCO | HOSH | NONE | OTHER |              |                   |                    |            |           |   |
|              | -1 P93B-ROX-071813          | 7/18/13  | 1025 | water  | 2            |      |      |      | 2     | 2            | 6                 | X                  | X          | X         |   |
|              | -2 P93C-ROX-071813          |          | 1110 |        | 2            |      |      |      | 2     | 2            | 6                 | X                  | X          | X         |   |
|              | -3 P93A-ROX-071813          |          | 1200 |        | 2            |      |      |      | 2     | 2            | 6                 | X                  | X          | X         |   |
|              | -4 P114-ROX-071813          |          | 1435 |        | 2            |      |      |      | 2     | 2            | 6                 | X                  | X          | X         |   |
|              | -5 P114-ROX-071813-DWP      |          | 1435 |        | 2            |      |      |      | 2     | 2            | 6                 | X                  | X          | X         |   |
|              | -6 TB-ROX-071813-HCl        |          | 0000 |        | 2            |      |      |      | 2     | 2            | X                 |                    |            |           |   |
|              | -7 TB-ROX-071813-ST         |          | 0000 |        |              |      |      |      | 2     | 2            | X                 |                    |            |           | 19A, 1B4  |

Requested by (Signature): [Signature]    Received by (Signature): [Signature]    Date: 7/18/13    Time: 1800

Retransmitted by (Signature): FED EX    Received by (Signature): Way [Signature]    Date: 7-19-13    Time: 930

Retransmitted by (Signature): \_\_\_\_\_    Received by (Signature): \_\_\_\_\_    Date: \_\_\_\_\_    Time: \_\_\_\_\_

1.2-1.5

5.1  
5MC22834: Chain of Custody  
Page 1 of 2

## Accutest Laboratories Sample Receipt Summary

**Accutest Job Number:** MC22834      **Client:** URS      **Immediate Client Services Action Required:** No  
**Date / Time Received:** 7/19/2013      **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: Infrared gun  
 3. Cooler media: Ice (bag)

**Quality Control Preservation**      Y or N      N/A  
 1. Trip Blank present / cooler:     
 2. Trip Blank listed on COC:     
 3. Samples preserved properly:    
 4. VOCs headspace free:

**Sample Integrity - Documentation**      Y or N  
 1. Sample labels present on bottles:    
 2. Container labeling complete:    
 3. Sample container label / COC agree:

**Sample Integrity - Condition**      Y or N  
 1. Sample recvd within HT:    
 2. All containers accounted for:    
 3. Condition of sample: Intact

**Sample Integrity - Instructions**      Y or N      N/A  
 1. Analysis requested is clear:    
 2. Bottles received for unspecified tests:    
 3. Sufficient volume recvd for analysis:    
 4. Compositing instructions clear:     
 5. Filtering instructions clear:

Comments

5.1 5



# Initial Calibration Summary

Job Number: MC22834

Sample: MSL3534-ICC3534

Account: SHELLWIC Shell Oil

Lab FileID: L76082.D

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

## Response Factor Report MSL

Method : O:\msl\1\methods\1130729wx.m (RTE Integrator)  
Title : SW-846 Method 8260  
Last Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration

### Calibration Files

|               |               |               |              |
|---------------|---------------|---------------|--------------|
| 0.5 =176076.d | 2 =176078.d   | 5 =176079.d   | 50 =176082.d |
| 10 =176080.d  | 200 =176084.d | 400 =176085.d | 25 =176081.d |
| 1 =176077.d   | 100 =176083.d | =             | =            |

### Compound

|  | 0.5 | 2 | 5 | 50 | 10 | 200 | 400 | 25 | 1 | 100 | Avg | %RSD |
|--|-----|---|---|----|----|-----|-----|----|---|-----|-----|------|
|--|-----|---|---|----|----|-----|-----|----|---|-----|-----|------|

|                          |                |       |       |       |       |       |       |       |       |       |      |  |
|--------------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|--|
| 1) I 1,4-difluorobenzene | -----ISTD----- |       |       |       |       |       |       |       |       |       |      |  |
| 2) 1,2-dichloroethane    | 0.484          | 0.511 | 0.487 | 0.538 | 0.533 | 0.495 | 0.489 | 0.436 | 0.505 | 0.498 | 6.07 |  |

(#) = Out of Range ### Number of calibration levels exceeded format ###

1130729wx.m Mon Oct 19 11:51:51 2015

5.2  
5



# Continuing Calibration Summary

Job Number: MC22834

Sample: MSL3537-CC3534

Account: SHELLWIC Shell Oil

Lab FileID: L76141.D

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

## Evaluate Continuing Calibration Report

Data File : O:\msl\1\data backup\1130730\176141.d Vial: 1  
Acq On : 30 Jul 2013 8:33 am Operator: kerryr  
Sample : cc3534-50 Inst : MSL  
Misc : ms29537,msl3537,,,,5,1 Multiplr: 1.00  
MS Integration Params: RTEINT.P

Method : O:\msl\1\methods\1130729wx.m (RTE Integrator)  
Title : SW-846 Method 8260  
Last Update : Mon Oct 19 11:51:04 2015  
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 20% Max. Rel. Area : 200%

| Compound                | AvgRF | CCRF  | %Dev | Area% | Dev (min) | R.T. |
|-------------------------|-------|-------|------|-------|-----------|------|
| 1 I 1,4-difluorobenzene | 1.000 | 1.000 | 0.0  | 102   | 0.00      | 8.89 |
| 2 M 1,2-dichloroethane  | 0.498 | 0.442 | 11.2 | 93    | 0.00      | 8.20 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0  
176082.d 1130729wx.m Tue Oct 20 16:42:32 2015

5.2  
5

Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176076.d  
 Acq On : 26 Jul 2013 7:18 pm  
 Operator : kerryr  
 Sample : ic3534-0.5  
 Misc : ms29503,msl3534,,,,5,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 19 11:47:40 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:44:54 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|------------------------|-------|------|----------|-------|-------|----------|
| Internal Standards     |       |      |          |       |       |          |
| 1) 1,4-difluorobenzene | 8.898 | 114  | 135854   | 50.00 | ug/L  | 0.00     |

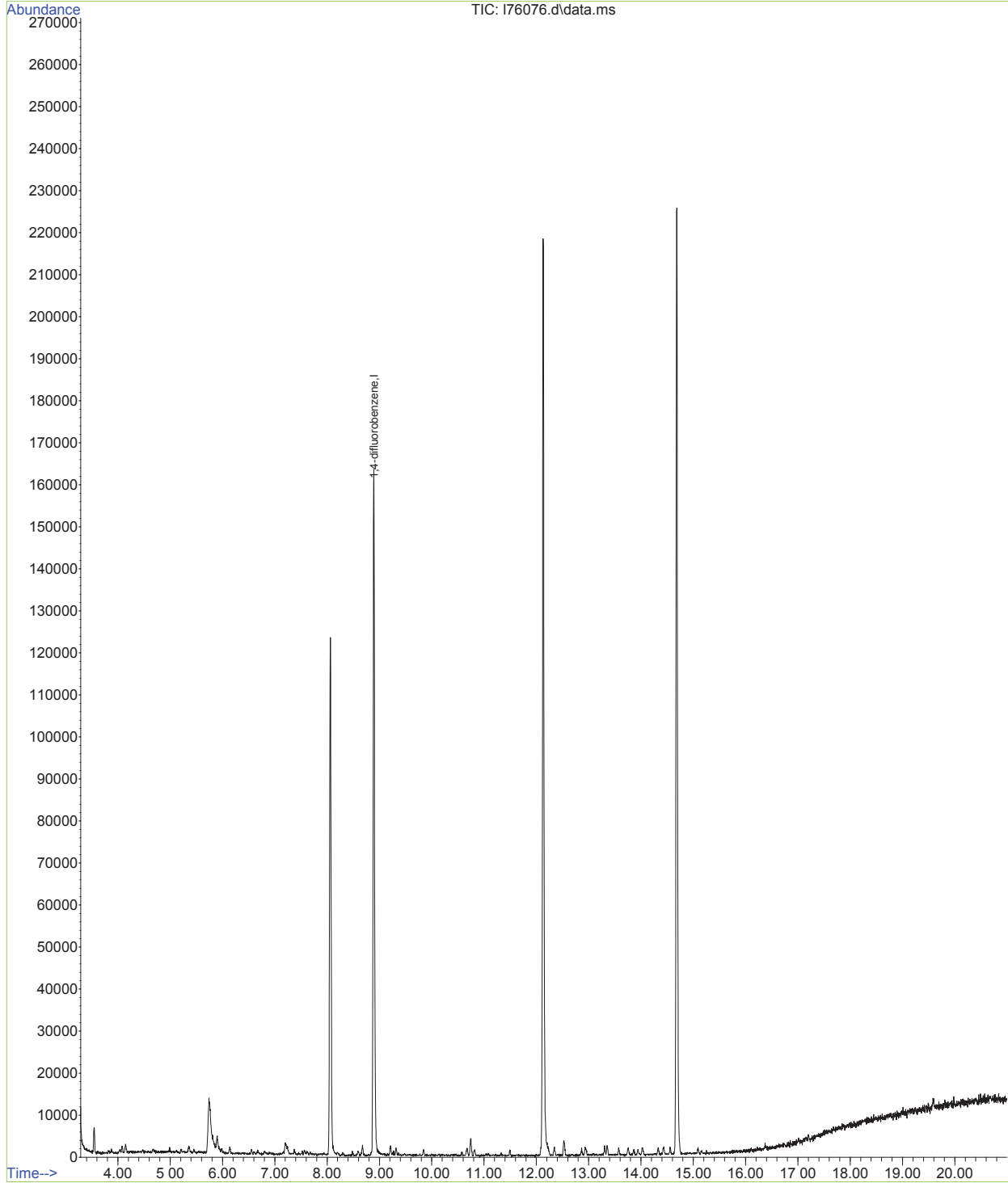
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130726\  
Data File : 176076.d  
Acq On : 26 Jul 2013 7:18 pm  
Operator : kerryr  
Sample : ic3534-0.5  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 19 11:47:40 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:44:54 2015  
Response via : Initial Calibration



Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176077.d  
 Acq On : 26 Jul 2013 7:46 pm  
 Operator : kerryr  
 Sample : ic3534-1  
 Misc : ms29503,msl3534,,,,,5,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 19 11:45:44 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:44:54 2015  
 Response via : Initial Calibration

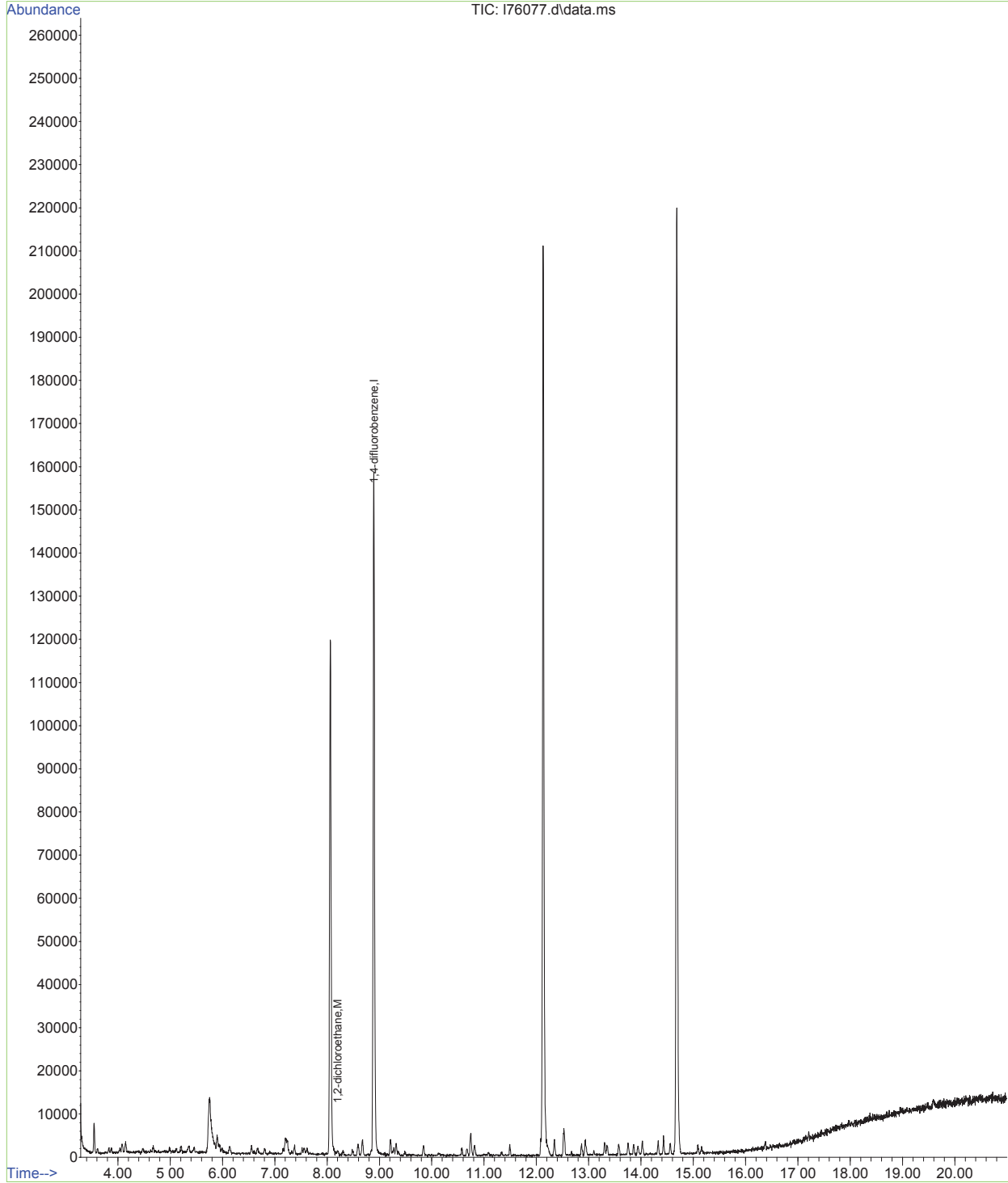
| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.898 | 114  | 130372   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.202 | 62   | 1136     | 0.89  | ug/L  | Qvalue<br>83 |
| -----                  |       |      |          |       |       |              |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130726\  
Data File : 176077.d  
Acq On : 26 Jul 2013 7:46 pm  
Operator : kerryr  
Sample : ic3534-1  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 19 11:45:44 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:44:54 2015  
Response via : Initial Calibration



Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176078.d  
 Acq On : 26 Jul 2013 8:15 pm  
 Operator : kerryr  
 Sample : ic3534-2  
 Misc : ms29503,msl3534,,,,,5,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 19 11:45:46 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:44:54 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.896 | 114  | 129092   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.202 | 62   | 2500     | 1.99  | ug/L  | Qvalue<br>83 |
| -----                  |       |      |          |       |       |              |

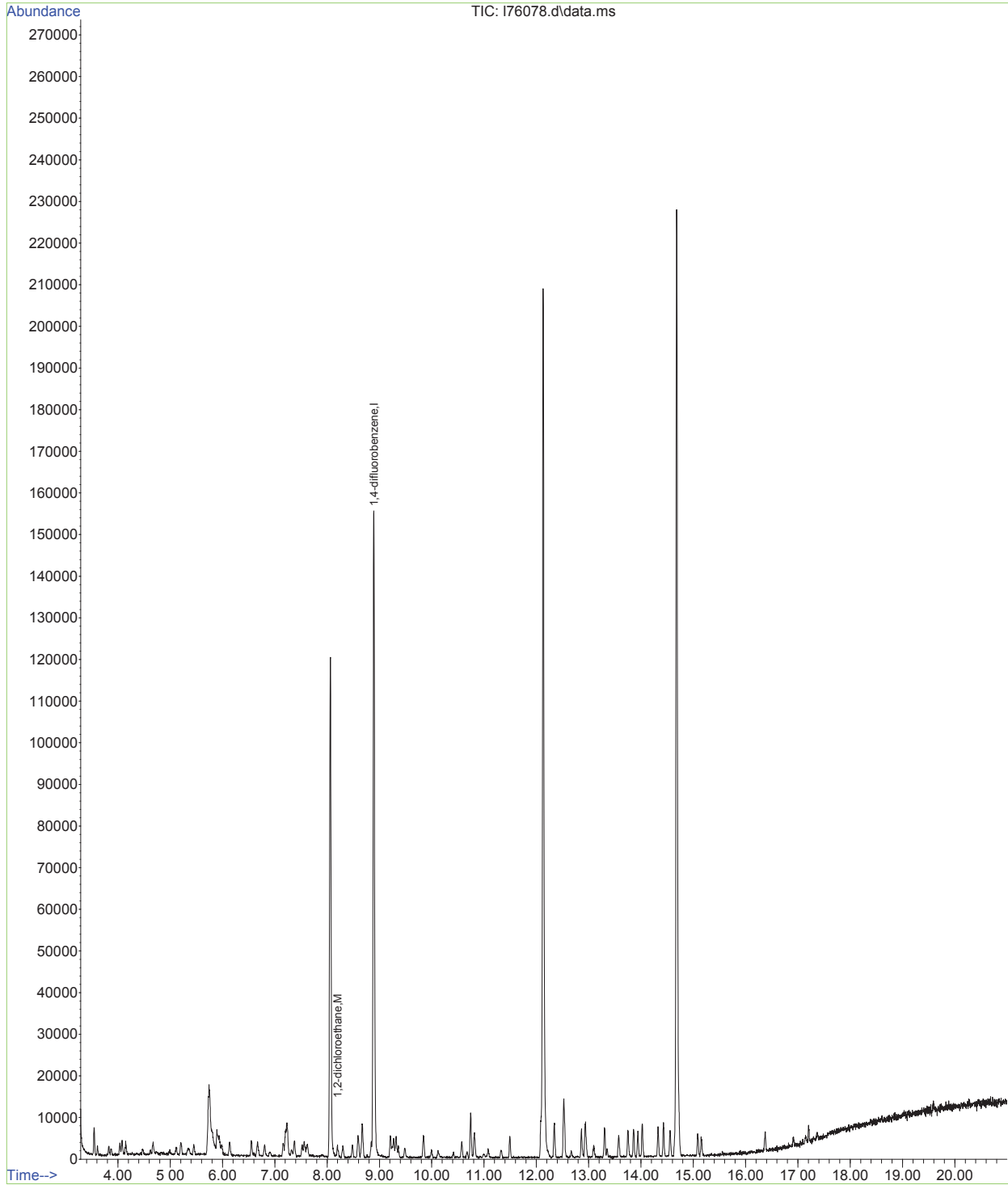
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5



Data Path : O:\msl\1\data backup\1130726\  
Data File : 176078.d  
Acq On : 26 Jul 2013 8:15 pm  
Operator : kerryr  
Sample : ic3534-2  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 19 11:45:46 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:44:54 2015  
Response via : Initial Calibration



Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176079.d  
 Acq On : 26 Jul 2013 8:45 pm  
 Operator : kerryr  
 Sample : ic3534-5  
 Misc : ms29503,msl3534,,,,5,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 19 11:45:48 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:44:54 2015  
 Response via : Initial Calibration

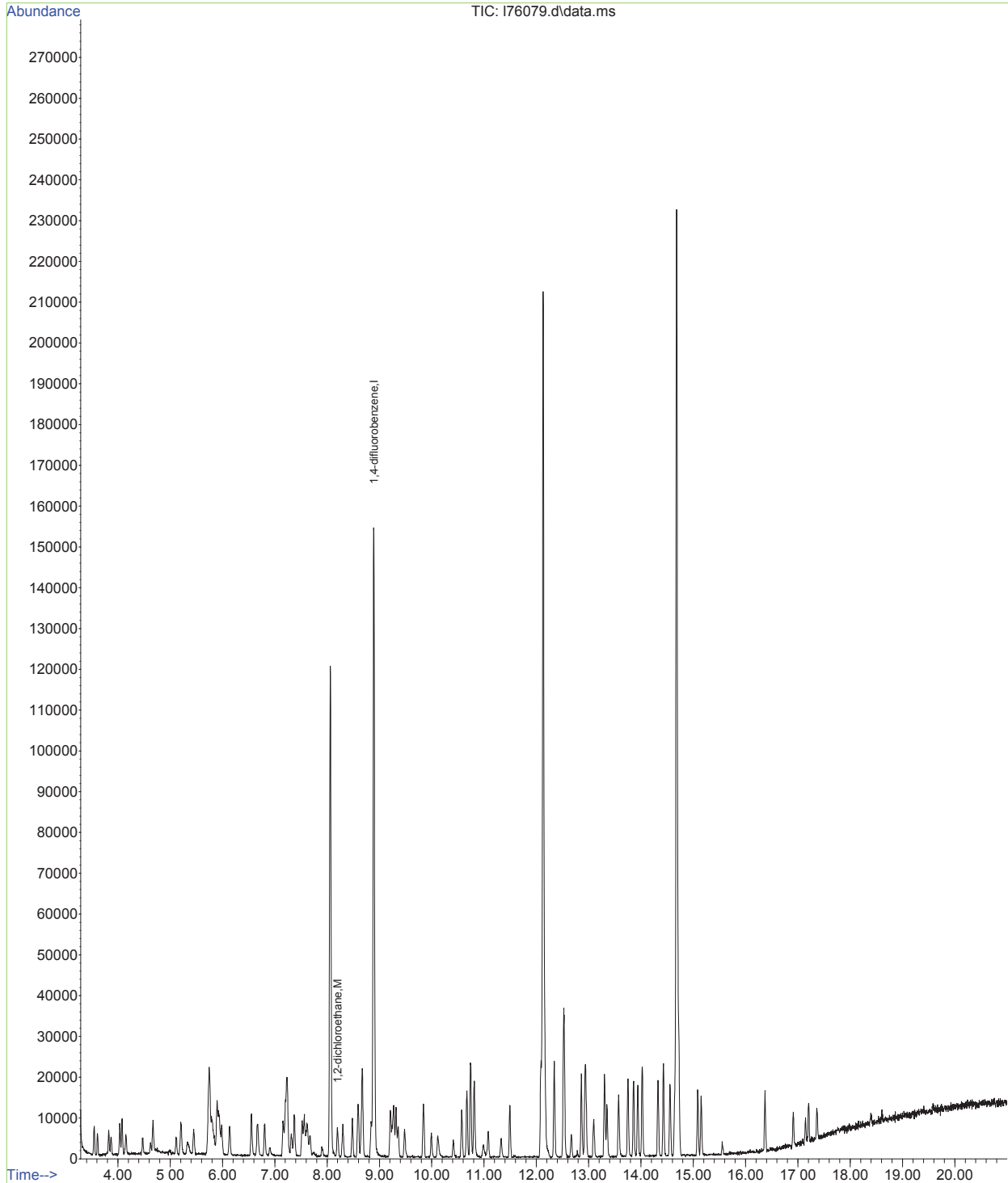
| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.895 | 114  | 126971   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.201 | 62   | 6483     | 5.24  | ug/L  | Qvalue<br>83 |
| -----                  |       |      |          |       |       |              |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130726\  
Data File : 176079.d  
Acq On : 26 Jul 2013 8:45 pm  
Operator : kerryr  
Sample : ic3534-5  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 19 11:45:48 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:44:54 2015  
Response via : Initial Calibration



Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176080.d  
 Acq On : 26 Jul 2013 9:14 pm  
 Operator : kerryr  
 Sample : ic3534-10  
 Misc : ms29503,msl3534,,,,,5,1  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 19 11:45:50 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:44:54 2015  
 Response via : Initial Calibration

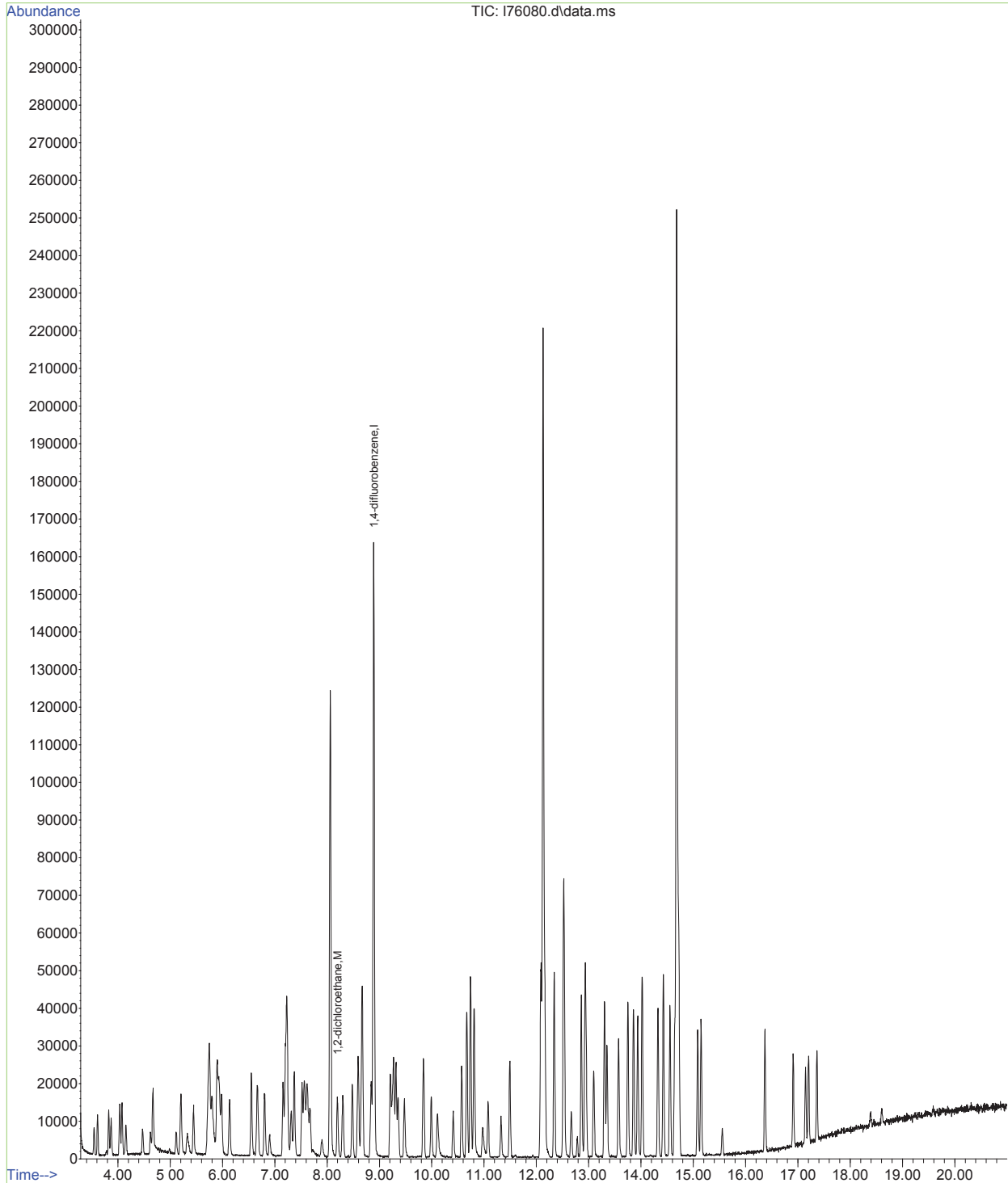
| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.894 | 114  | 130643   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.200 | 62   | 14059    | 11.03 | ug/L  | Qvalue<br>92 |
| -----                  |       |      |          |       |       |              |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130726\  
Data File : 176080.d  
Acq On : 26 Jul 2013 9:14 pm  
Operator : kerryr  
Sample : ic3534-10  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 19 11:45:50 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:44:54 2015  
Response via : Initial Calibration



Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176081.d  
 Acq On : 26 Jul 2013 9:44 pm  
 Operator : kerryr  
 Sample : ic3534-25  
 Misc : ms29503,msl3534,,,,,5,1  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 19 11:45:52 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:44:54 2015  
 Response via : Initial Calibration

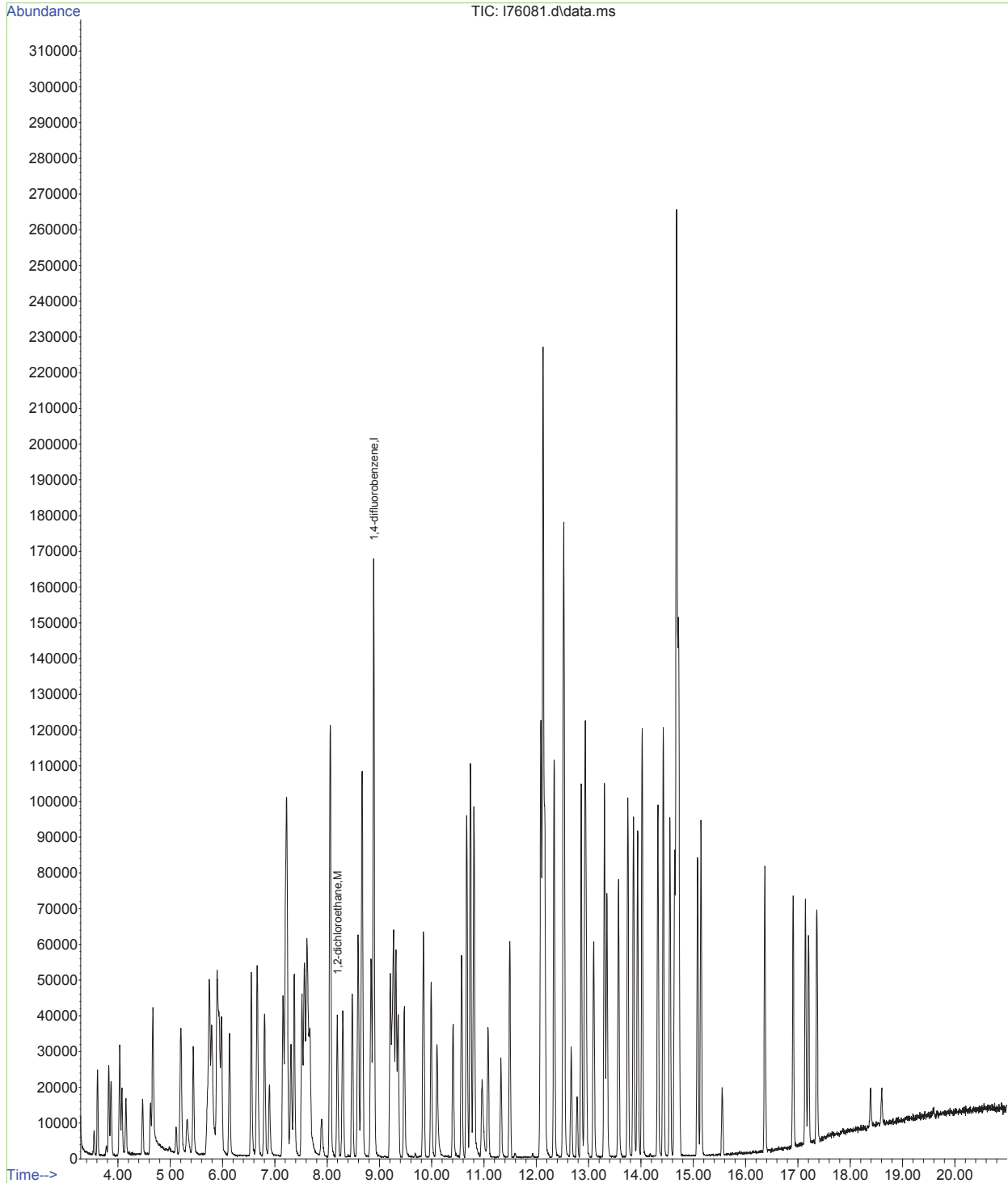
| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.893 | 114  | 131826   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.198 | 62   | 32253    | 25.09 | ug/L  | Qvalue<br>96 |
| -----                  |       |      |          |       |       |              |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130726\  
Data File : 176081.d  
Acq On : 26 Jul 2013 9:44 pm  
Operator : kerryr  
Sample : ic3534-25  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 19 11:45:52 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:44:54 2015  
Response via : Initial Calibration



Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176082.d  
 Acq On : 26 Jul 2013 10:13 pm  
 Operator : kerryr  
 Sample : icc3534-50  
 Misc : ms29503,msl3534,,,,5,1  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 19 11:45:54 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:44:54 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)      |
|------------------------|-------|------|----------|-------|-------|---------------|
| -----                  |       |      |          |       |       |               |
| Internal Standards     |       |      |          |       |       |               |
| 1) 1,4-difluorobenzene | 8.892 | 114  | 129809   | 50.00 | ug/L  | 0.00          |
| Target Compounds       |       |      |          |       |       |               |
| 2) 1,2-dichloroethane  | 8.197 | 62   | 63250    | 49.96 | ug/L  | Qvalue<br>100 |
| -----                  |       |      |          |       |       |               |

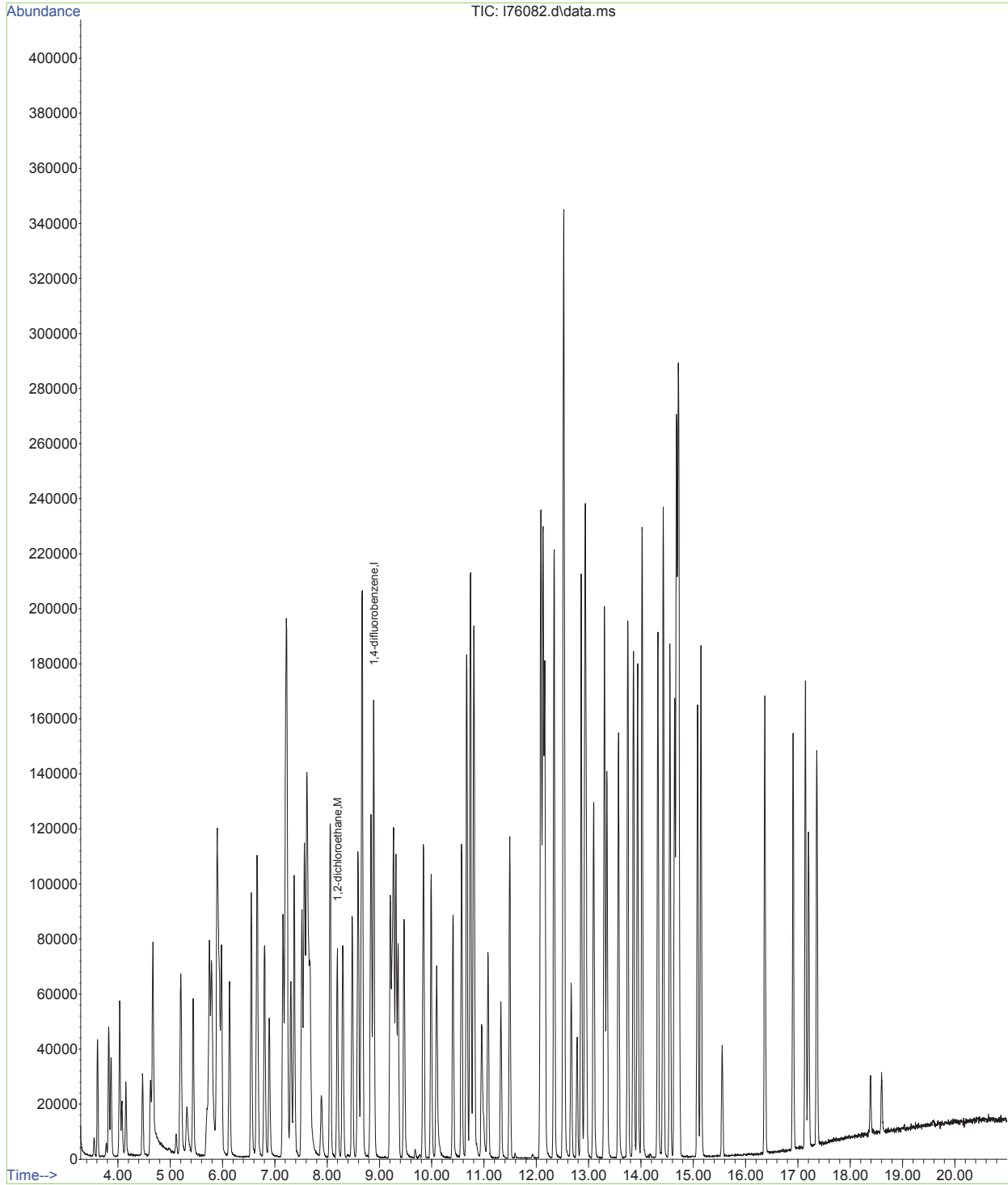
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5



Data Path : O:\msl\1\data backup\1130726\  
Data File : 176082.d  
Acq On : 26 Jul 2013 10:13 pm  
Operator : kerryr  
Sample : icc3534-50  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 19 11:45:54 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:44:54 2015  
Response via : Initial Calibration



Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176083.d  
 Acq On : 26 Jul 2013 10:43 pm  
 Operator : kerryr  
 Sample : ic3534-100  
 Misc : ms29503,msl3534,,,,,5,1  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 19 11:45:56 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:44:54 2015  
 Response via : Initial Calibration

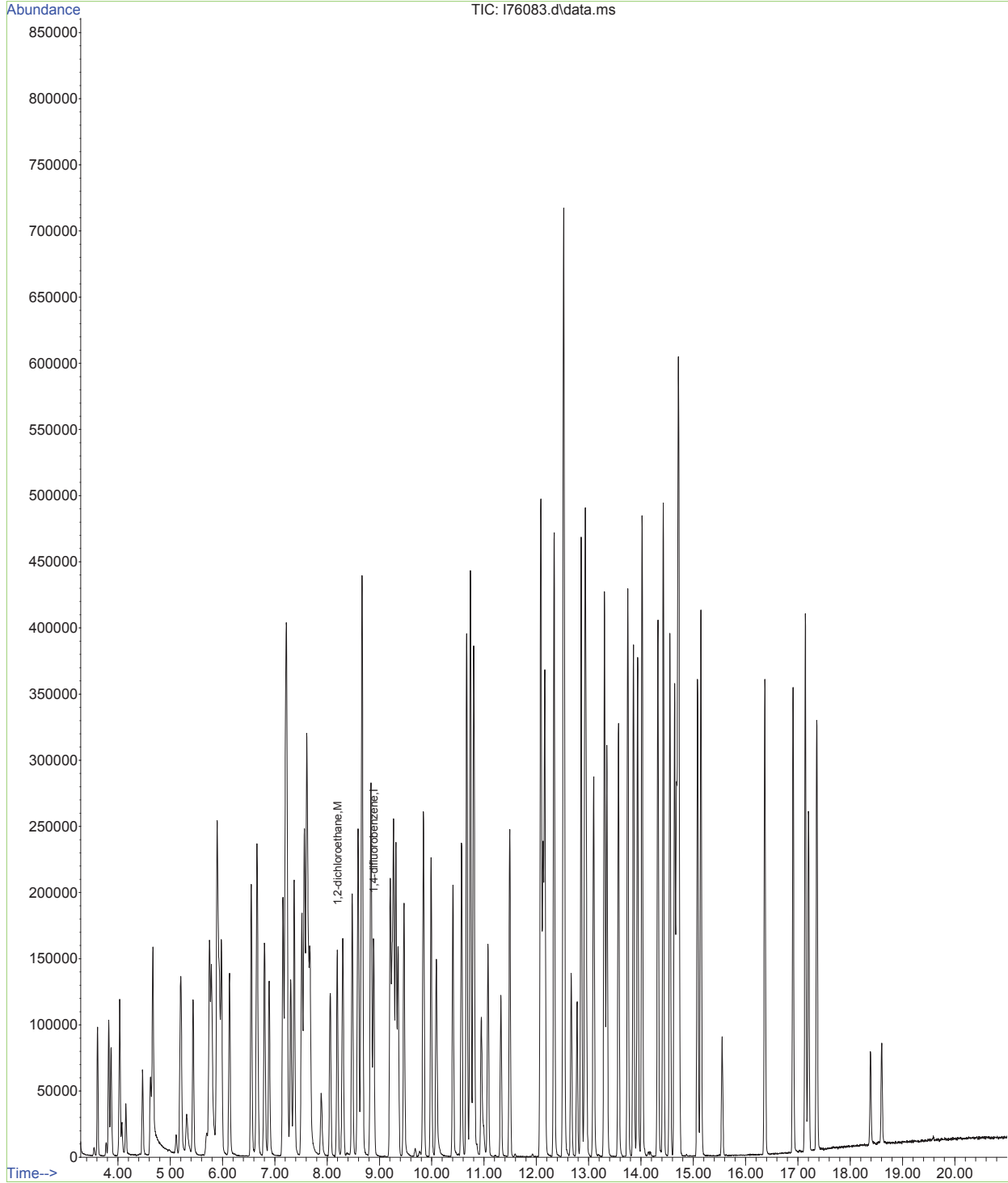
| Compound               | R.T.  | QIon | Response | Conc   | Units | Dev(Min)     |
|------------------------|-------|------|----------|--------|-------|--------------|
| -----                  |       |      |          |        |       |              |
| Internal Standards     |       |      |          |        |       |              |
| 1) 1,4-difluorobenzene | 8.891 | 114  | 128337   | 50.00  | ug/L  | 0.00         |
| Target Compounds       |       |      |          |        |       |              |
| 2) 1,2-dichloroethane  | 8.196 | 62   | 129642   | 103.58 | ug/L  | Qvalue<br>95 |
| -----                  |       |      |          |        |       |              |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130726\  
Data File : 176083.d  
Acq On : 26 Jul 2013 10:43 pm  
Operator : kerryr  
Sample : ic3534-100  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 19 11:45:56 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:44:54 2015  
Response via : Initial Calibration



Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176084.d  
 Acq On : 26 Jul 2013 11:12 pm  
 Operator : kerryr  
 Sample : ic3534-200  
 Misc : ms29503,msl3534,,,,,5,1  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 19 11:45:58 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:44:54 2015  
 Response via : Initial Calibration

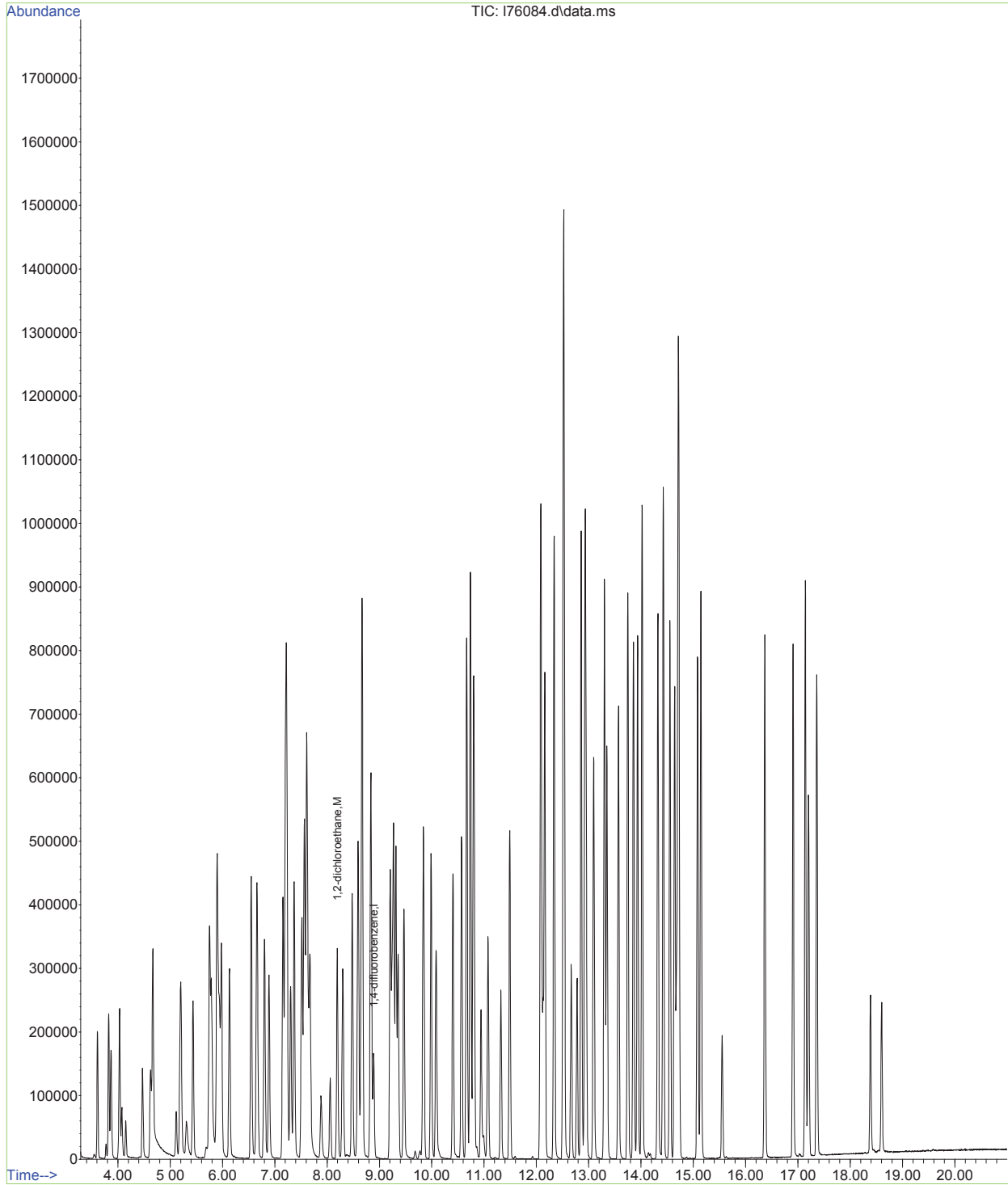
| Compound               | R.T.  | QIon | Response | Conc   | Units | Dev(Min)     |
|------------------------|-------|------|----------|--------|-------|--------------|
| -----                  |       |      |          |        |       |              |
| Internal Standards     |       |      |          |        |       |              |
| 1) 1,4-difluorobenzene | 8.891 | 114  | 126477   | 50.00  | ug/L  | 0.00         |
| Target Compounds       |       |      |          |        |       |              |
| 2) 1,2-dichloroethane  | 8.196 | 62   | 269464   | 218.45 | ug/L  | Qvalue<br>97 |
| -----                  |       |      |          |        |       |              |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130726\  
Data File : 176084.d  
Acq On : 26 Jul 2013 11:12 pm  
Operator : kerryr  
Sample : ic3534-200  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 19 11:45:58 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:44:54 2015  
Response via : Initial Calibration



Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176085.d  
 Acq On : 26 Jul 2013 11:42 pm  
 Operator : kerryr  
 Sample : ic3534-400  
 Misc : ms29503,msl3534,,,,,5,1  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 19 11:46:00 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:44:54 2015  
 Response via : Initial Calibration

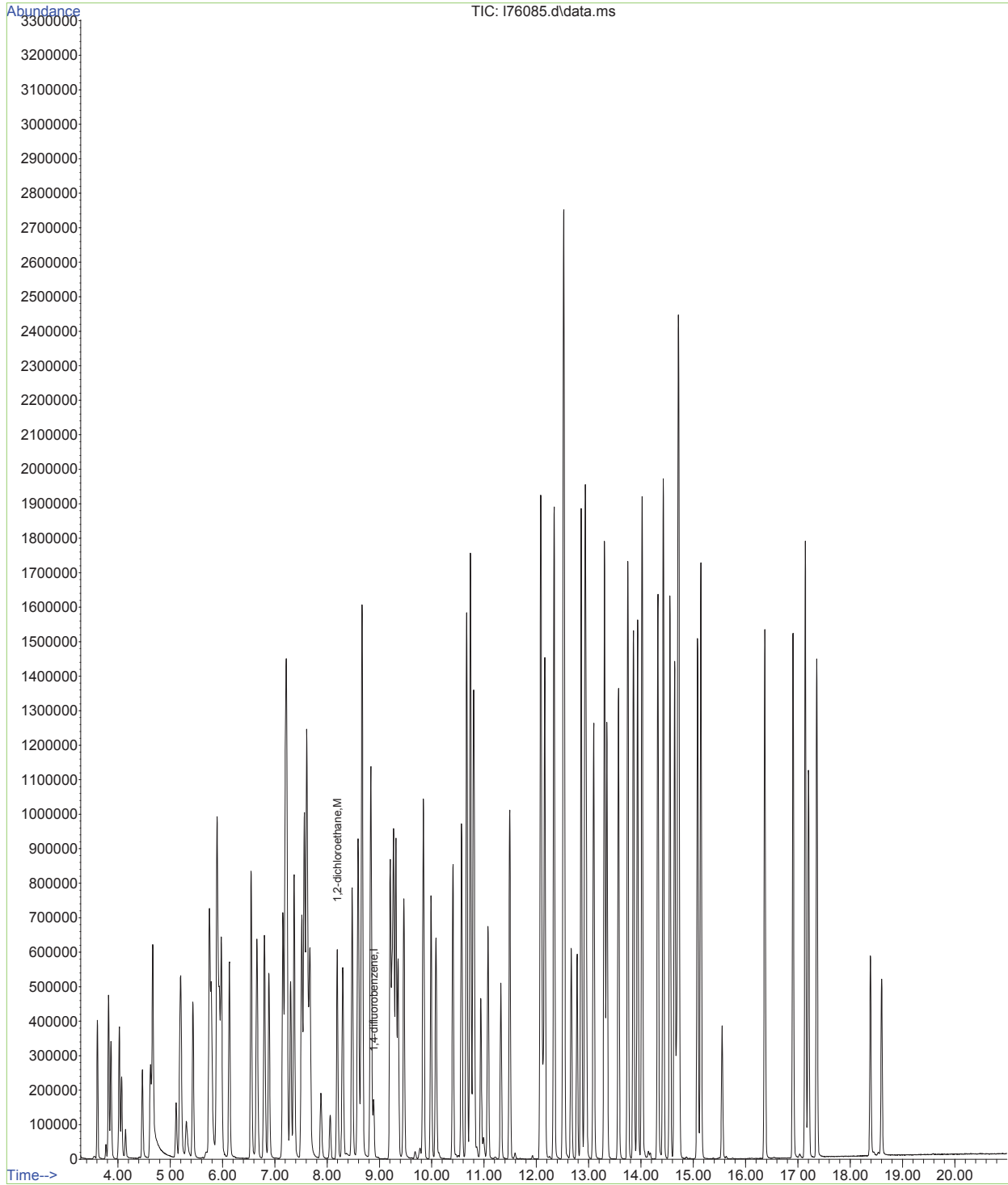
| Compound               | R.T.  | QIon | Response | Conc   | Units | Dev(Min)     |
|------------------------|-------|------|----------|--------|-------|--------------|
| -----                  |       |      |          |        |       |              |
| Internal Standards     |       |      |          |        |       |              |
| 1) 1,4-difluorobenzene | 8.891 | 114  | 126155   | 50.00  | ug/L  | 0.00         |
| Target Compounds       |       |      |          |        |       |              |
| 2) 1,2-dichloroethane  | 8.195 | 62   | 499464   | 405.94 | ug/L  | Qvalue<br>97 |
| -----                  |       |      |          |        |       |              |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Data Path : O:\msl\1\data backup\1130726\  
Data File : 176085.d  
Acq On : 26 Jul 2013 11:42 pm  
Operator : kerryr  
Sample : ic3534-400  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 19 11:46:00 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:44:54 2015  
Response via : Initial Calibration



Data Path : O:\msl\1\data backup\1130726\  
 Data File : 176088.d  
 Acq On : 27 Jul 2013 1:09 am  
 Operator : kerryr  
 Sample : icv3534-50  
 Misc : ms29503,msl3534,,,,5,1  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Oct 19 11:51:40 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.892 | 114  | 132946   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.196 | 62   | 65927    | 49.84 | ug/L  | Qvalue<br>96 |
| -----                  |       |      |          |       |       |              |

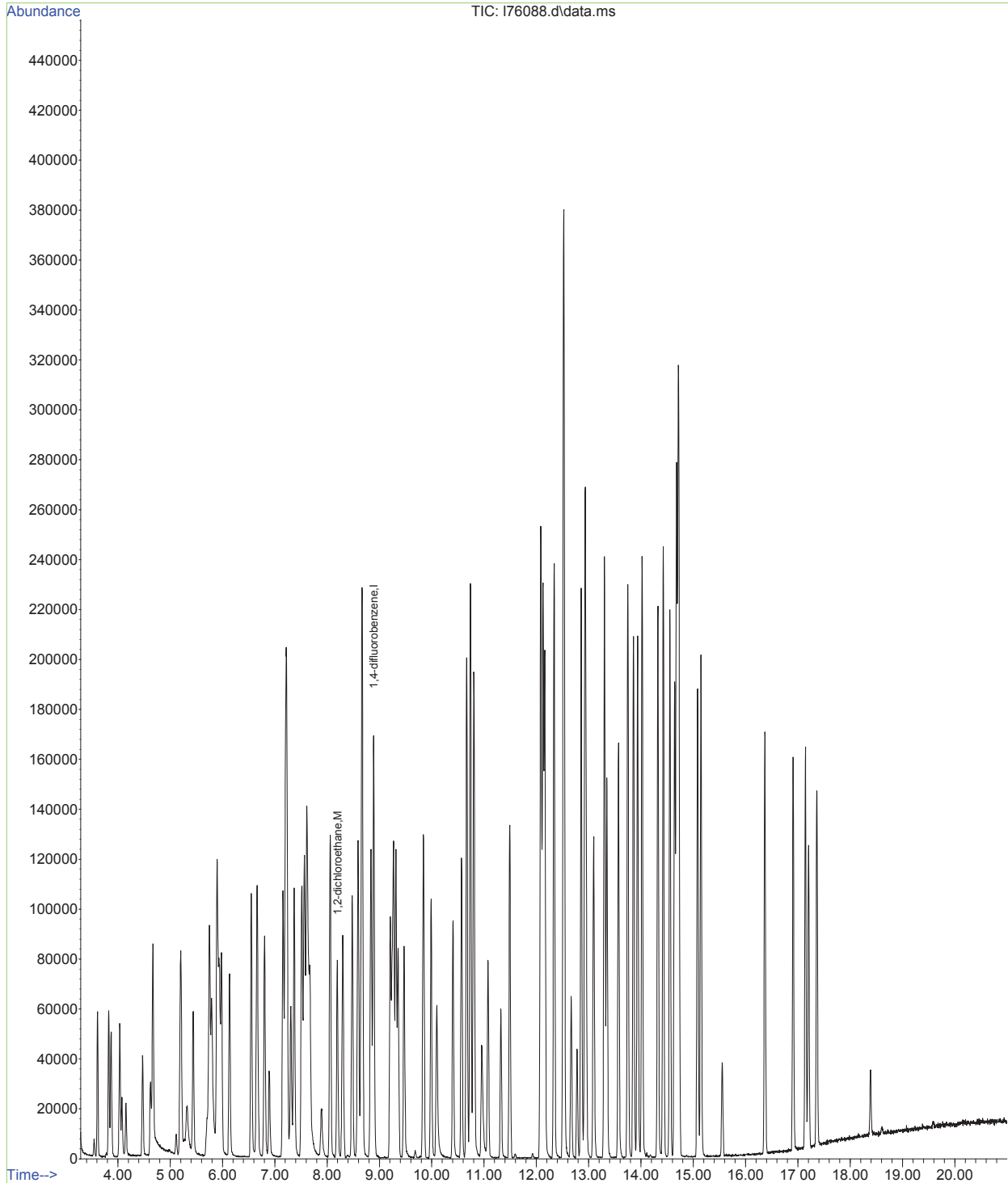
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5



Data Path : O:\msl\1\data backup\1130726\  
Data File : 176088.d  
Acq On : 27 Jul 2013 1:09 am  
Operator : kerryr  
Sample : icv3534-50  
Misc : ms29503,msl3534,,,,,5,1  
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Oct 19 11:51:40 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176141.d  
 Acq On : 30 Jul 2013 8:33 am  
 Operator : kerryr  
 Sample : cc3534-50  
 Misc : ms29537,msl3537,,,,,5,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 20 16:41:32 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.895 | 114  | 132933   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.200 | 62   | 58804    | 44.46 | ug/L  | Qvalue<br>95 |
| -----                  |       |      |          |       |       |              |

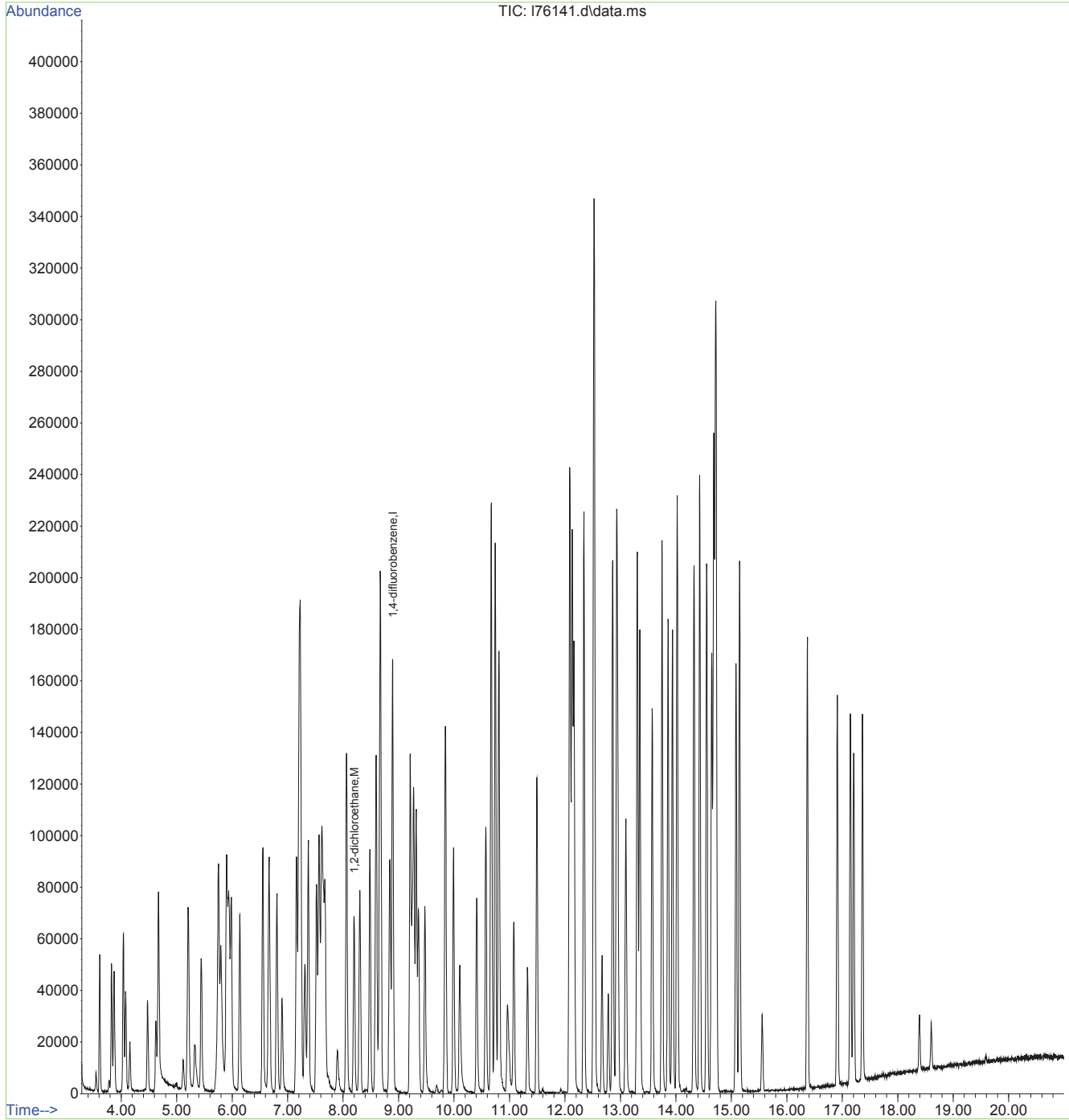
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
Data File : 176141.d  
Acq On : 30 Jul 2013 8:33 am  
Operator : kerryr  
Sample : cc3534-50  
Misc : ms29537,msl3537,,,,5,1  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 20 16:41:32 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176157.d  
 Acq On : 30 Jul 2013 4:19 pm  
 Operator : kerryr  
 Sample : mc22834-1  
 Misc : ms29544tic,msl3537,,,,5,1  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 20 16:41:47 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|------------------------|-------|------|----------|-------|-------|----------|
| -----                  |       |      |          |       |       |          |
| Internal Standards     |       |      |          |       |       |          |
| 1) 1,4-difluorobenzene | 8.932 | 114  | 126283   | 50.00 | ug/L  | 0.04     |

Target Compounds Qvalue  
 -----

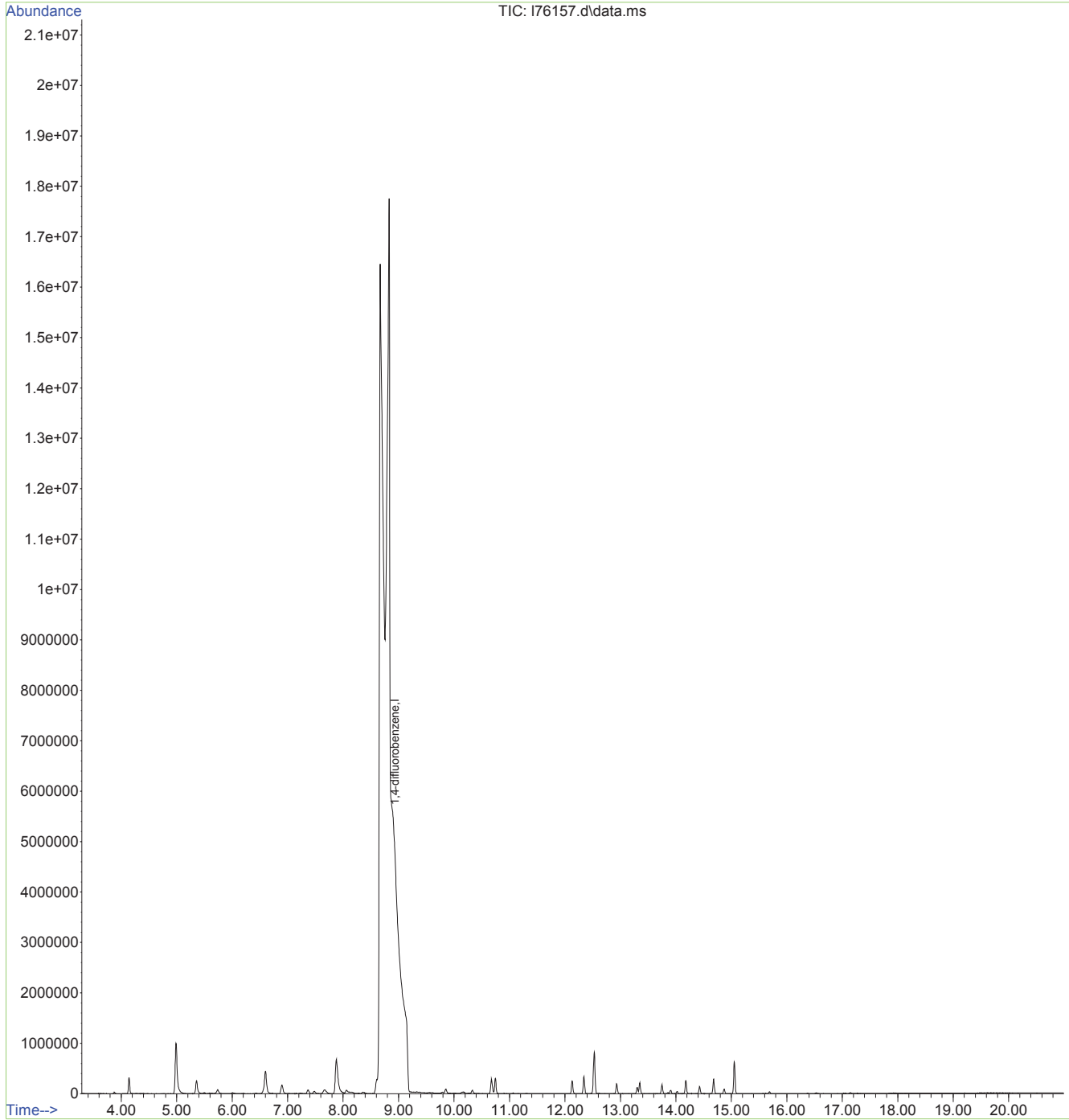
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
Data File : 176157.d  
Acq On : 30 Jul 2013 4:19 pm  
Operator : kerryr  
Sample : mc22834-1  
Misc : ms29544tic,msl3537,,,,5,1  
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 20 16:41:47 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176158.d  
 Acq On : 30 Jul 2013 4:47 pm  
 Operator : kerryr  
 Sample : mc22834-2  
 Misc : ms29544tic,msl3537,,,,5,1  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: Oct 20 16:41:49 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|------------------------|-------|------|----------|-------|-------|----------|
| -----                  |       |      |          |       |       |          |
| Internal Standards     |       |      |          |       |       |          |
| 1) 1,4-difluorobenzene | 8.903 | 114  | 146112   | 50.00 | ug/L  | 0.01     |

Target Compounds Qvalue  
 -----

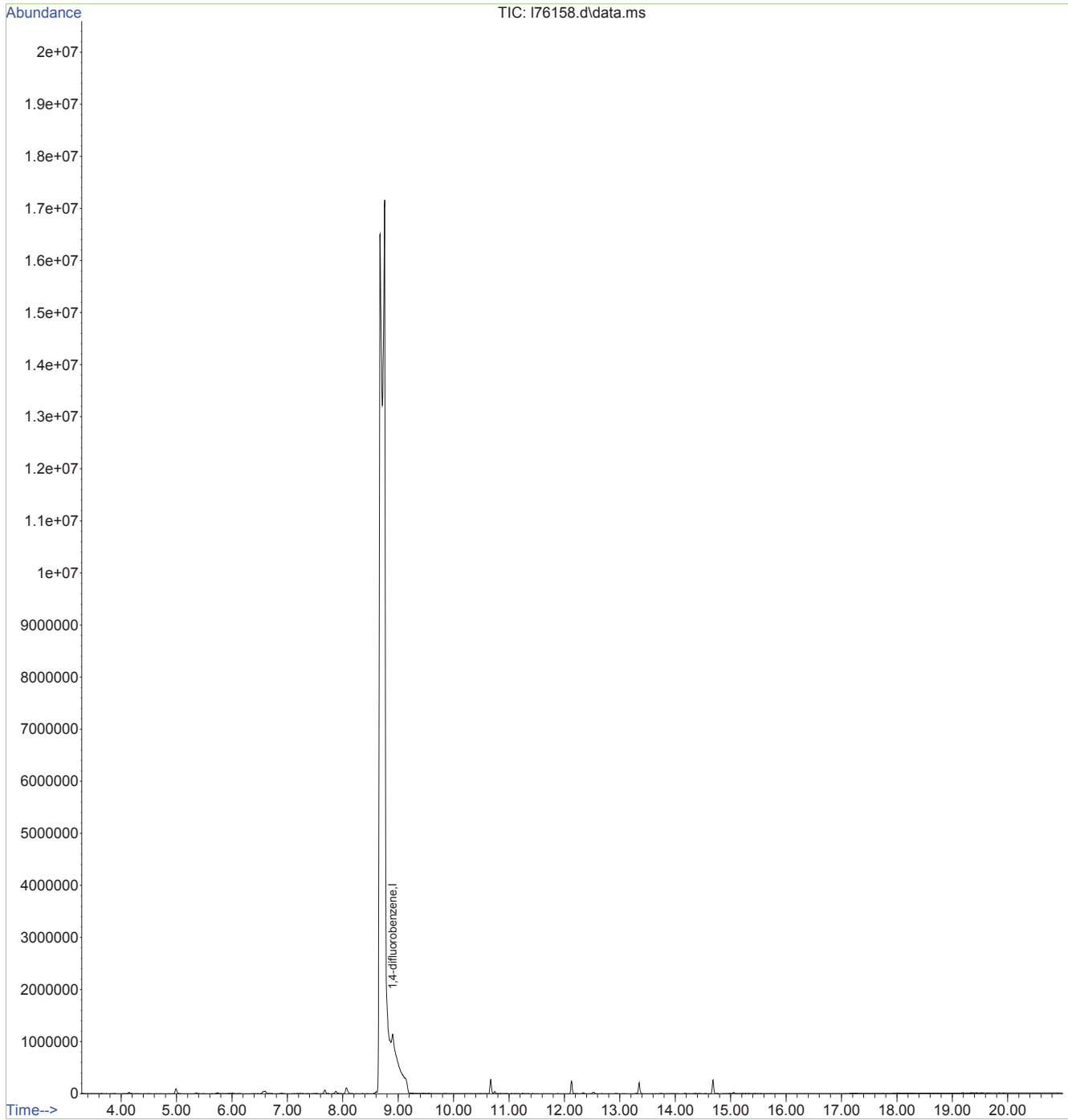
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\l130730\  
Data File : l76158.d  
Acq On : 30 Jul 2013 4:47 pm  
Operator : kerryr  
Sample : mc22834-2  
Misc : ms29544tic,msl3537,,,,5,1  
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Oct 20 16:41:49 2015  
Quant Method : O:\msl\1\methods\l130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176159.d  
 Acq On : 30 Jul 2013 5:16 pm  
 Operator : kerryr  
 Sample : mc22834-3  
 Misc : ms29544tic,msl3537,,,,5,1  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: Oct 20 16:41:51 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|------------------------|-------|------|----------|-------|-------|----------|
| -----                  |       |      |          |       |       |          |
| Internal Standards     |       |      |          |       |       |          |
| 1) 1,4-difluorobenzene | 8.901 | 114  | 147670   | 50.00 | ug/L  | 0.00     |

Target Compounds Qvalue  
 -----

(#) = qualifier out of range (m) = manual integration (+) = signals summed

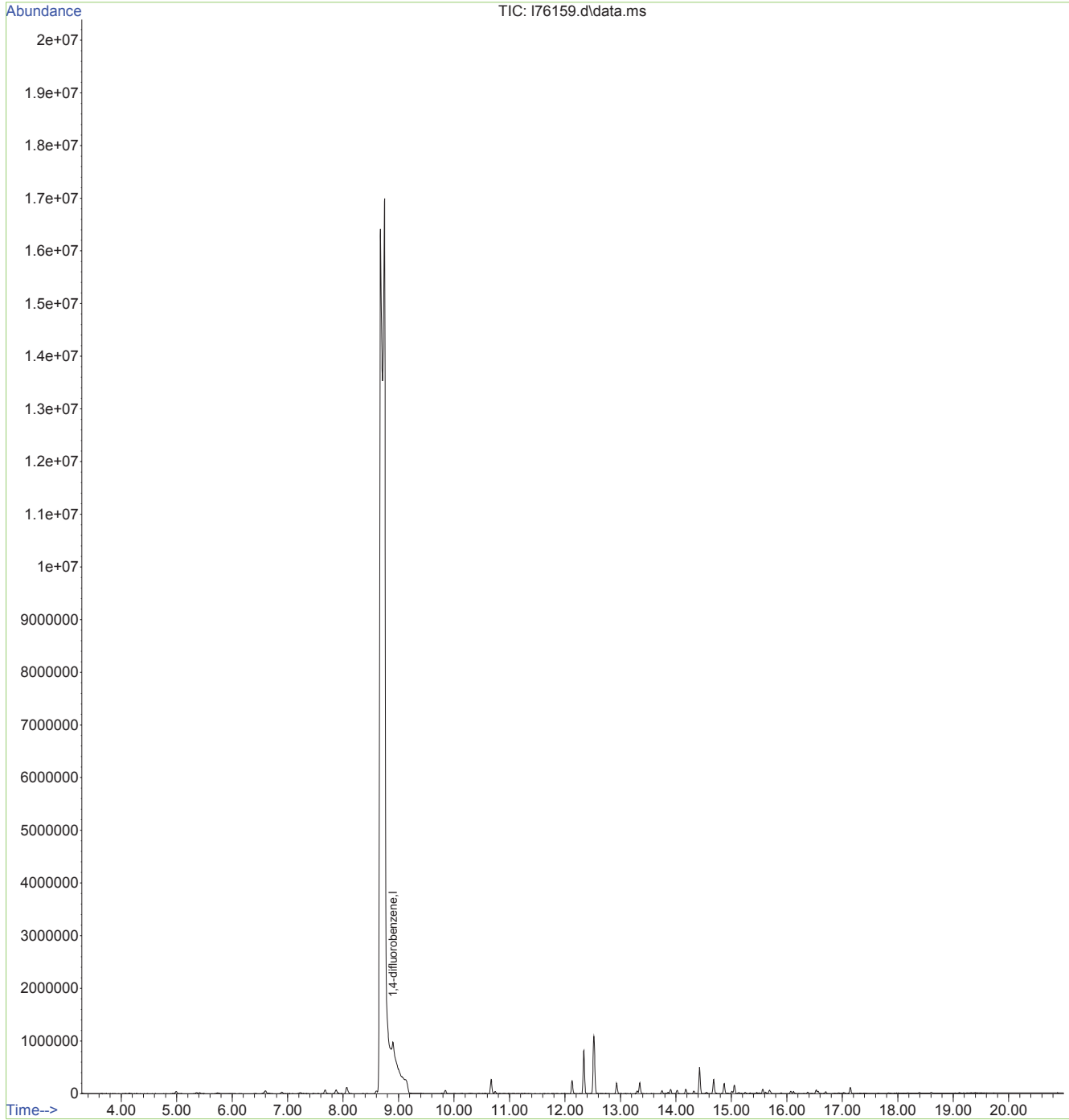
5.2  
5



Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
Data File : 176159.d  
Acq On : 30 Jul 2013 5:16 pm  
Operator : kerryr  
Sample : mc22834-3  
Misc : ms29544tic,msl3537,,,,5,1  
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Oct 20 16:41:51 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176142.d  
 Acq On : 30 Jul 2013 9:02 am  
 Operator : kerryr  
 Sample : bs  
 Misc : ms29537,msl3537,,,,,5,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 20 16:41:35 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.893 | 114  | 140042   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.198 | 62   | 65009    | 46.65 | ug/L  | Qvalue<br>98 |
| -----                  |       |      |          |       |       |              |

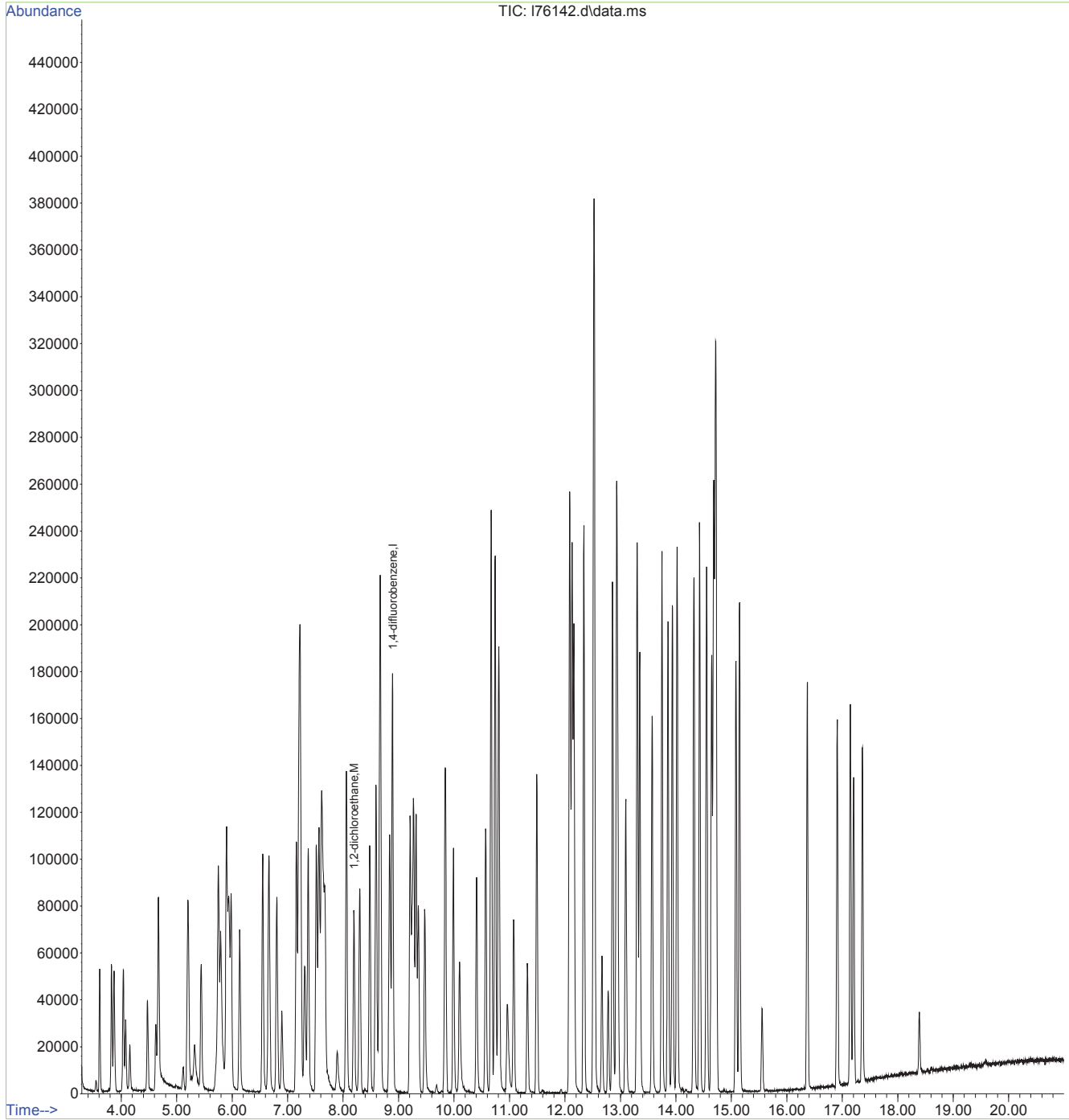
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
Data File : 176142.d  
Acq On : 30 Jul 2013 9:02 am  
Operator : kerryr  
Sample : bs  
Misc : ms29537,msl3537,,,,5,1  
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 20 16:41:35 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176145.d  
 Acq On : 30 Jul 2013 10:32 am  
 Operator : kerryr  
 Sample : mb  
 Misc : ms29544tic,msl3537,,,,5,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 20 16:41:37 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|------------------------|-------|------|----------|-------|-------|----------|
| -----                  |       |      |          |       |       |          |
| Internal Standards     |       |      |          |       |       |          |
| 1) 1,4-difluorobenzene | 8.897 | 114  | 138887   | 50.00 | ug/L  | 0.00     |

Target Compounds Qvalue  
 -----

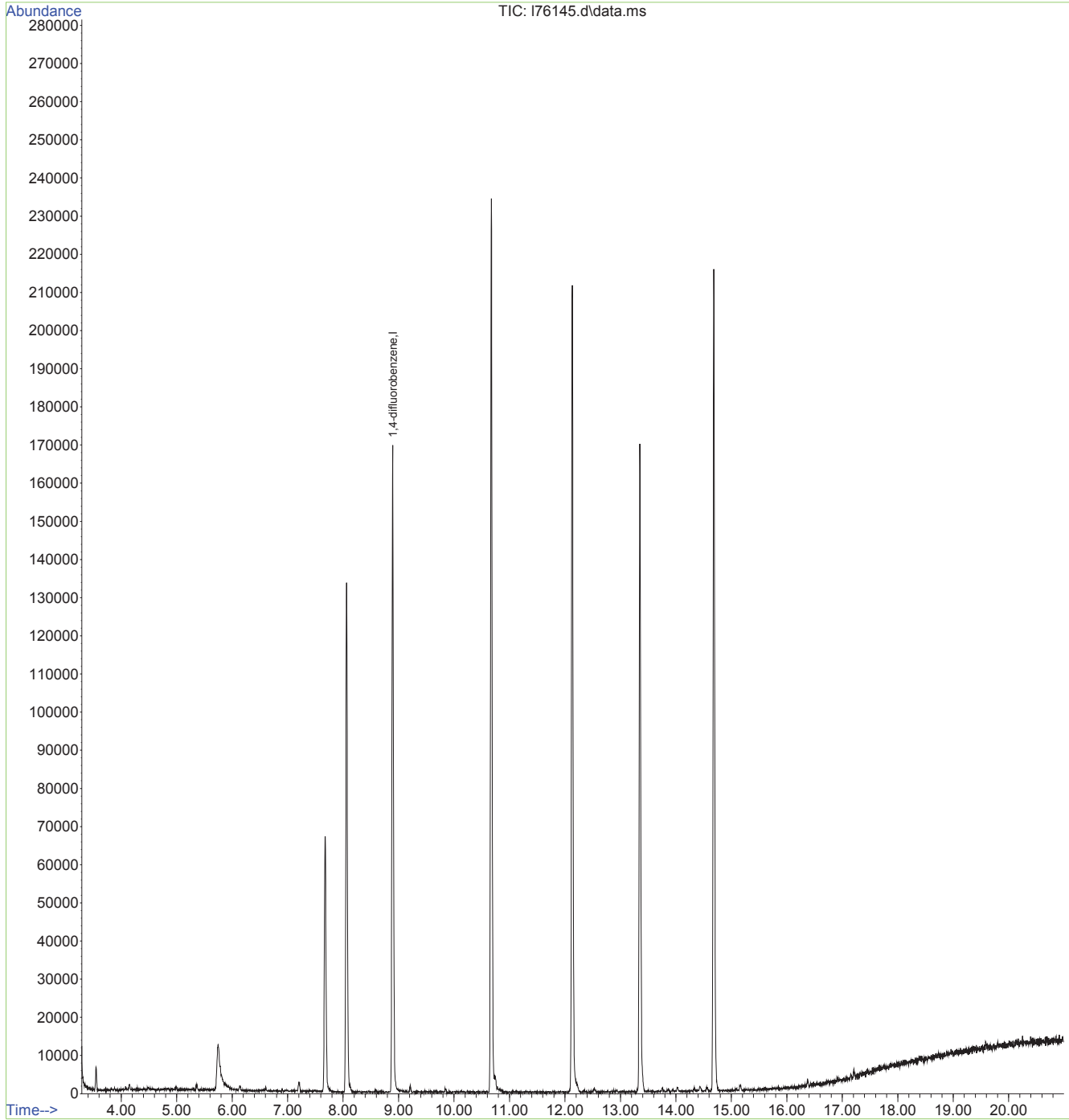
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\l130730\  
Data File : l76145.d  
Acq On : 30 Jul 2013 10:32 am  
Operator : kerryr  
Sample : mb  
Misc : ms29544tic,msl3537,,,,5,1  
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 20 16:41:37 2015  
Quant Method : O:\msl\1\methods\l130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176163.d  
 Acq On : 30 Jul 2013 7:12 pm  
 Operator : kerryr  
 Sample : mc22841-37ms  
 Misc : ms29537,msl3537,,,,,5,5  
 ALS Vial : 23 Sample Multiplier: 1

Quant Time: Oct 20 16:41:59 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |              |
|------------------------|-------|------|----------|-------|-------|----------|--------------|
| -----                  |       |      |          |       |       |          |              |
| Internal Standards     |       |      |          |       |       |          |              |
| 1) 1,4-difluorobenzene | 8.892 | 114  | 146262   | 50.00 | ug/L  | 0.00     |              |
| Target Compounds       |       |      |          |       |       |          |              |
| 2) 1,2-dichloroethane  | 8.198 | 62   | 61358    | 42.16 | ug/L  |          | Qvalue<br>95 |
| -----                  |       |      |          |       |       |          |              |

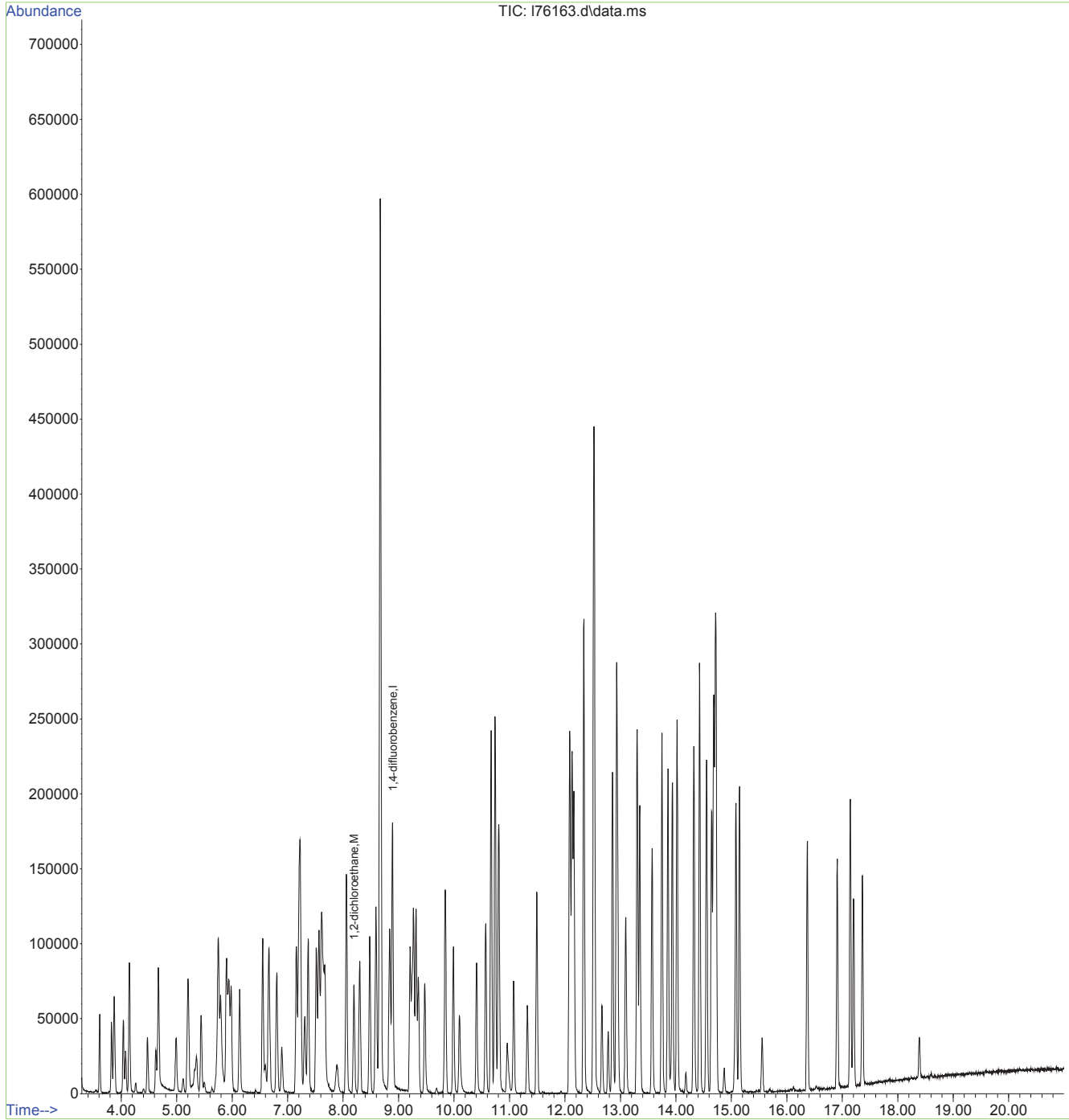
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
Data File : 176163.d  
Acq On : 30 Jul 2013 7:12 pm  
Operator : kerryr  
Sample : mc22841-37ms  
Misc : ms29537,msl3537,,,,,5,5  
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Oct 20 16:41:59 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176163.d  
 Acq On : 30 Jul 2013 7:12 pm  
 Operator : kerryr  
 Sample : mc22841-37ms  
 Misc : ms29537,msl3537,,,,,5,5  
 ALS Vial : 23 Sample Multiplier: 1

Quant Time: Oct 20 16:41:59 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.892 | 114  | 146262   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.198 | 62   | 61358    | 42.16 | ug/L  | Qvalue<br>95 |
| -----                  |       |      |          |       |       |              |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

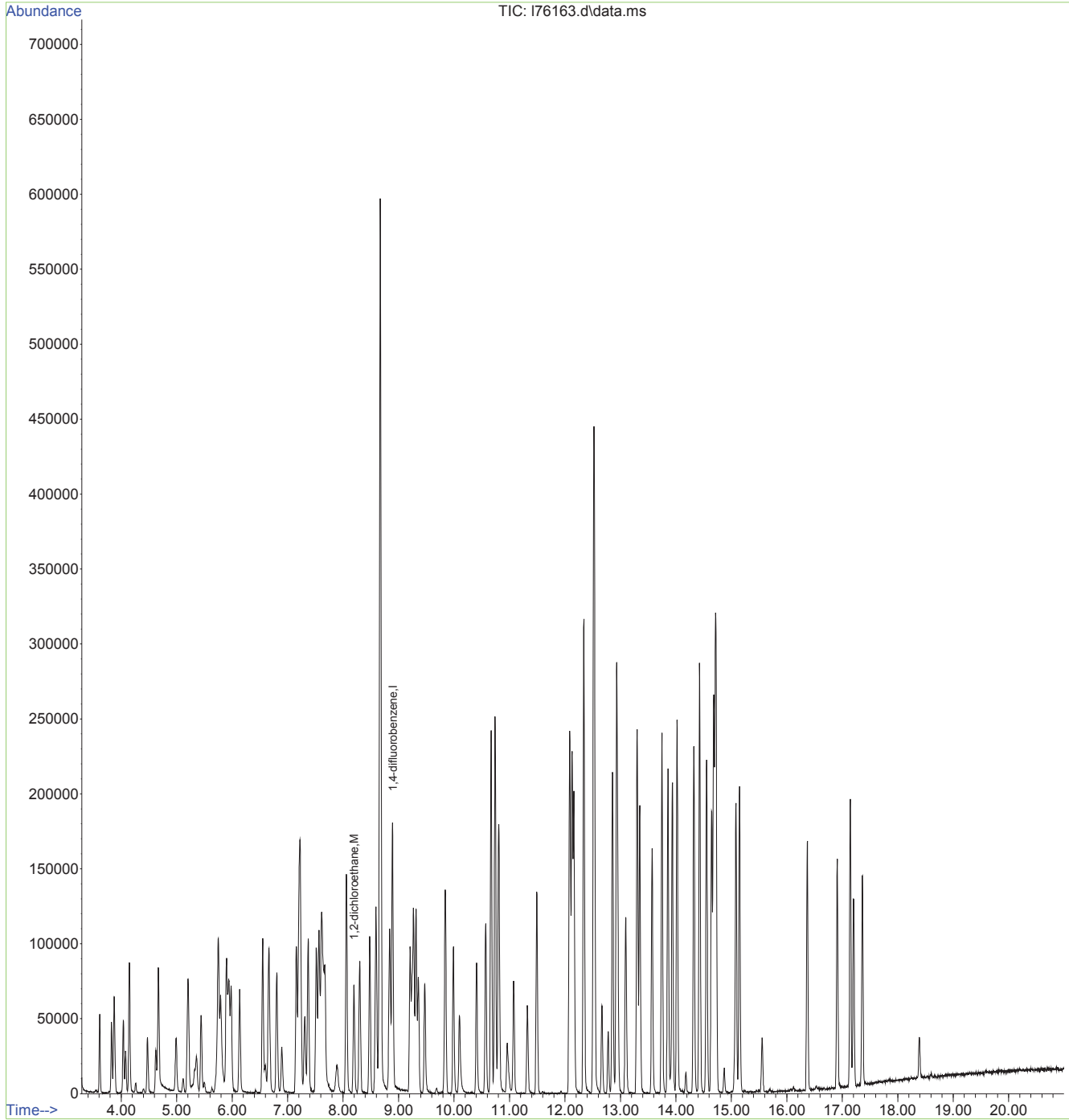
5.2  
5



Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
Data File : 176163.d  
Acq On : 30 Jul 2013 7:12 pm  
Operator : kerryr  
Sample : mc22841-37ms  
Misc : ms29537,msl3537,,,,,5,5  
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Oct 20 16:41:59 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176164.d  
 Acq On : 30 Jul 2013 7:42 pm  
 Operator : kerryr  
 Sample : mc22841-37msd  
 Misc : ms29537,msl3537,,,,,5,5  
 ALS Vial : 24 Sample Multiplier: 1

Quant Time: Oct 20 16:42:01 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.893 | 114  | 144863   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.197 | 62   | 61678    | 42.79 | ug/L  | Qvalue<br>94 |
| -----                  |       |      |          |       |       |              |

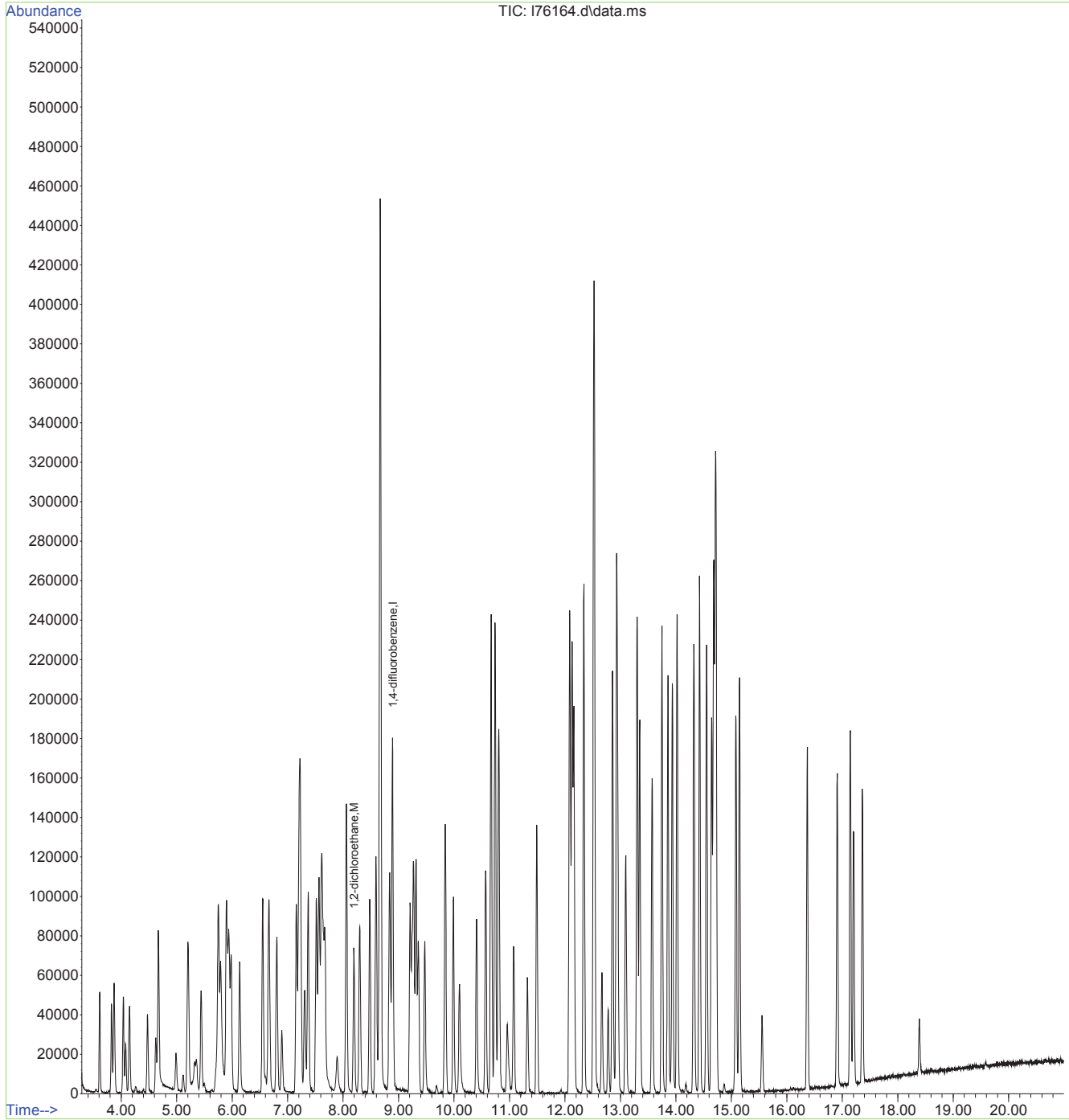
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
Data File : 176164.d  
Acq On : 30 Jul 2013 7:42 pm  
Operator : kerryr  
Sample : mc22841-37msd  
Misc : ms29537,msl3537,,,,,5,5  
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Oct 20 16:42:01 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
 Data File : 176164.d  
 Acq On : 30 Jul 2013 7:42 pm  
 Operator : kerryr  
 Sample : mc22841-37msd  
 Misc : ms29537,msl3537,,,,,5,5  
 ALS Vial : 24 Sample Multiplier: 1

Quant Time: Oct 20 16:42:01 2015  
 Quant Method : O:\msl\1\methods\1130729wx.m  
 Quant Title : SW-846 Method 8260  
 QLast Update : Mon Oct 19 11:51:04 2015  
 Response via : Initial Calibration

| Compound               | R.T.  | QIon | Response | Conc  | Units | Dev(Min)     |
|------------------------|-------|------|----------|-------|-------|--------------|
| -----                  |       |      |          |       |       |              |
| Internal Standards     |       |      |          |       |       |              |
| 1) 1,4-difluorobenzene | 8.893 | 114  | 144863   | 50.00 | ug/L  | 0.00         |
| Target Compounds       |       |      |          |       |       |              |
| 2) 1,2-dichloroethane  | 8.197 | 62   | 61678    | 42.79 | ug/L  | Qvalue<br>94 |
| -----                  |       |      |          |       |       |              |

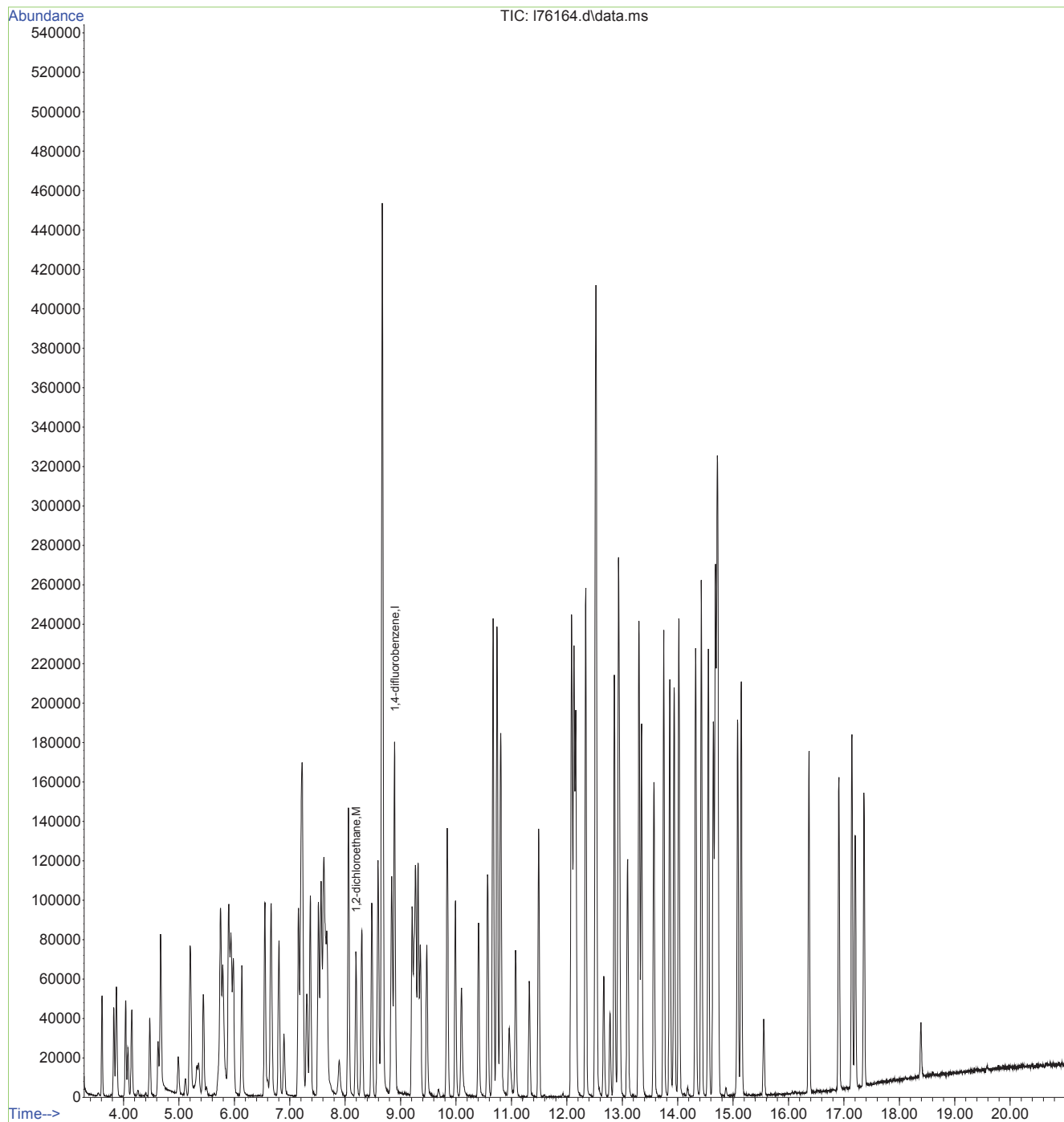
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5.2  
5

Quantitation Report (QT Reviewed)

Data Path : O:\msl\1\data backup\1130730\  
Data File : 176164.d  
Acq On : 30 Jul 2013 7:42 pm  
Operator : kerryr  
Sample : mc22841-37msd  
Misc : ms29537,msl3537,,,,,5,5  
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Oct 20 16:42:01 2015  
Quant Method : O:\msl\1\methods\1130729wx.m  
Quant Title : SW-846 Method 8260  
QLast Update : Mon Oct 19 11:51:04 2015  
Response via : Initial Calibration



### Internal Sample Tracking Chronicle

Shell Oil

Job No: MC22834

URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

5.3  
5

| Sample Number   | Method             | Analyzed        | By | Prepped   | By | Test Codes |
|---|--------------------|-----------------|----|-----------|----|------------|
| MC22834-1 Collected: 18-JUL-13 10:25 By: LRDM Received: 19-JUL-13 By: P93B-ROX-071813     |                    |                 |    |           |    |            |
| MC22834-1   | SW846 8011         | 25-JUL-13 15:15 | NK | 23-JUL-13 | BJ | V8011SL    |
| MC22834-1   | SW846 8270C BY SIM | 29-JUL-13 11:11 | WK | 24-JUL-13 | FC | B8270SIMSL |
| MC22834-1   | SW846 8260B        | 30-JUL-13 16:19 | KR |           |    | V8260SL +  |
| MC22834-1   | SW846 8260B        | 30-JUL-13 16:53 | GK |           |    | V8260SL +  |
| MC22834-1   | SW846 8270C        | 31-JUL-13 13:34 | KR | 24-JUL-13 | FC | AB8270SL + |
| MC22834-2 Collected: 18-JUL-13 11:10 By: LRDM Received: 19-JUL-13 By: P93C-ROX-071813     |                    |                 |    |           |    |            |
| MC22834-2   | SW846 8011         | 25-JUL-13 15:39 | NK | 23-JUL-13 | BJ | V8011SL    |
| MC22834-2   | SW846 8270C BY SIM | 29-JUL-13 11:33 | WK | 24-JUL-13 | FC | B8270SIMSL |
| MC22834-2   | SW846 8260B        | 30-JUL-13 16:47 | KR |           |    | V8260SL +  |
| MC22834-2   | SW846 8260B        | 30-JUL-13 17:21 | GK |           |    | V8260SL +  |
| MC22834-2   | SW846 8270C        | 31-JUL-13 13:57 | KR | 24-JUL-13 | FC | AB8270SL + |
| MC22834-3 Collected: 18-JUL-13 12:00 By: LRDM Received: 19-JUL-13 By: P93A-ROX-071813     |                    |                 |    |           |    |            |
| MC22834-3   | SW846 8011         | 25-JUL-13 16:04 | NK | 23-JUL-13 | BJ | V8011SL    |
| MC22834-3   | SW846 8270C BY SIM | 29-JUL-13 11:54 | WK | 24-JUL-13 | FC | B8270SIMSL |
| MC22834-3   | SW846 8260B        | 30-JUL-13 17:16 | KR |           |    | V8260SL +  |
| MC22834-3   | SW846 8260B        | 30-JUL-13 17:49 | GK |           |    | V8260SL +  |
| MC22834-3   | SW846 8270C        | 31-JUL-13 14:20 | KR | 24-JUL-13 | FC | AB8270SL + |
| MC22834-4 Collected: 18-JUL-13 14:35 By: LRDM Received: 19-JUL-13 By: P114-ROX-071813     |                    |                 |    |           |    |            |
| MC22834-4   | SW846 8011         | 25-JUL-13 16:28 | NK | 23-JUL-13 | BJ | V8011SL    |
| MC22834-4   | SW846 8270C BY SIM | 29-JUL-13 12:15 | WK | 24-JUL-13 | FC | B8270SIMSL |
| MC22834-4   | SW846 8260B        | 30-JUL-13 12:56 | KR |           |    | V8260SL +  |
| MC22834-4   | SW846 8260B        | 30-JUL-13 18:17 | GK |           |    | V8260SL +  |
| MC22834-4   | SW846 8270C        | 31-JUL-13 14:43 | KR | 24-JUL-13 | FC | AB8270SL + |
| MC22834-5 Collected: 18-JUL-13 14:35 By: LRDM Received: 19-JUL-13 By: P114-ROX-071813-DUP |                    |                 |    |           |    |            |
| MC22834-5   | SW846 8011         | 25-JUL-13 17:16 | NK | 23-JUL-13 | BJ | V8011SL    |

### Internal Sample Tracking Chronicle

Shell Oil

Job No: MC22834

URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

5.3  
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| Sample Number   | Method             | Analyzed        | By | Prepped   | By | Test Codes |
|---|--------------------|-----------------|----|-----------|----|------------|
| MC22834-5   | SW846 8270C BY SIM | 29-JUL-13 12:37 | WK | 24-JUL-13 | FC | B8270SIMSL |
| MC22834-5   | SW846 8260B        | 30-JUL-13 13:26 | KR |           |    | V8260SL +  |
| MC22834-5   | SW846 8260B        | 30-JUL-13 18:44 | GK |           |    | V8260SL +  |
| MC22834-5   | SW846 8270C        | 31-JUL-13 15:52 | KR | 24-JUL-13 | FC | AB8270SL + |
| MC22834-6 Collected: 18-JUL-13 00:00 By: LRDM Received: 19-JUL-13 By: TB-ROX-071813-HCL |                    |                 |    |           |    |            |
| MC22834-6   | SW846 8260B        | 30-JUL-13 11:01 | KR |           |    | V8260SL +  |
| MC22834-6   | SW846 8260B        | 30-JUL-13 11:52 | GK |           |    | V8260SL +  |
| MC22834-7 Collected: 18-JUL-13 00:00 By: LRDM Received: 19-JUL-13 By: TB-ROX-071813-ST  |                    |                 |    |           |    |            |
| MC22834-7   | SW846 8011         | 25-JUL-13 16:52 | NK | 23-JUL-13 | BJ | V8011SL    |

# SGS Accutest Internal Chain of Custody

**Job Number:** MC22834  
**Account:** SHELLWIC Shell Oil  
**Project:** URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
**Received:** 07/19/13

| Sample.Bottle Number | Transfer FROM   | Transfer TO    | Date/Time      | Reason                 |
|----------------------|-----------------|----------------|----------------|------------------------|
| MC22834-1.1          | Walk In Ref #22 | Bijan Jafari   | 07/24/13 11:21 | Retrieve from Storage  |
| MC22834-1.1          | Bijan Jafari    |                | 07/26/13 08:35 | Depleted               |
| MC22834-1.3          | VOC Ref #1      | Kerry Ryan     | 07/30/13 09:39 | Retrieve from Storage  |
| MC22834-1.3          | Kerry Ryan      | GCMSL          | 07/30/13 09:39 | Load on Instrument     |
| MC22834-1.3          | GCMSL           | Kerry Ryan     | 07/31/13 09:24 | Unload from Instrument |
| MC22834-1.3          | Kerry Ryan      | VOC Ref #1     | 07/31/13 09:24 | Return to Storage      |
| MC22834-1.3          | Scott Parsick   |                | 10/04/13 13:49 | Disposed               |
| MC22834-1.4          | VOC Ref #1      | Gary Krasinski | 07/30/13 11:04 | Retrieve from Storage  |
| MC22834-1.4          | Gary Krasinski  | GCMSK          | 07/30/13 11:04 | Load on Instrument     |
| MC22834-1.4          | GCMSK           | Gary Krasinski | 07/31/13 09:37 | Unload from Instrument |
| MC22834-1.4          | Gary Krasinski  | VOC Ref #1     | 07/31/13 09:37 | Return to Storage      |
| MC22834-1.4          | Scott Parsick   |                | 10/04/13 13:49 | Disposed               |
| MC22834-1.5          | VOC Ref #1      | Bijan Jafari   | 07/23/13 10:48 | Retrieve from Storage  |
| MC22834-1.5          | Bijan Jafari    |                | 07/23/13 18:13 | Depleted               |
| MC22834-2.1          | Walk In Ref #22 | Bijan Jafari   | 07/24/13 11:21 | Retrieve from Storage  |
| MC22834-2.1          | Bijan Jafari    |                | 07/26/13 08:35 | Depleted               |
| MC22834-2.3          | VOC Ref #1      | Gary Krasinski | 07/30/13 11:04 | Retrieve from Storage  |
| MC22834-2.3          | Gary Krasinski  | GCMSK          | 07/30/13 11:04 | Load on Instrument     |
| MC22834-2.3          | GCMSK           | Gary Krasinski | 07/31/13 09:37 | Unload from Instrument |
| MC22834-2.3          | Gary Krasinski  | VOC Ref #1     | 07/31/13 09:37 | Return to Storage      |
| MC22834-2.3          | Scott Parsick   |                | 10/04/13 13:49 | Disposed               |
| MC22834-2.4          | VOC Ref #1      | Kerry Ryan     | 07/30/13 09:39 | Retrieve from Storage  |
| MC22834-2.4          | Kerry Ryan      | GCMSL          | 07/30/13 09:39 | Load on Instrument     |
| MC22834-2.4          | GCMSL           | Kerry Ryan     | 07/31/13 09:24 | Unload from Instrument |
| MC22834-2.4          | Kerry Ryan      | VOC Ref #1     | 07/31/13 09:24 | Return to Storage      |
| MC22834-2.4          | Scott Parsick   |                | 10/04/13 13:49 | Disposed               |
| MC22834-2.6          | VOC Ref #1      | Bijan Jafari   | 07/23/13 10:48 | Retrieve from Storage  |
| MC22834-2.6          | Bijan Jafari    |                | 07/23/13 18:13 | Depleted               |
| MC22834-3.1          | Walk In Ref #22 | Bijan Jafari   | 07/24/13 11:21 | Retrieve from Storage  |
| MC22834-3.1          | Bijan Jafari    |                | 07/26/13 08:35 | Depleted               |
| MC22834-3.3          | VOC Ref #1      | Kerry Ryan     | 07/30/13 09:39 | Retrieve from Storage  |
| MC22834-3.3          | Kerry Ryan      | GCMSL          | 07/30/13 09:39 | Load on Instrument     |
| MC22834-3.3          | GCMSL           | Kerry Ryan     | 07/31/13 09:24 | Unload from Instrument |
| MC22834-3.3          | Kerry Ryan      | VOC Ref #1     | 07/31/13 09:24 | Return to Storage      |
| MC22834-3.3          | Scott Parsick   |                | 10/04/13 13:49 | Disposed               |

5.4  
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# SGS Accutest Internal Chain of Custody

**Job Number:** MC22834  
**Account:** SHELLWIC Shell Oil  
**Project:** URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
**Received:** 07/19/13

| Sample.Bottle Number | Transfer FROM   | Transfer TO    | Date/Time      | Reason                 |
|----------------------|-----------------|----------------|----------------|------------------------|
| MC22834-3.4          | VOC Ref #1      | Gary Krasinski | 07/30/13 11:04 | Retrieve from Storage  |
| MC22834-3.4          | Gary Krasinski  | GCMSK          | 07/30/13 11:04 | Load on Instrument     |
| MC22834-3.4          | GCMSK           | Gary Krasinski | 07/31/13 09:37 | Unload from Instrument |
| MC22834-3.4          | Gary Krasinski  | VOC Ref #1     | 07/31/13 09:37 | Return to Storage      |
| MC22834-3.4          | Scott Parsick   |                | 10/04/13 13:49 | Disposed               |
| MC22834-3.6          | VOC Ref #1      | Bijan Jafari   | 07/23/13 10:48 | Retrieve from Storage  |
| MC22834-3.6          | Bijan Jafari    |                | 07/23/13 18:13 | Depleted               |
| MC22834-4.1          | Walk In Ref #22 | Bijan Jafari   | 07/24/13 11:21 | Retrieve from Storage  |
| MC22834-4.1          | Bijan Jafari    |                | 07/26/13 08:35 | Depleted               |
| MC22834-4.3          | VOC Ref #1      | Gary Krasinski | 07/30/13 11:04 | Retrieve from Storage  |
| MC22834-4.3          | Gary Krasinski  | GCMSK          | 07/30/13 11:04 | Load on Instrument     |
| MC22834-4.3          | GCMSK           | Gary Krasinski | 07/31/13 09:37 | Unload from Instrument |
| MC22834-4.3          | Gary Krasinski  | VOC Ref #1     | 07/31/13 09:37 | Return to Storage      |
| MC22834-4.3          | Scott Parsick   |                | 10/04/13 13:49 | Disposed               |
| MC22834-4.4          | VOC Ref #1      | Kerry Ryan     | 07/30/13 09:39 | Retrieve from Storage  |
| MC22834-4.4          | Kerry Ryan      | GCMSL          | 07/30/13 09:39 | Load on Instrument     |
| MC22834-4.4          | GCMSL           | Kerry Ryan     | 07/31/13 09:24 | Unload from Instrument |
| MC22834-4.4          | Kerry Ryan      | VOC Ref #1     | 07/31/13 09:24 | Return to Storage      |
| MC22834-4.4          | Scott Parsick   |                | 10/04/13 13:49 | Disposed               |
| MC22834-4.5          | VOC Ref #1      | Bijan Jafari   | 07/23/13 10:48 | Retrieve from Storage  |
| MC22834-4.5          | Bijan Jafari    |                | 07/23/13 18:13 | Depleted               |
| MC22834-5.1          | Walk In Ref #22 | Bijan Jafari   | 07/24/13 11:21 | Retrieve from Storage  |
| MC22834-5.1          | Bijan Jafari    |                | 07/26/13 08:35 | Depleted               |
| MC22834-5.3          | VOC Ref #1      | Kerry Ryan     | 07/30/13 09:39 | Retrieve from Storage  |
| MC22834-5.3          | Kerry Ryan      | GCMSL          | 07/30/13 09:39 | Load on Instrument     |
| MC22834-5.3          | GCMSL           | Kerry Ryan     | 07/31/13 09:24 | Unload from Instrument |
| MC22834-5.3          | Kerry Ryan      | VOC Ref #1     | 07/31/13 09:24 | Return to Storage      |
| MC22834-5.3          | Scott Parsick   |                | 10/04/13 13:49 | Disposed               |
| MC22834-5.4          | VOC Ref #1      | Gary Krasinski | 07/30/13 11:04 | Retrieve from Storage  |
| MC22834-5.4          | Gary Krasinski  | GCMSK          | 07/30/13 11:04 | Load on Instrument     |
| MC22834-5.4          | GCMSK           | Gary Krasinski | 07/31/13 09:37 | Unload from Instrument |
| MC22834-5.4          | Gary Krasinski  | VOC Ref #1     | 07/31/13 09:37 | Return to Storage      |
| MC22834-5.4          | Scott Parsick   |                | 10/04/13 13:49 | Disposed               |
| MC22834-6.1          | VOC Ref #1      | Gary Krasinski | 07/30/13 11:04 | Retrieve from Storage  |

5.4  
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# SGS Accutest Internal Chain of Custody

**Job Number:** MC22834  
**Account:** SHELLWIC Shell Oil  
**Project:** URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
**Received:** 07/19/13

| Sample.Bottle Number | Transfer FROM  | Transfer TO    | Date/Time      | Reason                 |
|----------------------|----------------|----------------|----------------|------------------------|
| MC22834-6.1          | Gary Krasinski | GCMSK          | 07/30/13 11:04 | Load on Instrument     |
| MC22834-6.1          | GCMSK          | Gary Krasinski | 07/31/13 09:37 | Unload from Instrument |
| MC22834-6.1          | Gary Krasinski | VOC Ref #1     | 07/31/13 09:37 | Return to Storage      |
| MC22834-6.1          | Scott Parsick  |                | 10/04/13 13:49 | Disposed               |
| MC22834-6.2          | VOC Ref #1     | Kerry Ryan     | 07/30/13 09:42 | Retrieve from Storage  |
| MC22834-6.2          | Kerry Ryan     | GCMSL          | 07/30/13 09:42 | Load on Instrument     |
| MC22834-6.2          | GCMSL          | Kerry Ryan     | 07/31/13 09:24 | Unload from Instrument |
| MC22834-6.2          | Kerry Ryan     | VOC Ref #1     | 07/31/13 09:24 | Return to Storage      |
| MC22834-6.2          | Scott Parsick  |                | 10/04/13 13:49 | Disposed               |
| MC22834-7.2          | VOC Ref #1     | Bijan Jafari   | 07/23/13 10:48 | Retrieve from Storage  |
| MC22834-7.2          | Bijan Jafari   |                | 07/23/13 18:13 | Depleted               |

5.4  
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## GC/MS Volatiles

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## QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

# Method Blank Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSL3537-MB | L76145.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-6

| 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  |   |
| 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  |   |
| 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  |   |
| 10061-01-5 | cis-1,3-Dichloropropene   | ND     | 0.50 | 0.22 | ug/l  |   |
| 10061-02-6 | trans-1,3-Dichloropropene | ND     | 1.0  | 0.29 | ug/l  |   |

6.1.1  
6

# Method Blank Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSL3537-MB | L76145.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-6

| CAS No.   | Compound                    | Result | RL   | MDL  | Units | Q |
|-----------|-----------------------------|--------|------|------|-------|---|
| 123-91-1  | 1,4-Dioxane                 | ND     | 50   | 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     | 1.0  | 0.47 | ug/l  |   |
| 108-67-8  | 1,3,5-Trimethylbenzene      | ND     | 1.0  | 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  
6

# Method Blank Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSL3537-MB | L76145.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-6

| CAS No.   | Surrogate Recoveries | Limits       |
|-----------|----------------------|--------------|
| 1868-53-7 | Dibromofluoromethane | 85% 70-130%  |
| 2037-26-5 | Toluene-D8           | 90% 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  
6

# Method Blank Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2364-MB | K72596.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-6

| CAS No.    | Compound                  | Result | RL   | MDL  | Units | Q |
|------------|---------------------------|--------|------|------|-------|---|
| 67-64-1    | Acetone                   | ND     | 10   | 2.8  | 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  | 1.1  | 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  |   |
| 10061-01-5 | cis-1,3-Dichloropropene   | ND     | 0.50 | 0.22 | ug/l  |   |

# Method Blank Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2364-MB | K72596.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-6

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 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: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2364-MB | K72596.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-6

| CAS No.   | Surrogate Recoveries | Limits |         |
|-----------|----------------------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 112%   | 70-130% |
| 2037-26-5 | Toluene-D8           | 96%    | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 94%    | 70-130% |

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

6.1.2  
6

# Blank Spike Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSL3537-BS | L76142.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-6

| CAS No.    | Compound                  | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | Limits |
|------------|---------------------------|---------------|-------------|----------|--------|
| 67-64-1    | Acetone                   | 50            | 42.2        | 84       | 70-130 |
| 107-02-8   | Acrolein                  | 250           | 321         | 128      | 70-130 |
| 107-13-1   | Acrylonitrile             | 50            | 44.2        | 88       | 70-130 |
| 108-86-1   | Bromobenzene              | 50            | 50.4        | 101      | 70-130 |
| 74-97-5    | Bromochloromethane        | 50            | 44.4        | 89       | 70-130 |
| 75-27-4    | Bromodichloromethane      | 50            | 47.1        | 94       | 70-130 |
| 75-25-2    | Bromoform                 | 50            | 43.4        | 87       | 70-130 |
| 74-83-9    | Bromomethane              | 50            | 49.0        | 98       | 70-130 |
| 78-93-3    | 2-Butanone (MEK)          | 50            | 37.1        | 74       | 70-130 |
| 104-51-8   | n-Butylbenzene            | 50            | 55.7        | 111      | 70-130 |
| 135-98-8   | sec-Butylbenzene          | 50            | 58.0        | 116      | 70-130 |
| 98-06-6    | tert-Butylbenzene         | 50            | 55.9        | 112      | 70-130 |
| 75-15-0    | Carbon disulfide          | 50            | 42.1        | 84       | 70-130 |
| 56-23-5    | Carbon tetrachloride      | 50            | 48.4        | 97       | 70-130 |
| 108-90-7   | Chlorobenzene             | 50            | 52.8        | 106      | 70-130 |
| 75-00-3    | Chloroethane              | 50            | 43.8        | 88       | 70-130 |
| 67-66-3    | Chloroform                | 50            | 44.6        | 89       | 70-130 |
| 74-87-3    | Chloromethane             | 50            | 42.5        | 85       | 70-130 |
| 95-49-8    | o-Chlorotoluene           | 50            | 51.3        | 103      | 70-130 |
| 106-43-4   | p-Chlorotoluene           | 50            | 54.7        | 109      | 70-130 |
| 124-48-1   | Dibromochloromethane      | 50            | 50.4        | 101      | 70-130 |
| 95-50-1    | 1,2-Dichlorobenzene       | 50            | 54.5        | 109      | 70-130 |
| 541-73-1   | 1,3-Dichlorobenzene       | 50            | 52.7        | 105      | 70-130 |
| 106-46-7   | 1,4-Dichlorobenzene       | 50            | 48.6        | 97       | 70-130 |
| 75-71-8    | Dichlorodifluoromethane   | 50            | 46.3        | 93       | 70-130 |
| 75-34-3    | 1,1-Dichloroethane        | 50            | 46.4        | 93       | 70-130 |
| 107-06-2   | 1,2-Dichloroethane        | 50            | 46.7        | 93       | 70-130 |
| 75-35-4    | 1,1-Dichloroethene        | 50            | 48.1        | 96       | 70-130 |
| 156-59-2   | cis-1,2-Dichloroethene    | 50            | 44.2        | 88       | 70-130 |
| 156-60-5   | trans-1,2-Dichloroethene  | 50            | 44.2        | 88       | 70-130 |
| 78-87-5    | 1,2-Dichloropropane       | 50            | 44.7        | 89       | 70-130 |
| 142-28-9   | 1,3-Dichloropropane       | 50            | 50.2        | 100      | 70-130 |
| 594-20-7   | 2,2-Dichloropropane       | 50            | 50.9        | 102      | 70-130 |
| 563-58-6   | 1,1-Dichloropropene       | 50            | 49.9        | 100      | 70-130 |
| 10061-01-5 | cis-1,3-Dichloropropene   | 50            | 39.7        | 79       | 70-130 |
| 10061-02-6 | trans-1,3-Dichloropropene | 50            | 43.4        | 87       | 70-130 |

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSL3537-BS | L76142.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-6

| CAS No.   | Compound                    | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | Limits |
|-----------|-----------------------------|---------------|-------------|----------|--------|
| 123-91-1  | 1,4-Dioxane                 | 250           | 179         | 72       | 70-130 |
| 97-63-2   | Ethyl methacrylate          | 50            | 44.0        | 88       | 77-137 |
| 100-41-4  | Ethylbenzene                | 50            | 50.0        | 100      | 70-130 |
| 87-68-3   | Hexachlorobutadiene         | 50            | 52.5        | 105      | 70-130 |
| 591-78-6  | 2-Hexanone                  | 50            | 45.6        | 91       | 70-130 |
| 98-82-8   | Isopropylbenzene            | 50            | 54.4        | 109      | 70-130 |
| 99-87-6   | p-Isopropyltoluene          | 50            | 54.8        | 110      | 70-130 |
| 1634-04-4 | Methyl Tert Butyl Ether     | 50            | 37.6        | 75       | 70-130 |
| 108-10-1  | 4-Methyl-2-pentanone (MIBK) | 50            | 39.8        | 80       | 70-130 |
| 74-95-3   | Methylene bromide           | 50            | 46.3        | 93       | 70-130 |
| 75-09-2   | Methylene chloride          | 50            | 45.5        | 91       | 70-130 |
| 91-20-3   | Naphthalene                 | 50            | 43.3        | 87       | 70-130 |
| 103-65-1  | n-Propylbenzene             | 50            | 53.9        | 108      | 70-130 |
| 100-42-5  | Styrene                     | 50            | 50.9        | 102      | 70-130 |
| 630-20-6  | 1,1,1,2-Tetrachloroethane   | 50            | 50.9        | 102      | 70-130 |
| 79-34-5   | 1,1,2,2-Tetrachloroethane   | 50            | 47.4        | 95       | 70-130 |
| 127-18-4  | Tetrachloroethene           | 50            | 56.4        | 113      | 70-130 |
| 108-88-3  | Toluene                     | 50            | 42.5        | 85       | 70-130 |
| 87-61-6   | 1,2,3-Trichlorobenzene      | 50            | 45.6        | 91       | 70-130 |
| 120-82-1  | 1,2,4-Trichlorobenzene      | 50            | 47.2        | 94       | 70-130 |
| 71-55-6   | 1,1,1-Trichloroethane       | 50            | 52.5        | 105      | 70-130 |
| 79-00-5   | 1,1,2-Trichloroethane       | 50            | 45.7        | 91       | 70-130 |
| 79-01-6   | Trichloroethene             | 50            | 42.3        | 85       | 70-130 |
| 75-69-4   | Trichlorofluoromethane      | 50            | 46.7        | 93       | 70-130 |
| 96-18-4   | 1,2,3-Trichloropropane      | 50            | 49.8        | 100      | 70-130 |
| 95-63-6   | 1,2,4-Trimethylbenzene      | 50            | 48.4        | 97       | 70-130 |
| 108-67-8  | 1,3,5-Trimethylbenzene      | 50            | 47.8        | 96       | 70-130 |
| 108-05-4  | Vinyl Acetate               | 50            | 28.4        | 57* a    | 70-130 |
| 75-01-4   | Vinyl chloride              | 50            | 36.5        | 73       | 70-130 |
|           | m,p-Xylene                  | 100           | 103         | 103      | 70-130 |
| 95-47-6   | o-Xylene                    | 50            | 54.7        | 109      | 70-130 |
| 1330-20-7 | Xylene (total)              | 150           | 157         | 105      | 70-130 |

\* = Outside of Control Limits.

## Blank Spike Summary

Job Number: MC22834  
Account: SHELLWIC Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSL3537-BS | L76142.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-6

| CAS No.   | Surrogate Recoveries | BSP  | Limits  |
|-----------|----------------------|------|---------|
| 1868-53-7 | Dibromofluoromethane | 85%  | 70-130% |
| 2037-26-5 | Toluene-D8           | 90%  | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 101% | 70-130% |

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

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2364-BS | K72593.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-6

| CAS No.    | Compound                  | Spike ug/l | BSP ug/l | BSP %  | Limits |
|------------|---------------------------|------------|----------|--------|--------|
| 67-64-1    | Acetone                   | 50         | 64.7     | 129    | 70-130 |
| 107-13-1   | Acrylonitrile             | 50         | 49.8     | 100    | 70-130 |
| 71-43-2    | Benzene                   | 50         | 52.2     | 104    | 70-130 |
| 108-86-1   | Bromobenzene              | 50         | 49.4     | 99     | 70-130 |
| 74-97-5    | Bromochloromethane        | 50         | 53.3     | 107    | 70-130 |
| 75-27-4    | Bromodichloromethane      | 50         | 50.4     | 101    | 70-130 |
| 75-25-2    | Bromoform                 | 50         | 51.6     | 103    | 70-130 |
| 74-83-9    | Bromomethane              | 50         | 60.2     | 120    | 70-130 |
| 78-93-3    | 2-Butanone (MEK)          | 50         | 66.5     | 133* a | 70-130 |
| 104-51-8   | n-Butylbenzene            | 50         | 48.8     | 98     | 70-130 |
| 135-98-8   | sec-Butylbenzene          | 50         | 51.7     | 103    | 70-130 |
| 98-06-6    | tert-Butylbenzene         | 50         | 50.1     | 100    | 70-130 |
| 75-15-0    | Carbon disulfide          | 50         | 50.8     | 102    | 70-130 |
| 56-23-5    | Carbon tetrachloride      | 50         | 52.9     | 106    | 70-130 |
| 108-90-7   | Chlorobenzene             | 50         | 59.3     | 119    | 70-130 |
| 75-00-3    | Chloroethane              | 50         | 54.7     | 109    | 70-130 |
| 110-75-8   | 2-Chloroethyl vinyl ether | 50         | 33.2     | 66* a  | 70-130 |
| 67-66-3    | Chloroform                | 50         | 55.0     | 110    | 70-130 |
| 74-87-3    | Chloromethane             | 50         | 57.3     | 115    | 70-130 |
| 95-49-8    | o-Chlorotoluene           | 50         | 49.0     | 98     | 70-130 |
| 106-43-4   | p-Chlorotoluene           | 50         | 51.9     | 104    | 70-130 |
| 124-48-1   | Dibromochloromethane      | 50         | 54.2     | 108    | 70-130 |
| 95-50-1    | 1,2-Dichlorobenzene       | 50         | 53.7     | 107    | 70-130 |
| 541-73-1   | 1,3-Dichlorobenzene       | 50         | 53.4     | 107    | 70-130 |
| 106-46-7   | 1,4-Dichlorobenzene       | 50         | 49.4     | 99     | 70-130 |
| 75-71-8    | Dichlorodifluoromethane   | 50         | 55.1     | 110    | 70-130 |
| 75-34-3    | 1,1-Dichloroethane        | 50         | 54.2     | 108    | 70-130 |
| 107-06-2   | 1,2-Dichloroethane        | 50         | 48.6     | 97     | 70-130 |
| 75-35-4    | 1,1-Dichloroethene        | 50         | 51.5     | 103    | 70-130 |
| 156-59-2   | cis-1,2-Dichloroethene    | 50         | 53.5     | 107    | 70-130 |
| 156-60-5   | trans-1,2-Dichloroethene  | 50         | 54.5     | 109    | 70-130 |
| 78-87-5    | 1,2-Dichloropropane       | 50         | 47.0     | 94     | 70-130 |
| 142-28-9   | 1,3-Dichloropropane       | 50         | 51.7     | 103    | 70-130 |
| 594-20-7   | 2,2-Dichloropropane       | 50         | 58.3     | 117    | 70-130 |
| 563-58-6   | 1,1-Dichloropropene       | 50         | 48.9     | 98     | 70-130 |
| 10061-01-5 | cis-1,3-Dichloropropene   | 50         | 47.0     | 94     | 70-130 |

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2364-BS | K72593.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-6

| CAS No.    | Compound                    | Spike ug/l | BSP ug/l | BSP % | Limits |
|------------|-----------------------------|------------|----------|-------|--------|
| 10061-02-6 | trans-1,3-Dichloropropene   | 50         | 50.3     | 101   | 70-130 |
| 123-91-1   | 1,4-Dioxane                 | 250        | 227      | 91    | 70-130 |
| 97-63-2    | Ethyl methacrylate          | 50         | 48.5     | 97    | 77-137 |
| 100-41-4   | Ethylbenzene                | 50         | 50.9     | 102   | 70-130 |
| 87-68-3    | Hexachlorobutadiene         | 50         | 48.5     | 97    | 70-130 |
| 591-78-6   | 2-Hexanone                  | 50         | 58.5     | 117   | 70-130 |
| 98-82-8    | Isopropylbenzene            | 50         | 51.3     | 103   | 70-130 |
| 99-87-6    | p-Isopropyltoluene          | 50         | 50.7     | 101   | 70-130 |
| 1634-04-4  | Methyl Tert Butyl Ether     | 50         | 49.7     | 99    | 70-130 |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | 50         | 43.5     | 87    | 70-130 |
| 74-95-3    | Methylene bromide           | 50         | 50.2     | 100   | 70-130 |
| 75-09-2    | Methylene chloride          | 50         | 55.1     | 110   | 70-130 |
| 91-20-3    | Naphthalene                 | 50         | 58.0     | 116   | 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         | 55.7     | 111   | 70-130 |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | 50         | 48.6     | 97    | 70-130 |
| 127-18-4   | Tetrachloroethene           | 50         | 57.7     | 115   | 70-130 |
| 108-88-3   | Toluene                     | 50         | 50.0     | 100   | 70-130 |
| 87-61-6    | 1,2,3-Trichlorobenzene      | 50         | 62.9     | 126   | 70-130 |
| 120-82-1   | 1,2,4-Trichlorobenzene      | 50         | 54.8     | 110   | 70-130 |
| 71-55-6    | 1,1,1-Trichloroethane       | 50         | 52.4     | 105   | 70-130 |
| 79-00-5    | 1,1,2-Trichloroethane       | 50         | 48.5     | 97    | 70-130 |
| 79-01-6    | Trichloroethene             | 50         | 48.8     | 98    | 70-130 |
| 75-69-4    | Trichlorofluoromethane      | 50         | 50.0     | 100   | 70-130 |
| 96-18-4    | 1,2,3-Trichloropropane      | 50         | 42.1     | 84    | 70-130 |
| 95-63-6    | 1,2,4-Trimethylbenzene      | 50         | 47.9     | 96    | 70-130 |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 50         | 46.8     | 94    | 70-130 |
| 108-05-4   | Vinyl Acetate               | 50         | 34.5     | 69* a | 70-130 |
| 75-01-4    | Vinyl chloride              | 50         | 41.2     | 82    | 70-130 |
|            | m,p-Xylene                  | 100        | 106      | 106   | 70-130 |
| 95-47-6    | o-Xylene                    | 50         | 54.5     | 109   | 70-130 |
| 1330-20-7  | Xylene (total)              | 150        | 160      | 107   | 70-130 |

\* = Outside of Control Limits.

## Blank Spike Summary

Job Number: MC22834

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| MSK2364-BS | K72593.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-6

| CAS No.   | Surrogate Recoveries | BSP  | Limits  |
|-----------|----------------------|------|---------|
| 1868-53-7 | Dibromofluoromethane | 103% | 70-130% |
| 2037-26-5 | Toluene-D8           | 100% | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 94%  | 70-130% |

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

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22834

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|----|-----------|------------|------------------|
| MC23063-7MS  | K72601.D | 5  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |
| MC23063-7MSD | K72602.D | 5  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |
| MC23063-7    | K72600.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-6

| CAS No.    | Compound                  | MC23063-7<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|------------|---------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 67-64-1    | Acetone                   | 7.6               | 250        | 165        | 63* a   | 250           | 167         | 64* a    | 1   | 70-130/30         |
| 107-13-1   | Acrylonitrile             | ND                | 250        | 232        | 93      | 250           | 225         | 90       | 3   | 70-130/30         |
| 71-43-2    | Benzene                   | ND                | 250        | 244        | 98      | 250           | 237         | 95       | 3   | 70-130/30         |
| 108-86-1   | Bromobenzene              | ND                | 250        | 223        | 89      | 250           | 228         | 91       | 2   | 70-130/30         |
| 74-97-5    | Bromochloromethane        | ND                | 250        | 243        | 97      | 250           | 238         | 95       | 2   | 70-130/30         |
| 75-27-4    | Bromodichloromethane      | ND                | 250        | 232        | 93      | 250           | 227         | 91       | 2   | 70-130/30         |
| 75-25-2    | Bromoform                 | ND                | 250        | 234        | 94      | 250           | 234         | 94       | 0   | 70-130/30         |
| 74-83-9    | Bromomethane              | ND                | 250        | 249        | 100     | 250           | 239         | 96       | 4   | 70-130/30         |
| 78-93-3    | 2-Butanone (MEK)          | ND                | 250        | 219        | 88      | 250           | 216         | 86       | 1   | 70-130/30         |
| 104-51-8   | n-Butylbenzene            | ND                | 250        | 233        | 93      | 250           | 234         | 94       | 0   | 70-130/30         |
| 135-98-8   | sec-Butylbenzene          | ND                | 250        | 231        | 92      | 250           | 231         | 92       | 0   | 70-130/30         |
| 98-06-6    | tert-Butylbenzene         | ND                | 250        | 225        | 90      | 250           | 225         | 90       | 0   | 70-130/30         |
| 75-15-0    | Carbon disulfide          | ND                | 250        | 217        | 87      | 250           | 207         | 83       | 5   | 70-130/30         |
| 56-23-5    | Carbon tetrachloride      | ND                | 250        | 253        | 101     | 250           | 244         | 98       | 4   | 70-130/30         |
| 108-90-7   | Chlorobenzene             | ND                | 250        | 254        | 102     | 250           | 252         | 101      | 1   | 70-130/30         |
| 75-00-3    | Chloroethane              | ND                | 250        | 240        | 96      | 250           | 230         | 92       | 4   | 70-130/30         |
| 110-75-8   | 2-Chloroethyl vinyl ether | ND                | 250        | 211        | 84      | 250           | 205         | 82       | 3   | 70-130/30         |
| 67-66-3    | Chloroform                | ND                | 250        | 260        | 104     | 250           | 253         | 101      | 3   | 70-130/30         |
| 74-87-3    | Chloromethane             | ND                | 250        | 207        | 83      | 250           | 201         | 80       | 3   | 70-130/30         |
| 95-49-8    | o-Chlorotoluene           | ND                | 250        | 217        | 87      | 250           | 217         | 87       | 0   | 70-130/30         |
| 106-43-4   | p-Chlorotoluene           | ND                | 250        | 219        | 88      | 250           | 220         | 88       | 0   | 70-130/30         |
| 124-48-1   | Dibromochloromethane      | ND                | 250        | 245        | 98      | 250           | 245         | 98       | 0   | 70-130/30         |
| 95-50-1    | 1,2-Dichlorobenzene       | ND                | 250        | 231        | 92      | 250           | 234         | 94       | 1   | 70-130/30         |
| 541-73-1   | 1,3-Dichlorobenzene       | ND                | 250        | 231        | 92      | 250           | 231         | 92       | 0   | 70-130/30         |
| 106-46-7   | 1,4-Dichlorobenzene       | ND                | 250        | 226        | 90      | 250           | 228         | 91       | 1   | 70-130/30         |
| 75-71-8    | Dichlorodifluoromethane   | ND                | 250        | 222        | 89      | 250           | 208         | 83       | 7   | 70-130/30         |
| 75-34-3    | 1,1-Dichloroethane        | ND                | 250        | 249        | 100     | 250           | 241         | 96       | 3   | 70-130/30         |
| 107-06-2   | 1,2-Dichloroethane        | ND                | 250        | 223        | 89      | 250           | 218         | 87       | 2   | 70-130/30         |
| 75-35-4    | 1,1-Dichloroethene        | ND                | 250        | 236        | 94      | 250           | 223         | 89       | 6   | 70-130/30         |
| 156-59-2   | cis-1,2-Dichloroethene    | ND                | 250        | 256        | 102     | 250           | 249         | 100      | 3   | 70-130/30         |
| 156-60-5   | trans-1,2-Dichloroethene  | ND                | 250        | 254        | 102     | 250           | 246         | 98       | 3   | 70-130/30         |
| 78-87-5    | 1,2-Dichloropropane       | ND                | 250        | 219        | 88      | 250           | 215         | 86       | 2   | 70-130/30         |
| 142-28-9   | 1,3-Dichloropropane       | ND                | 250        | 243        | 97      | 250           | 240         | 96       | 1   | 70-130/30         |
| 594-20-7   | 2,2-Dichloropropane       | ND                | 250        | 265        | 106     | 250           | 253         | 101      | 5   | 70-130/30         |
| 563-58-6   | 1,1-Dichloropropene       | ND                | 250        | 229        | 92      | 250           | 223         | 89       | 3   | 70-130/30         |
| 10061-01-5 | cis-1,3-Dichloropropene   | ND                | 250        | 218        | 87      | 250           | 217         | 87       | 0   | 70-130/30         |

\* = Outside of Control Limits.



# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|----|-----------|------------|------------------|
| MC23063-7MS  | K72601.D | 5  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |
| MC23063-7MSD | K72602.D | 5  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |
| MC23063-7    | K72600.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-6

| CAS No.    | Compound                    | MC23063-7<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|------------|-----------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 10061-02-6 | trans-1,3-Dichloropropene   | ND                | 250        | 219        | 88      | 250           | 216         | 86       | 1   | 70-130/30         |
| 123-91-1   | 1,4-Dioxane                 | ND                | 1250       | 1080       | 86      | 1250          | 1130        | 90       | 5   | 70-130/30         |
| 97-63-2    | Ethyl methacrylate          | ND                | 250        | 222        | 89      | 250           | 218         | 87       | 2   | 72-139/30         |
| 100-41-4   | Ethylbenzene                | ND                | 250        | 238        | 95      | 250           | 236         | 94       | 1   | 70-130/30         |
| 87-68-3    | Hexachlorobutadiene         | ND                | 250        | 234        | 94      | 250           | 235         | 94       | 0   | 70-130/30         |
| 591-78-6   | 2-Hexanone                  | ND                | 250        | 177        | 71      | 250           | 174         | 70       | 2   | 70-130/30         |
| 98-82-8    | Isopropylbenzene            | ND                | 250        | 225        | 90      | 250           | 226         | 90       | 0   | 70-130/30         |
| 99-87-6    | p-Isopropyltoluene          | ND                | 250        | 231        | 92      | 250           | 233         | 93       | 1   | 70-130/30         |
| 1634-04-4  | Methyl Tert Butyl Ether     | ND                | 250        | 236        | 94      | 250           | 230         | 92       | 3   | 70-130/30         |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | ND                | 250        | 191        | 76      | 250           | 188         | 75       | 2   | 70-130/30         |
| 74-95-3    | Methylene bromide           | ND                | 250        | 232        | 93      | 250           | 228         | 91       | 2   | 70-130/30         |
| 75-09-2    | Methylene chloride          | ND                | 250        | 256        | 102     | 250           | 247         | 99       | 4   | 70-130/30         |
| 91-20-3    | Naphthalene                 | 1.3               | 250        | 264        | 105     | 250           | 269         | 107      | 2   | 70-130/30         |
| 103-65-1   | n-Propylbenzene             | ND                | 250        | 224        | 90      | 250           | 223         | 89       | 0   | 70-130/30         |
| 100-42-5   | Styrene                     | ND                | 250        | 253        | 101     | 250           | 254         | 102      | 0   | 70-130/30         |
| 630-20-6   | 1,1,1,2-Tetrachloroethane   | ND                | 250        | 258        | 103     | 250           | 258         | 103      | 0   | 70-130/30         |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | ND                | 250        | 224        | 90      | 250           | 225         | 90       | 0   | 70-130/30         |
| 127-18-4   | Tetrachloroethene           | ND                | 250        | 263        | 105     | 250           | 264         | 106      | 0   | 70-130/30         |
| 108-88-3   | Toluene                     | 0.50              | 250        | 231        | 92      | 250           | 226         | 90       | 2   | 70-130/30         |
| 87-61-6    | 1,2,3-Trichlorobenzene      | ND                | 250        | 279        | 112     | 250           | 291         | 116      | 4   | 70-130/30         |
| 120-82-1   | 1,2,4-Trichlorobenzene      | ND                | 250        | 247        | 99      | 250           | 253         | 101      | 2   | 70-130/30         |
| 71-55-6    | 1,1,1-Trichloroethane       | ND                | 250        | 250        | 100     | 250           | 240         | 96       | 4   | 70-130/30         |
| 79-00-5    | 1,1,2-Trichloroethane       | ND                | 250        | 227        | 91      | 250           | 219         | 88       | 4   | 70-130/30         |
| 79-01-6    | Trichloroethene             | ND                | 250        | 229        | 92      | 250           | 225         | 90       | 2   | 70-130/30         |
| 75-69-4    | Trichlorofluoromethane      | ND                | 250        | 258        | 103     | 250           | 244         | 98       | 6   | 70-130/30         |
| 96-18-4    | 1,2,3-Trichloropropane      | ND                | 250        | 193        | 77      | 250           | 190         | 76       | 2   | 70-130/30         |
| 95-63-6    | 1,2,4-Trimethylbenzene      | 1.3               | 250        | 231        | 92      | 250           | 231         | 92       | 0   | 70-130/30         |
| 108-67-8   | 1,3,5-Trimethylbenzene      | ND                | 250        | 226        | 90      | 250           | 229         | 92       | 1   | 70-130/30         |
| 108-05-4   | Vinyl Acetate               | ND                | 250        | 214        | 86      | 250           | 209         | 84       | 2   | 70-130/30         |
| 75-01-4    | Vinyl chloride              | ND                | 250        | 226        | 90      | 250           | 217         | 87       | 4   | 70-130/30         |
|            | m,p-Xylene                  | ND                | 500        | 474        | 95      | 500           | 476         | 95       | 0   | 70-130/30         |
| 95-47-6    | o-Xylene                    | ND                | 250        | 235        | 94      | 250           | 236         | 94       | 0   | 70-130/30         |
| 1330-20-7  | Xylene (total)              | 0.80              | 750        | 709        | 94      | 750           | 712         | 95       | 0   | 70-130/30         |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|----|-----------|------------|------------------|
| MC23063-7MS  | K72601.D | 5  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |
| MC23063-7MSD | K72602.D | 5  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |
| MC23063-7    | K72600.D | 1  | 07/30/13 | GK | n/a       | n/a        | MSK2364          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-6

| CAS No.   | Surrogate Recoveries | MS   | MSD  | MC23063-7 | Limits  |
|-----------|----------------------|------|------|-----------|---------|
| 1868-53-7 | Dibromofluoromethane | 105% | 104% | 113%      | 70-130% |
| 2037-26-5 | Toluene-D8           | 100% | 99%  | 97%       | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 93%  | 95%  | 93%       | 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: MC22834

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample        | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---------------|----------|----|----------|----|-----------|------------|------------------|
| MC22841-37MS  | L76163.D | 5  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |
| MC22841-37MSD | L76164.D | 5  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |
| MC22841-37    | L76149.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-6

| CAS No.    | Compound                  | MC22841-37 Spike |        | MS ug/l | MS %  | Spike ug/l | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|------------|---------------------------|------------------|--------|---------|-------|------------|----------|-------|-----|----------------|
|            |                           | ug/l             | Q ug/l |         |       |            |          |       |     |                |
| 67-64-1    | Acetone                   | 11.1             | 250    | 119     | 43* a | 250        | 130      | 48* a | 9   | 70-130/30      |
| 107-02-8   | Acrolein                  | ND               | 1250   | 1190    | 95    | 1250       | 1280     | 102   | 7   | 70-130/30      |
| 107-13-1   | Acrylonitrile             | ND               | 250    | 157     | 63* a | 250        | 168      | 67* a | 7   | 70-130/30      |
| 108-86-1   | Bromobenzene              | ND               | 250    | 258     | 103   | 250        | 261      | 104   | 1   | 70-130/30      |
| 74-97-5    | Bromochloromethane        | ND               | 250    | 218     | 87    | 250        | 216      | 86    | 1   | 70-130/30      |
| 75-27-4    | Bromodichloromethane      | ND               | 250    | 227     | 91    | 250        | 228      | 91    | 0   | 70-130/30      |
| 75-25-2    | Bromoform                 | ND               | 250    | 221     | 88    | 250        | 230      | 92    | 4   | 70-130/30      |
| 74-83-9    | Bromomethane              | ND               | 250    | 223     | 89    | 250        | 246      | 98    | 10  | 70-130/30      |
| 78-93-3    | 2-Butanone (MEK)          | ND               | 250    | 145     | 58* a | 250        | 160      | 64* a | 10  | 70-130/30      |
| 104-51-8   | n-Butylbenzene            | ND               | 250    | 261     | 104   | 250        | 271      | 108   | 4   | 70-130/30      |
| 135-98-8   | sec-Butylbenzene          | ND               | 250    | 285     | 114   | 250        | 291      | 116   | 2   | 70-130/30      |
| 98-06-6    | tert-Butylbenzene         | ND               | 250    | 283     | 113   | 250        | 281      | 112   | 1   | 70-130/30      |
| 75-15-0    | Carbon disulfide          | ND               | 250    | 196     | 78    | 250        | 194      | 78    | 1   | 70-130/30      |
| 56-23-5    | Carbon tetrachloride      | ND               | 250    | 228     | 91    | 250        | 237      | 95    | 4   | 70-130/30      |
| 108-90-7   | Chlorobenzene             | ND               | 250    | 272     | 109   | 250        | 267      | 107   | 2   | 70-130/30      |
| 75-00-3    | Chloroethane              | ND               | 250    | 218     | 87    | 250        | 211      | 84    | 3   | 70-130/30      |
| 67-66-3    | Chloroform                | ND               | 250    | 208     | 83    | 250        | 209      | 84    | 0   | 70-130/30      |
| 74-87-3    | Chloromethane             | ND               | 250    | 166     | 66* a | 250        | 162      | 65* a | 2   | 70-130/30      |
| 95-49-8    | o-Chlorotoluene           | ND               | 250    | 258     | 103   | 250        | 257      | 103   | 0   | 70-130/30      |
| 106-43-4   | p-Chlorotoluene           | ND               | 250    | 268     | 107   | 250        | 270      | 108   | 1   | 70-130/30      |
| 124-48-1   | Dibromochloromethane      | ND               | 250    | 252     | 101   | 250        | 253      | 101   | 0   | 70-130/30      |
| 95-50-1    | 1,2-Dichlorobenzene       | ND               | 250    | 273     | 109   | 250        | 278      | 111   | 2   | 70-130/30      |
| 541-73-1   | 1,3-Dichlorobenzene       | ND               | 250    | 265     | 106   | 250        | 268      | 107   | 1   | 70-130/30      |
| 106-46-7   | 1,4-Dichlorobenzene       | ND               | 250    | 241     | 96    | 250        | 247      | 99    | 2   | 70-130/30      |
| 75-71-8    | Dichlorodifluoromethane   | ND               | 250    | 213     | 85    | 250        | 212      | 85    | 0   | 70-130/30      |
| 75-34-3    | 1,1-Dichloroethane        | ND               | 250    | 205     | 82    | 250        | 202      | 81    | 1   | 70-130/30      |
| 107-06-2   | 1,2-Dichloroethane        | ND               | 250    | 211     | 84    | 250        | 214      | 86    | 1   | 70-130/30      |
| 75-35-4    | 1,1-Dichloroethene        | ND               | 250    | 242     | 97    | 250        | 239      | 96    | 1   | 70-130/30      |
| 156-59-2   | cis-1,2-Dichloroethene    | ND               | 250    | 212     | 85    | 250        | 211      | 84    | 0   | 70-130/30      |
| 156-60-5   | trans-1,2-Dichloroethene  | ND               | 250    | 214     | 86    | 250        | 209      | 84    | 2   | 70-130/30      |
| 78-87-5    | 1,2-Dichloropropane       | ND               | 250    | 210     | 84    | 250        | 206      | 82    | 2   | 70-130/30      |
| 142-28-9   | 1,3-Dichloropropane       | ND               | 250    | 251     | 100   | 250        | 249      | 100   | 1   | 70-130/30      |
| 594-20-7   | 2,2-Dichloropropane       | ND               | 250    | 212     | 85    | 250        | 210      | 84    | 1   | 70-130/30      |
| 563-58-6   | 1,1-Dichloropropene       | ND               | 250    | 242     | 97    | 250        | 239      | 96    | 1   | 70-130/30      |
| 10061-01-5 | cis-1,3-Dichloropropene   | ND               | 250    | 190     | 76    | 250        | 194      | 78    | 2   | 70-130/30      |
| 10061-02-6 | trans-1,3-Dichloropropene | ND               | 250    | 207     | 83    | 250        | 212      | 85    | 2   | 70-130/30      |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22834

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample        | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---------------|----------|----|----------|----|-----------|------------|------------------|
| MC22841-37MS  | L76163.D | 5  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |
| MC22841-37MSD | L76164.D | 5  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |
| MC22841-37    | L76149.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-6

| CAS No.   | Compound                    | MC22841-37 Spike |      | MS ug/l | MS %   | Spike ug/l | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|-----------|-----------------------------|------------------|------|---------|--------|------------|----------|-------|-----|----------------|
|           |                             | ug/l             | Q    |         |        |            |          |       |     |                |
| 123-91-1  | 1,4-Dioxane                 | ND               | 1250 | 950     | 76     | 1250       | 1010     | 81    | 6   | 70-130/30      |
| 97-63-2   | Ethyl methacrylate          | ND               | 250  | 225     | 90     | 250        | 234      | 94    | 4   | 72-139/30      |
| 100-41-4  | Ethylbenzene                | ND               | 250  | 335     | 134* a | 250        | 275      | 110   | 20  | 70-130/30      |
| 87-68-3   | Hexachlorobutadiene         | ND               | 250  | 252     | 101    | 250        | 269      | 108   | 7   | 70-130/30      |
| 591-78-6  | 2-Hexanone                  | ND               | 250  | 178     | 71     | 250        | 186      | 74    | 4   | 70-130/30      |
| 98-82-8   | Isopropylbenzene            | ND               | 250  | 274     | 110    | 250        | 274      | 110   | 0   | 70-130/30      |
| 99-87-6   | p-Isopropyltoluene          | ND               | 250  | 270     | 108    | 250        | 275      | 110   | 2   | 70-130/30      |
| 1634-04-4 | Methyl Tert Butyl Ether     | ND               | 250  | 181     | 72     | 250        | 183      | 73    | 1   | 70-130/30      |
| 108-10-1  | 4-Methyl-2-pentanone (MIBK) | ND               | 250  | 164     | 66* a  | 250        | 175      | 70    | 6   | 70-130/30      |
| 74-95-3   | Methylene bromide           | ND               | 250  | 225     | 90     | 250        | 229      | 92    | 2   | 70-130/30      |
| 75-09-2   | Methylene chloride          | ND               | 250  | 190     | 76     | 250        | 208      | 83    | 9   | 70-130/30      |
| 91-20-3   | Naphthalene                 | ND               | 250  | 248     | 99     | 250        | 237      | 95    | 5   | 70-130/30      |
| 103-65-1  | n-Propylbenzene             | ND               | 250  | 271     | 108    | 250        | 271      | 108   | 0   | 70-130/30      |
| 100-42-5  | Styrene                     | ND               | 250  | 256     | 102    | 250        | 253      | 101   | 1   | 70-130/30      |
| 630-20-6  | 1,1,1,2-Tetrachloroethane   | ND               | 250  | 257     | 103    | 250        | 251      | 100   | 2   | 70-130/30      |
| 79-34-5   | 1,1,2,2-Tetrachloroethane   | ND               | 250  | 227     | 91     | 250        | 241      | 96    | 6   | 70-130/30      |
| 127-18-4  | Tetrachloroethene           | ND               | 250  | 290     | 116    | 250        | 285      | 114   | 2   | 70-130/30      |
| 108-88-3  | Toluene                     | ND               | 250  | 237     | 95     | 250        | 224      | 90    | 6   | 70-130/30      |
| 87-61-6   | 1,2,3-Trichlorobenzene      | ND               | 250  | 221     | 88     | 250        | 236      | 94    | 7   | 70-130/30      |
| 120-82-1  | 1,2,4-Trichlorobenzene      | ND               | 250  | 224     | 90     | 250        | 237      | 95    | 6   | 70-130/30      |
| 71-55-6   | 1,1,1-Trichloroethane       | ND               | 250  | 246     | 98     | 250        | 244      | 98    | 1   | 70-130/30      |
| 79-00-5   | 1,1,2-Trichloroethane       | ND               | 250  | 223     | 89     | 250        | 230      | 92    | 3   | 70-130/30      |
| 79-01-6   | Trichloroethene             | ND               | 250  | 206     | 82     | 250        | 210      | 84    | 2   | 70-130/30      |
| 75-69-4   | Trichlorofluoromethane      | ND               | 250  | 214     | 86     | 250        | 215      | 86    | 0   | 70-130/30      |
| 96-18-4   | 1,2,3-Trichloropropane      | ND               | 250  | 235     | 94     | 250        | 248      | 99    | 5   | 70-130/30      |
| 95-63-6   | 1,2,4-Trimethylbenzene      | ND               | 250  | 283     | 113    | 250        | 256      | 102   | 10  | 70-130/30      |
| 108-67-8  | 1,3,5-Trimethylbenzene      | ND               | 250  | 247     | 99     | 250        | 243      | 97    | 2   | 70-130/30      |
| 108-05-4  | Vinyl Acetate               | ND               | 250  | 112     | 45* a  | 250        | 120      | 48* a | 7   | 70-130/30      |
| 75-01-4   | Vinyl chloride              | ND               | 250  | 169     | 68* a  | 250        | 168      | 67* a | 1   | 70-130/30      |
|           | m,p-Xylene                  | ND               | 500  | 616     | 123    | 500        | 569      | 114   | 8   | 70-130/30      |
| 95-47-6   | o-Xylene                    | ND               | 250  | 304     | 122    | 250        | 287      | 115   | 6   | 70-130/30      |
| 1330-20-7 | Xylene (total)              | ND               | 750  | 920     | 123    | 750        | 855      | 114   | 7   | 70-130/30      |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample        | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---------------|----------|----|----------|----|-----------|------------|------------------|
| MC22841-37MS  | L76163.D | 5  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |
| MC22841-37MSD | L76164.D | 5  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |
| MC22841-37    | L76149.D | 1  | 07/30/13 | KR | n/a       | n/a        | MSL3537          |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-6

| CAS No.   | Surrogate Recoveries | MS  | MSD | MC22841-37 | Limits  |
|-----------|----------------------|-----|-----|------------|---------|
| 1868-53-7 | Dibromofluoromethane | 78% | 77% | 86%        | 70-130% |
| 2037-26-5 | Toluene-D8           | 89% | 90% | 91%        | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 99% | 99% | 110%       | 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: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSK2364-CC2349 | Injection Date: | 07/30/13    |
| Lab File ID:   | K72592.D       | Injection Time: | 09:08       |
| Instrument ID: | GCMSK          | Method:         | SW846 8260B |

|                          | IS 1   |      | IS 2   |       | IS 3   |       | IS 4   |       | IS 5   |      |
|--------------------------|--------|------|--------|-------|--------|-------|--------|-------|--------|------|
|                          | AREA   | RT   | AREA   | RT    | AREA   | RT    | AREA   | RT    | AREA   | RT   |
| Check Std                | 320544 | 8.84 | 489795 | 9.69  | 219173 | 12.94 | 243128 | 15.50 | 60132  | 6.42 |
| Upper Limit <sup>a</sup> | 641088 | 9.34 | 979590 | 10.19 | 438346 | 13.44 | 486256 | 16.00 | 120264 | 6.92 |
| Lower Limit <sup>b</sup> | 160272 | 8.34 | 244898 | 9.19  | 109587 | 12.44 | 121564 | 15.00 | 30066  | 5.92 |

| Lab          | IS 1   |      | IS 2   |      | IS 3   |       | IS 4   |       | IS 5  |      |
|--------------|--------|------|--------|------|--------|-------|--------|-------|-------|------|
| Sample ID    | AREA   | RT   | AREA   | RT   | AREA   | RT    | AREA   | RT    | AREA  | RT   |
| MSK2364-BS   | 329119 | 8.84 | 495483 | 9.69 | 221013 | 12.94 | 245955 | 15.50 | 61791 | 6.42 |
| MSK2364-MB   | 326556 | 8.84 | 499615 | 9.69 | 207915 | 12.95 | 229665 | 15.50 | 62604 | 6.42 |
| ZZZZZZ       | 318533 | 8.84 | 495077 | 9.69 | 207202 | 12.94 | 223099 | 15.50 | 53397 | 6.42 |
| MC22834-6    | 320700 | 8.84 | 497824 | 9.69 | 209451 | 12.95 | 227612 | 15.50 | 54784 | 6.42 |
| ZZZZZZ       | 318185 | 8.84 | 495775 | 9.69 | 209475 | 12.95 | 227266 | 15.50 | 57473 | 6.42 |
| MC23063-7    | 315918 | 8.84 | 490255 | 9.69 | 207127 | 12.95 | 227071 | 15.50 | 54974 | 6.42 |
| MC23063-7MS  | 320430 | 8.84 | 487202 | 9.69 | 219534 | 12.94 | 244640 | 15.50 | 58048 | 6.42 |
| MC23063-7MSD | 333458 | 8.84 | 503292 | 9.69 | 222584 | 12.94 | 248245 | 15.50 | 58675 | 6.42 |
| ZZZZZZ       | 345938 | 8.84 | 526637 | 9.69 | 220526 | 12.94 | 246576 | 15.50 | 61922 | 6.42 |
| ZZZZZZ       | 351026 | 8.84 | 520496 | 9.69 | 224354 | 12.95 | 245895 | 15.50 | 61640 | 6.42 |
| ZZZZZZ       | 330184 | 8.84 | 500727 | 9.69 | 220475 | 12.94 | 244985 | 15.50 | 61439 | 6.42 |
| ZZZZZZ       | 332970 | 8.84 | 508447 | 9.69 | 219135 | 12.95 | 245836 | 15.50 | 59067 | 6.42 |
| ZZZZZZ       | 328972 | 8.84 | 496261 | 9.69 | 214671 | 12.95 | 235203 | 15.50 | 57585 | 6.42 |
| ZZZZZZ       | 330012 | 8.84 | 506267 | 9.69 | 210703 | 12.95 | 228576 | 15.50 | 60120 | 6.42 |
| MC22834-1    | 314407 | 8.84 | 472708 | 9.69 | 203934 | 12.95 | 223361 | 15.50 | 56194 | 6.42 |
| MC22834-2    | 319137 | 8.84 | 488448 | 9.69 | 204600 | 12.95 | 226441 | 15.50 | 59090 | 6.42 |
| MC22834-3    | 322075 | 8.84 | 490581 | 9.69 | 207458 | 12.94 | 225171 | 15.50 | 57134 | 6.42 |
| MC22834-4    | 320148 | 8.84 | 496157 | 9.69 | 210782 | 12.95 | 233189 | 15.50 | 66713 | 6.42 |
| MC22834-5    | 312325 | 8.84 | 479212 | 9.69 | 204466 | 12.95 | 222858 | 15.50 | 62442 | 6.43 |
| ZZZZZZ       | 314999 | 8.84 | 485504 | 9.69 | 205334 | 12.94 | 224129 | 15.50 | 49710 | 6.42 |
| ZZZZZZ       | 315661 | 8.84 | 492867 | 9.69 | 207420 | 12.95 | 223862 | 15.50 | 48795 | 6.42 |
| ZZZZZZ       | 308741 | 8.84 | 477769 | 9.69 | 203653 | 12.94 | 221439 | 15.50 | 52240 | 6.42 |
| ZZZZZZ       | 298703 | 8.84 | 463327 | 9.69 | 198679 | 12.94 | 215736 | 15.50 | 52037 | 6.42 |
| ZZZZZZ       | 295815 | 8.84 | 461445 | 9.69 | 198982 | 12.95 | 216406 | 15.50 | 52646 | 6.42 |

- IS 1 = Pentafluorobenzene
- IS 2 = 1,4-Difluorobenzene
- IS 3 = Chlorobenzene-D5
- IS 4 = 1,4-Dichlorobenzene-d4
- IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

6.4.1  
6

# Volatile Internal Standard Area Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSL3537-CC3534 | Injection Date: | 07/30/13    |
| Lab File ID:   | L76141.D       | Injection Time: | 08:33       |
| Instrument ID: | GCMSL          | Method:         | SW846 8260B |

|                          | IS 1   |      | IS 2   |      | IS 3   |       | IS 4   |       | IS 5  |      |
|--------------------------|--------|------|--------|------|--------|-------|--------|-------|-------|------|
|                          | AREA   | RT   | AREA   | RT   | AREA   | RT    | AREA   | RT    | AREA  | RT   |
| Check Std                | 99478  | 8.06 | 132933 | 8.89 | 69228  | 12.13 | 71450  | 14.68 | 27078 | 5.75 |
| Upper Limit <sup>a</sup> | 198956 | 8.56 | 265866 | 9.39 | 138456 | 12.63 | 142900 | 15.18 | 54156 | 6.25 |
| Lower Limit <sup>b</sup> | 49739  | 7.56 | 66467  | 8.39 | 34614  | 11.63 | 35725  | 14.18 | 13539 | 5.25 |

| Lab           | IS 1   |      | IS 2   |      | IS 3  |       | IS 4  |       | IS 5  |      |
|---------------|--------|------|--------|------|-------|-------|-------|-------|-------|------|
| Sample ID     | AREA   | RT   | AREA   | RT   | AREA  | RT    | AREA  | RT    | AREA  | RT   |
| MSL3537-BS    | 105109 | 8.06 | 140042 | 8.89 | 72455 | 12.13 | 74271 | 14.68 | 32829 | 5.75 |
| MSL3537-MB    | 104362 | 8.07 | 138887 | 8.90 | 70706 | 12.13 | 67181 | 14.69 | 36489 | 5.79 |
| MC22834-6     | 106821 | 8.06 | 142227 | 8.90 | 71838 | 12.13 | 70133 | 14.69 | 31405 | 5.79 |
| ZZZZZZ        | 105001 | 8.06 | 143376 | 8.90 | 70875 | 12.13 | 68210 | 14.69 | 34256 | 5.79 |
| ZZZZZZ        | 104929 | 8.06 | 138084 | 8.90 | 70282 | 12.13 | 67733 | 14.68 | 30817 | 5.79 |
| MC22841-37    | 103547 | 8.06 | 140464 | 8.90 | 70497 | 12.13 | 66221 | 14.69 | 35115 | 5.79 |
| MC22834-4     | 102249 | 8.06 | 136745 | 8.90 | 68886 | 12.13 | 65926 | 14.68 | 30179 | 5.79 |
| MC22834-5     | 102778 | 8.06 | 135832 | 8.90 | 69093 | 12.13 | 66855 | 14.68 | 34368 | 5.79 |
| ZZZZZZ        | 100661 | 8.06 | 128582 | 8.89 | 67366 | 12.13 | 69471 | 14.68 | 34083 | 5.78 |
| ZZZZZZ        | 107511 | 8.21 | 92723  | 9.00 | 73523 | 12.14 | 81280 | 14.68 | 31596 | 5.75 |
| ZZZZZZ        | 111049 | 8.12 | 112101 | 8.94 | 75584 | 12.13 | 81338 | 14.68 | 33046 | 5.74 |
| ZZZZZZ        | 115175 | 8.12 | 116261 | 8.94 | 77796 | 12.13 | 82840 | 14.68 | 30211 | 5.73 |
| ZZZZZZ        | 112803 | 8.06 | 142810 | 8.89 | 73110 | 12.13 | 72785 | 14.68 | 35753 | 5.78 |
| MC22834-1     | 118405 | 8.11 | 126283 | 8.93 | 79927 | 12.13 | 86679 | 14.68 | 34473 | 5.75 |
| MC22834-2     | 121680 | 8.07 | 146112 | 8.90 | 77682 | 12.13 | 81351 | 14.68 | 32423 | 5.78 |
| MC22834-3     | 121449 | 8.07 | 147670 | 8.90 | 78778 | 12.13 | 82083 | 14.68 | 33107 | 5.78 |
| ZZZZZZ        | 120042 | 8.08 | 138085 | 8.92 | 79280 | 12.13 | 85721 | 14.68 | 35628 | 5.73 |
| ZZZZZZ        | 114085 | 8.06 | 150175 | 8.89 | 76708 | 12.13 | 85592 | 14.68 | 54138 | 5.70 |
| ZZZZZZ        | 114350 | 8.06 | 147597 | 8.89 | 73655 | 12.13 | 79674 | 14.68 | 42291 | 5.76 |
| MC22841-37MS  | 114003 | 8.06 | 146262 | 8.89 | 73467 | 12.13 | 78233 | 14.68 | 34748 | 5.75 |
| MC22841-37MSD | 113198 | 8.06 | 144863 | 8.89 | 74017 | 12.13 | 77378 | 14.68 | 37539 | 5.76 |

- 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: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 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     |
|---------------|-------------|-----|-----|--------|
| MC22834-1     | K72609.D    | 111 | 100 | 94     |
| MC22834-1     | L76157.D    | 80  | 113 | 100    |
| MC22834-2     | L76158.D    | 77  | 97  | 104    |
| MC22834-2     | K72610.D    | 112 | 98  | 93     |
| MC22834-3     | L76159.D    | 77  | 96  | 102    |
| MC22834-3     | K72611.D    | 111 | 98  | 95     |
| MC22834-4     | K72612.D    | 112 | 97  | 138* a |
| MC22834-4     | L76150.D    | 86  | 91  | 147* a |
| MC22834-5     | K72613.D    | 112 | 98  | 138* a |
| MC22834-5     | L76151.D    | 85  | 92  | 148* a |
| MC22834-6     | K72598.D    | 112 | 96  | 93     |
| MC22834-6     | L76146.D    | 86  | 91  | 107    |
| MC22841-37MS  | L76163.D    | 78  | 89  | 99     |
| MC22841-37MSD | L76164.D    | 77  | 90  | 99     |
| MC23063-7MS   | K72601.D    | 105 | 100 | 93     |
| MC23063-7MSD  | K72602.D    | 104 | 99  | 95     |
| MSK2364-BS    | K72593.D    | 103 | 100 | 94     |
| MSK2364-MB    | K72596.D    | 112 | 96  | 94     |
| MSL3537-BS    | L76142.D    | 85  | 90  | 101    |
| MSL3537-MB    | L76145.D    | 85  | 90  | 108    |

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

(a) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

6.5.1  
6



## GC/MS Semi-volatiles

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### QC Data Summaries

7

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

# Method Blank Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34111-MB | R32490.D | 1  | 07/30/13 | KR | 07/24/13  | OP34111    | MSR1184          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5

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

7.1.1  
7

# Method Blank Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34111-MB | R32490.D | 1  | 07/30/13 | KR | 07/24/13  | OP34111    | MSR1184          |

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

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5

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

| CAS No.   | Surrogate Recoveries | Limits      |
|-----------|----------------------|-------------|
| 367-12-4  | 2-Fluorophenol       | 49% 15-110% |
| 4165-62-2 | Phenol-d5            | 20% 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 96% 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 80% 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 95% 30-130% |
| 1718-51-0 | Terphenyl-d14        | 92% 30-130% |

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

7.1.1  
7

# Method Blank Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34112-MB | W14187.D | 1  | 07/29/13 | WK | 07/24/13  | OP34112    | MSW642           |

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5

| CAS No.  | Compound               | Result | RL    | MDL   | Units | Q |
|----------|------------------------|--------|-------|-------|-------|---|
| 83-32-9  | Acenaphthene           | 0.016  | 0.10  | 0.014 | ug/l  | J |
| 208-96-8 | Acenaphthylene         | ND     | 0.10  | 0.013 | ug/l  |   |
| 120-12-7 | Anthracene             | ND     | 0.10  | 0.018 | ug/l  |   |
| 56-55-3  | Benzo(a)anthracene     | ND     | 0.050 | 0.030 | ug/l  |   |
| 50-32-8  | Benzo(a)pyrene         | ND     | 0.10  | 0.017 | ug/l  |   |
| 205-99-2 | Benzo(b)fluoranthene   | ND     | 0.050 | 0.024 | ug/l  |   |
| 191-24-2 | Benzo(g,h,i)perylene   | ND     | 0.10  | 0.038 | ug/l  |   |
| 207-08-9 | Benzo(k)fluoranthene   | ND     | 0.10  | 0.059 | ug/l  |   |
| 218-01-9 | Chrysene               | ND     | 0.10  | 0.073 | ug/l  |   |
| 53-70-3  | Dibenzo(a,h)anthracene | ND     | 0.10  | 0.042 | ug/l  |   |
| 206-44-0 | Fluoranthene           | ND     | 0.10  | 0.033 | ug/l  |   |
| 86-73-7  | Fluorene               | ND     | 0.10  | 0.046 | ug/l  |   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND     | 0.10  | 0.046 | ug/l  |   |
| 90-12-0  | 1-Methylnaphthalene    | ND     | 0.20  | 0.14  | ug/l  |   |
| 91-57-6  | 2-Methylnaphthalene    | ND     | 0.20  | 0.052 | ug/l  |   |
| 85-01-8  | Phenanthrene           | ND     | 0.050 | 0.013 | ug/l  |   |
| 129-00-0 | Pyrene                 | ND     | 0.10  | 0.036 | ug/l  |   |

| CAS No.   | Surrogate Recoveries | Limits |         |
|-----------|----------------------|--------|---------|
| 367-12-4  | 2-Fluorophenol       | 50%    | 15-110% |
| 4165-62-2 | Phenol-d5            | 20%    | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 98%    | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 89%    | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 87%    | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 96%    | 30-130% |

7.1.2  
7

# Blank Spike Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34111-BS | R32491.D | 1  | 07/30/13 | KR | 07/24/13  | OP34111    | MSR1184          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5

| CAS No.   | Compound                    | Spike ug/l | BSP ug/l | BSP % | Limits |
|-----------|-----------------------------|------------|----------|-------|--------|
| 65-85-0   | Benzoic Acid                | 50         | 10.3     | 21* a | 30-130 |
| 95-57-8   | 2-Chlorophenol              | 50         | 36.0     | 72    | 30-130 |
| 59-50-7   | 4-Chloro-3-methyl phenol    | 50         | 39.8     | 80    | 30-130 |
| 120-83-2  | 2,4-Dichlorophenol          | 50         | 39.0     | 78    | 30-130 |
| 105-67-9  | 2,4-Dimethylphenol          | 50         | 33.8     | 68    | 30-130 |
| 51-28-5   | 2,4-Dinitrophenol           | 50         | 34.6     | 69    | 30-130 |
| 534-52-1  | 4,6-Dinitro-o-cresol        | 50         | 44.8     | 90    | 30-130 |
| 95-48-7   | 2-Methylphenol              | 50         | 35.5     | 71    | 30-130 |
|           | 3&4-Methylphenol            | 100        | 58.4     | 58    | 30-130 |
| 88-75-5   | 2-Nitrophenol               | 50         | 40.8     | 82    | 30-130 |
| 100-02-7  | 4-Nitrophenol               | 50         | 17.5     | 35    | 30-130 |
| 87-86-5   | Pentachlorophenol           | 50         | 43.5     | 87    | 30-130 |
| 108-95-2  | Phenol                      | 50         | 18.6     | 37    | 30-130 |
| 95-95-4   | 2,4,5-Trichlorophenol       | 50         | 46.7     | 93    | 30-130 |
| 88-06-2   | 2,4,6-Trichlorophenol       | 50         | 44.0     | 88    | 30-130 |
| 62-53-3   | Aniline                     | 50         | 29.7     | 59    | 40-140 |
| 101-55-3  | 4-Bromophenyl phenyl ether  | 50         | 44.3     | 89    | 40-140 |
| 85-68-7   | Butyl benzyl phthalate      | 50         | 43.4     | 87    | 40-140 |
| 100-51-6  | Benzyl Alcohol              | 50         | 24.9     | 50    | 40-140 |
| 91-58-7   | 2-Chloronaphthalene         | 50         | 38.4     | 77    | 40-140 |
| 106-47-8  | 4-Chloroaniline             | 50         | 34.1     | 68    | 40-140 |
| 111-91-1  | bis(2-Chloroethoxy)methane  | 50         | 32.9     | 66    | 40-140 |
| 111-44-4  | bis(2-Chloroethyl)ether     | 50         | 32.5     | 65    | 40-140 |
| 108-60-1  | bis(2-Chloroisopropyl)ether | 50         | 33.0     | 66    | 40-140 |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | 50         | 45.3     | 91    | 40-140 |
| 122-66-7  | 1,2-Diphenylhydrazine       | 50         | 37.0     | 74    | 40-140 |
| 121-14-2  | 2,4-Dinitrotoluene          | 50         | 45.6     | 91    | 40-140 |
| 606-20-2  | 2,6-Dinitrotoluene          | 50         | 43.2     | 86    | 40-140 |
| 91-94-1   | 3,3'-Dichlorobenzidine      | 50         | 44.0     | 88    | 40-140 |
| 132-64-9  | Dibenzofuran                | 50         | 41.3     | 83    | 40-140 |
| 84-74-2   | Di-n-butyl phthalate        | 50         | 43.5     | 87    | 40-140 |
| 117-84-0  | Di-n-octyl phthalate        | 50         | 47.1     | 94    | 40-140 |
| 84-66-2   | Diethyl phthalate           | 50         | 43.3     | 87    | 40-140 |
| 131-11-3  | Dimethyl phthalate          | 50         | 39.0     | 78    | 40-140 |
| 117-81-7  | bis(2-Ethylhexyl)phthalate  | 50         | 42.9     | 86    | 40-140 |
| 118-74-1  | Hexachlorobenzene           | 50         | 42.1     | 84    | 40-140 |

\* = Outside of Control Limits.

7.2.1  
7

# Blank Spike Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34111-BS | R32491.D | 1  | 07/30/13 | KR | 07/24/13  | OP34111    | MSR1184          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5

| CAS No.  | Compound                   | Spike ug/l | BSP ug/l | BSP % | Limits |
|----------|----------------------------|------------|----------|-------|--------|
| 77-47-4  | Hexachlorocyclopentadiene  | 50         | 13.2     | 26* a | 40-140 |
| 67-72-1  | Hexachloroethane           | 50         | 30.1     | 60    | 40-140 |
| 78-59-1  | Isophorone                 | 50         | 33.3     | 67    | 40-140 |
| 88-74-4  | 2-Nitroaniline             | 50         | 46.9     | 94    | 40-140 |
| 99-09-2  | 3-Nitroaniline             | 50         | 44.0     | 88    | 40-140 |
| 100-01-6 | 4-Nitroaniline             | 50         | 46.5     | 93    | 40-140 |
| 98-95-3  | Nitrobenzene               | 50         | 30.2     | 60    | 40-140 |
| 62-75-9  | n-Nitrosodimethylamine     | 50         | 22.1     | 44    | 40-140 |
| 621-64-7 | N-Nitroso-di-n-propylamine | 50         | 34.9     | 70    | 40-140 |
| 86-30-6  | N-Nitrosodiphenylamine     | 50         | 41.7     | 83    | 40-140 |
| 110-86-1 | Pyridine                   | 50         | 21.0     | 42    | 40-140 |

| CAS No.   | Surrogate Recoveries | BSP  | Limits  |
|-----------|----------------------|------|---------|
| 367-12-4  | 2-Fluorophenol       | 48%  | 15-110% |
| 4165-62-2 | Phenol-d5            | 19%  | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 103% | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 76%  | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 91%  | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 94%  | 30-130% |

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

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|----|-----------|------------|------------------|
| OP34112-BS | W14188.D | 1  | 07/29/13 | WK | 07/24/13  | OP34112    | MSW642           |

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5

| CAS No.  | Compound               | Spike ug/l | BSP ug/l | BSP % | Limits |
|----------|------------------------|------------|----------|-------|--------|
| 83-32-9  | Acenaphthene           | 50         | 38.2     | 76    | 40-140 |
| 208-96-8 | Acenaphthylene         | 50         | 31.6     | 63    | 40-140 |
| 120-12-7 | Anthracene             | 50         | 40.1     | 80    | 40-140 |
| 56-55-3  | Benzo(a)anthracene     | 50         | 44.4     | 89    | 40-140 |
| 50-32-8  | Benzo(a)pyrene         | 50         | 42.0     | 84    | 40-140 |
| 205-99-2 | Benzo(b)fluoranthene   | 50         | 45.7     | 91    | 40-140 |
| 191-24-2 | Benzo(g,h,i)perylene   | 50         | 46.1     | 92    | 40-140 |
| 207-08-9 | Benzo(k)fluoranthene   | 50         | 44.0     | 88    | 40-140 |
| 218-01-9 | Chrysene               | 50         | 41.3     | 83    | 40-140 |
| 53-70-3  | Dibenzo(a,h)anthracene | 50         | 46.5     | 93    | 40-140 |
| 206-44-0 | Fluoranthene           | 50         | 43.2     | 86    | 40-140 |
| 86-73-7  | Fluorene               | 50         | 41.1     | 82    | 40-140 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 50         | 45.1     | 90    | 40-140 |
| 90-12-0  | 1-Methylnaphthalene    | 50         | 35.3     | 71    | 40-140 |
| 91-57-6  | 2-Methylnaphthalene    | 50         | 33.7     | 67    | 40-140 |
| 85-01-8  | Phenanthrene           | 50         | 40.8     | 82    | 40-140 |
| 129-00-0 | Pyrene                 | 50         | 41.2     | 82    | 40-140 |

| CAS No.   | Surrogate Recoveries | BSP  | Limits  |
|-----------|----------------------|------|---------|
| 367-12-4  | 2-Fluorophenol       | 48%  | 15-110% |
| 4165-62-2 | Phenol-d5            | 19%  | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 103% | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 85%  | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 85%  | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 96%  | 30-130% |

\* = Outside of Control Limits.

7.2.2  
7

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| OP34111-MS  | R32485.D | 1  | 07/30/13 | KR | 07/24/13  | OP34111    | MSR1184          |
| OP34111-MSD | R32486.D | 1  | 07/30/13 | KR | 07/24/13  | OP34111    | MSR1184          |
| MC22900-14  | R32487.D | 1  | 07/30/13 | KR | 07/24/13  | OP34111    | MSR1184          |

The QC reported here applies to the following samples:

Method: SW846 8270C

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5

| CAS No.   | Compound                    | MC22900-14 Spike |        | MS ug/l | MS %  | Spike ug/l | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|-----------|-----------------------------|------------------|--------|---------|-------|------------|----------|-------|-----|----------------|
|           |                             | ug/l             | Q ug/l |         |       |            |          |       |     |                |
| 65-85-0   | Benzoic Acid                | ND               | 500    | 129     | 26* a | 500        | 132      | 26* a | 2   | 30-130/20      |
| 95-57-8   | 2-Chlorophenol              | ND               | 500    | 426     | 85    | 500        | 393      | 79    | 8   | 30-130/20      |
| 59-50-7   | 4-Chloro-3-methyl phenol    | ND               | 500    | 438     | 88    | 500        | 417      | 83    | 5   | 30-130/20      |
| 120-83-2  | 2,4-Dichlorophenol          | ND               | 500    | 465     | 93    | 500        | 425      | 85    | 9   | 30-130/20      |
| 105-67-9  | 2,4-Dimethylphenol          | ND               | 500    | 387     | 77    | 500        | 369      | 74    | 5   | 30-130/20      |
| 51-28-5   | 2,4-Dinitrophenol           | ND               | 500    | 390     | 78    | 500        | 378      | 76    | 3   | 30-130/20      |
| 534-52-1  | 4,6-Dinitro-o-cresol        | ND               | 500    | 490     | 98    | 500        | 477      | 95    | 3   | 30-130/20      |
| 95-48-7   | 2-Methylphenol              | ND               | 500    | 389     | 78    | 500        | 388      | 78    | 0   | 30-130/20      |
|           | 3&4-Methylphenol            | ND               | 1000   | 685     | 69    | 1000       | 640      | 64    | 7   | 30-130/20      |
| 88-75-5   | 2-Nitrophenol               | ND               | 500    | 486     | 97    | 500        | 460      | 92    | 5   | 30-130/20      |
| 100-02-7  | 4-Nitrophenol               | ND               | 500    | 179     | 36    | 500        | 178      | 36    | 1   | 30-130/20      |
| 87-86-5   | Pentachlorophenol           | ND               | 500    | 439     | 88    | 500        | 435      | 87    | 1   | 30-130/20      |
| 108-95-2  | Phenol                      | ND               | 500    | 220     | 44    | 500        | 205      | 41    | 7   | 30-130/20      |
| 95-95-4   | 2,4,5-Trichlorophenol       | ND               | 500    | 534     | 107   | 500        | 506      | 101   | 5   | 30-130/20      |
| 88-06-2   | 2,4,6-Trichlorophenol       | ND               | 500    | 479     | 96    | 500        | 447      | 89    | 7   | 30-130/20      |
| 62-53-3   | Aniline                     | ND               | 500    | 357     | 71    | 500        | 344      | 69    | 4   | 40-140/20      |
| 101-55-3  | 4-Bromophenyl phenyl ether  | ND               | 500    | 466     | 93    | 500        | 458      | 92    | 2   | 40-140/20      |
| 85-68-7   | Butyl benzyl phthalate      | ND               | 500    | 450     | 90    | 500        | 444      | 89    | 1   | 40-140/20      |
| 100-51-6  | Benzyl Alcohol              | ND               | 500    | 288     | 58    | 500        | 258      | 52    | 11  | 40-140/20      |
| 91-58-7   | 2-Chloronaphthalene         | ND               | 500    | 450     | 90    | 500        | 421      | 84    | 7   | 40-140/20      |
| 106-47-8  | 4-Chloroaniline             | ND               | 500    | 402     | 80    | 500        | 385      | 77    | 4   | 40-140/20      |
| 111-91-1  | bis(2-Chloroethoxy)methane  | ND               | 500    | 402     | 80    | 500        | 378      | 76    | 6   | 40-140/20      |
| 111-44-4  | bis(2-Chloroethyl)ether     | ND               | 500    | 389     | 78    | 500        | 365      | 73    | 6   | 40-140/20      |
| 108-60-1  | bis(2-Chloroisopropyl)ether | ND               | 500    | 398     | 80    | 500        | 376      | 75    | 6   | 40-140/20      |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | ND               | 500    | 495     | 99    | 500        | 470      | 94    | 5   | 40-140/20      |
| 122-66-7  | 1,2-Diphenylhydrazine       | ND               | 500    | 385     | 77    | 500        | 383      | 77    | 1   | 40-140/20      |
| 121-14-2  | 2,4-Dinitrotoluene          | ND               | 500    | 489     | 98    | 500        | 481      | 96    | 2   | 40-140/20      |
| 606-20-2  | 2,6-Dinitrotoluene          | ND               | 500    | 459     | 92    | 500        | 453      | 91    | 1   | 40-140/20      |
| 91-94-1   | 3,3'-Dichlorobenzidine      | ND               | 500    | 464     | 93    | 500        | 461      | 92    | 1   | 40-140/20      |
| 132-64-9  | Dibenzofuran                | ND               | 500    | 460     | 92    | 500        | 442      | 88    | 4   | 40-140/20      |
| 84-74-2   | Di-n-butyl phthalate        | ND               | 500    | 456     | 91    | 500        | 452      | 90    | 1   | 40-140/20      |
| 117-84-0  | Di-n-octyl phthalate        | ND               | 500    | 498     | 100   | 500        | 481      | 96    | 3   | 40-140/20      |
| 84-66-2   | Diethyl phthalate           | ND               | 500    | 471     | 94    | 500        | 460      | 92    | 2   | 40-140/20      |
| 131-11-3  | Dimethyl phthalate          | ND               | 500    | 428     | 86    | 500        | 414      | 83    | 3   | 40-140/20      |
| 117-81-7  | bis(2-Ethylhexyl)phthalate  | ND               | 500    | 452     | 90    | 500        | 440      | 88    | 3   | 40-140/20      |
| 118-74-1  | Hexachlorobenzene           | ND               | 500    | 446     | 89    | 500        | 440      | 88    | 1   | 40-140/20      |

\* = Outside of Control Limits.

7.3.1  
 7



# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| OP34111-MS  | R32485.D | 1  | 07/30/13 | KR | 07/24/13  | OP34111    | MSR1184          |
| OP34111-MSD | R32486.D | 1  | 07/30/13 | KR | 07/24/13  | OP34111    | MSR1184          |
| MC22900-14  | R32487.D | 1  | 07/30/13 | KR | 07/24/13  | OP34111    | MSR1184          |

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

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5

7.3.1  
7

| CAS No.  | Compound                   | MC22900-14 Spike |     | MS ug/l | MS %  | Spike ug/l | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|----------|----------------------------|------------------|-----|---------|-------|------------|----------|-------|-----|----------------|
|          |                            | ug/l             | Q   |         |       |            |          |       |     |                |
| 77-47-4  | Hexachlorocyclopentadiene  | ND               | 500 | 164     | 33* a | 500        | 150      | 30* a | 9   | 40-140/20      |
| 67-72-1  | Hexachloroethane           | ND               | 500 | 373     | 75    | 500        | 335      | 67    | 11  | 40-140/20      |
| 78-59-1  | Isophorone                 | ND               | 500 | 392     | 78    | 500        | 370      | 74    | 6   | 40-140/20      |
| 88-74-4  | 2-Nitroaniline             | ND               | 500 | 513     | 103   | 500        | 491      | 98    | 4   | 40-140/20      |
| 99-09-2  | 3-Nitroaniline             | ND               | 500 | 474     | 95    | 500        | 467      | 93    | 1   | 40-140/20      |
| 100-01-6 | 4-Nitroaniline             | ND               | 500 | 493     | 99    | 500        | 482      | 96    | 2   | 40-140/20      |
| 98-95-3  | Nitrobenzene               | ND               | 500 | 364     | 73    | 500        | 340      | 68    | 7   | 40-140/20      |
| 62-75-9  | n-Nitrosodimethylamine     | ND               | 500 | 261     | 52    | 500        | 240      | 48    | 8   | 40-140/20      |
| 621-64-7 | N-Nitroso-di-n-propylamine | ND               | 500 | 401     | 80    | 500        | 377      | 75    | 6   | 40-140/20      |
| 86-30-6  | N-Nitrosodiphenylamine     | ND               | 500 | 429     | 86    | 500        | 427      | 85    | 0   | 40-140/20      |
| 110-86-1 | Pyridine                   | ND               | 500 | 238     | 48    | 500        | 217      | 43    | 9   | 40-140/20      |

| CAS No.   | Surrogate Recoveries | MS   | MSD  | MC22900-14 Limits |         |
|-----------|----------------------|------|------|-------------------|---------|
| 367-12-4  | 2-Fluorophenol       | 56%  | 50%  | 41%               | 15-110% |
| 4165-62-2 | Phenol-d5            | 22%  | 19%  | 15%               | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 108% | 106% | 79%               | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 92%  | 85%  | 65%               | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 105% | 100% | 79%               | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 97%  | 94%  | 87%               | 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: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID  | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|----------|----|----------|----|-----------|------------|------------------|
| OP34112-MS  | W14189.D | 1  | 07/29/13 | WK | 07/24/13  | OP34112    | MSW642           |
| OP34112-MSD | W14190.D | 1  | 07/29/13 | WK | 07/24/13  | OP34112    | MSW642           |
| MC22900-15  | W14191.D | 1  | 07/29/13 | WK | 07/24/13  | OP34112    | MSW642           |

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

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5

| CAS No.  | Compound               | MC22900-15 Spike |    | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|----------|------------------------|------------------|----|------------|---------|---------------|-------------|----------|-----|-------------------|
|          |                        | ug/l             | Q  |            |         |               |             |          |     |                   |
| 83-32-9  | Acenaphthene           | ND               | 50 | 42.2       | 84      | 50            | 40.9        | 82       | 3   | 40-140/20         |
| 208-96-8 | Acenaphthylene         | ND               | 50 | 35.0       | 70      | 50            | 33.8        | 68       | 3   | 40-140/20         |
| 120-12-7 | Anthracene             | ND               | 50 | 42.3       | 85      | 50            | 41.1        | 82       | 3   | 40-140/20         |
| 56-55-3  | Benzo(a)anthracene     | ND               | 50 | 46.0       | 92      | 50            | 44.9        | 90       | 2   | 40-140/20         |
| 50-32-8  | Benzo(a)pyrene         | ND               | 50 | 44.1       | 88      | 50            | 43.1        | 86       | 2   | 40-140/20         |
| 205-99-2 | Benzo(b)fluoranthene   | ND               | 50 | 46.3       | 93      | 50            | 47.3        | 95       | 2   | 40-140/20         |
| 191-24-2 | Benzo(g,h,i)perylene   | ND               | 50 | 48.0       | 96      | 50            | 47.1        | 94       | 2   | 40-140/20         |
| 207-08-9 | Benzo(k)fluoranthene   | ND               | 50 | 47.7       | 95      | 50            | 44.8        | 90       | 6   | 40-140/20         |
| 218-01-9 | Chrysene               | ND               | 50 | 43.2       | 86      | 50            | 42.0        | 84       | 3   | 40-140/20         |
| 53-70-3  | Dibenzo(a,h)anthracene | ND               | 50 | 48.5       | 97      | 50            | 47.8        | 96       | 1   | 40-140/20         |
| 206-44-0 | Fluoranthene           | ND               | 50 | 45.3       | 91      | 50            | 44.2        | 88       | 2   | 40-140/20         |
| 86-73-7  | Fluorene               | ND               | 50 | 43.5       | 87      | 50            | 42.8        | 86       | 2   | 40-140/20         |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | ND               | 50 | 47.3       | 95      | 50            | 46.6        | 93       | 1   | 40-140/20         |
| 90-12-0  | 1-Methylnaphthalene    | ND               | 50 | 40.9       | 82      | 50            | 39.6        | 79       | 3   | 40-140/20         |
| 91-57-6  | 2-Methylnaphthalene    | ND               | 50 | 39.2       | 78      | 50            | 37.3        | 75       | 5   | 40-140/20         |
| 85-01-8  | Phenanthrene           | ND               | 50 | 42.3       | 85      | 50            | 41.4        | 83       | 2   | 40-140/20         |
| 129-00-0 | Pyrene                 | ND               | 50 | 43.0       | 86      | 50            | 41.8        | 84       | 3   | 40-140/20         |

| CAS No.   | Surrogate Recoveries | MS   | MSD  | MC22900-15 Limits |         |
|-----------|----------------------|------|------|-------------------|---------|
| 367-12-4  | 2-Fluorophenol       | 57%  | 51%  |                   | 15-110% |
| 4165-62-2 | Phenol-d5            | 22%  | 20%  |                   | 15-110% |
| 118-79-6  | 2,4,6-Tribromophenol | 109% | 105% |                   | 15-110% |
| 4165-60-0 | Nitrobenzene-d5      | 100% | 96%  | 74%               | 30-130% |
| 321-60-8  | 2-Fluorobiphenyl     | 97%  | 94%  | 73%               | 30-130% |
| 1718-51-0 | Terphenyl-d14        | 101% | 97%  | 89%               | 30-130% |

\* = Outside of Control Limits.

7.3.2  
7

# Semivolatile Internal Standard Area Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSR1184-CC1159 | Injection Date: | 07/30/13    |
| Lab File ID:   | R32474.D       | Injection Time: | 08:33       |
| Instrument ID: | GCMSR          | 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                | 107117 | 4.30 | 392530 | 5.36 | 236450 | 6.90 | 438074 | 8.31 | 500908  | 11.30 | 475379 | 12.89 |
| Upper Limit <sup>a</sup> | 214234 | 4.80 | 785060 | 5.86 | 472900 | 7.40 | 876148 | 8.81 | 1001816 | 11.80 | 950758 | 13.39 |
| Lower Limit <sup>b</sup> | 53559  | 3.80 | 196265 | 4.86 | 118225 | 6.40 | 219037 | 7.81 | 250454  | 10.80 | 237690 | 12.39 |

| 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    |
| OP34128-MB    | 121123 | 4.30 | 441943 | 5.36 | 263537 | 6.90 | 485268 | 8.31 | 541623 | 11.29 | 507352 | 12.88 |
| OP34128-BS    | 105833 | 4.30 | 387150 | 5.36 | 234154 | 6.90 | 419578 | 8.31 | 465868 | 11.30 | 433458 | 12.88 |
| OP34128-MS    | 104399 | 4.31 | 381170 | 5.36 | 229470 | 6.90 | 407915 | 8.31 | 457627 | 11.30 | 435629 | 12.88 |
| OP34128-MSD   | 114525 | 4.31 | 415002 | 5.36 | 251371 | 6.90 | 446073 | 8.31 | 497363 | 11.30 | 464681 | 12.88 |
| MC22932-1     | 102812 | 4.31 | 357596 | 5.37 | 235117 | 6.90 | 413845 | 8.31 | 462325 | 11.29 | 426106 | 12.88 |
| ZZZZZZ        | 94413  | 4.30 | 349533 | 5.36 | 206721 | 6.90 | 380145 | 8.31 | 415761 | 11.29 | 383149 | 12.88 |
| ZZZZZZ        | 101917 | 4.30 | 380246 | 5.36 | 224120 | 6.90 | 417577 | 8.31 | 455311 | 11.29 | 421719 | 12.88 |
| ZZZZZZ        | 104283 | 4.30 | 385602 | 5.36 | 228449 | 6.90 | 413698 | 8.31 | 449195 | 11.29 | 412270 | 12.88 |
| ZZZZZZ        | 117582 | 4.30 | 430298 | 5.36 | 258291 | 6.90 | 463967 | 8.31 | 509267 | 11.30 | 471122 | 12.88 |
| ZZZZZZ        | 106309 | 4.30 | 394170 | 5.36 | 237676 | 6.90 | 433578 | 8.31 | 471070 | 11.29 | 428039 | 12.88 |
| OP34111-MS    | 121649 | 4.30 | 462446 | 5.36 | 276360 | 6.90 | 513596 | 8.31 | 581056 | 11.30 | 533528 | 12.89 |
| OP34111-MSD   | 122613 | 4.30 | 466797 | 5.36 | 279772 | 6.90 | 514222 | 8.31 | 584813 | 11.29 | 542895 | 12.89 |
| MC22900-14    | 115555 | 4.30 | 435497 | 5.36 | 263940 | 6.90 | 480784 | 8.31 | 552100 | 11.29 | 517531 | 12.88 |
| ZZZZZZ        | 114395 | 4.30 | 429723 | 5.36 | 261344 | 6.90 | 476324 | 8.31 | 544575 | 11.29 | 517450 | 12.88 |
| ZZZZZZ        | 109476 | 4.30 | 420112 | 5.36 | 254828 | 6.90 | 454970 | 8.31 | 500166 | 11.29 | 458436 | 12.88 |
| OP34111-MB    | 111051 | 4.30 | 427012 | 5.36 | 256695 | 6.90 | 474482 | 8.31 | 547154 | 11.29 | 511909 | 12.88 |
| OP34111-BS    | 118175 | 4.30 | 452290 | 5.36 | 272973 | 6.90 | 493467 | 8.31 | 560012 | 11.30 | 521769 | 12.89 |

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.4.1  
7

# Semivolatile Internal Standard Area Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSR1186-CC1159 | Injection Date: | 07/31/13    |
| Lab File ID:   | R32530.D       | Injection Time: | 08:10       |
| Instrument ID: | GCMSR          | 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                | 104562 | 4.28 | 383178 | 5.34 | 230793 | 6.87 | 425391 | 8.29 | 476355 | 11.27 | 440549 | 12.86 |
| Upper Limit <sup>a</sup> | 209124 | 4.78 | 766356 | 5.84 | 461586 | 7.37 | 850782 | 8.79 | 952710 | 11.77 | 881098 | 13.36 |
| Lower Limit <sup>b</sup> | 52281  | 3.78 | 191589 | 4.84 | 115397 | 6.37 | 212696 | 7.79 | 238178 | 10.77 | 220275 | 12.36 |

| 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    |
| OP34178-MB    | 93209  | 4.28 | 342326 | 5.34 | 212839 | 6.87 | 388323 | 8.28 | 434900 | 11.27 | 408631 | 12.86 |
| OP34178-BS    | 98042  | 4.28 | 366141 | 5.34 | 224849 | 6.87 | 410090 | 8.28 | 461692 | 11.27 | 432502 | 12.86 |
| ZZZZZZ        | 95201  | 4.28 | 349488 | 5.34 | 211609 | 6.87 | 388545 | 8.28 | 434838 | 11.27 | 404518 | 12.85 |
| ZZZZZZ        | 90556  | 4.28 | 339634 | 5.34 | 204820 | 6.87 | 375556 | 8.28 | 416808 | 11.27 | 388683 | 12.85 |
| ZZZZZZ        | 95292  | 4.28 | 355196 | 5.34 | 215726 | 6.87 | 393160 | 8.28 | 438223 | 11.27 | 401697 | 12.85 |
| ZZZZZZ        | 91048  | 4.28 | 328095 | 5.34 | 197213 | 6.87 | 364446 | 8.28 | 402804 | 11.27 | 369150 | 12.85 |
| ZZZZZZ        | 92823  | 4.29 | 370360 | 5.35 | 310616 | 6.89 | 603006 | 8.29 | 633299 | 11.29 | 645518 | 12.89 |
| ZZZZZZ        | 115896 | 4.28 | 433038 | 5.34 | 263014 | 6.87 | 479839 | 8.28 | 530873 | 11.27 | 494511 | 12.86 |
| ZZZZZZ        | 125818 | 4.29 | 465987 | 5.35 | 277248 | 6.88 | 501175 | 8.29 | 543053 | 11.27 | 507677 | 12.87 |
| ZZZZZZ        | 108009 | 4.28 | 399889 | 5.34 | 241960 | 6.87 | 452109 | 8.28 | 494746 | 11.27 | 460221 | 12.86 |
| ZZZZZZ        | 108347 | 4.28 | 398128 | 5.34 | 242862 | 6.87 | 449453 | 8.28 | 492986 | 11.27 | 459258 | 12.86 |
| ZZZZZZ        | 115584 | 4.28 | 423870 | 5.34 | 255513 | 6.87 | 471569 | 8.28 | 530053 | 11.27 | 482404 | 12.86 |
| ZZZZZZ        | 108368 | 4.28 | 397336 | 5.34 | 243841 | 6.87 | 443685 | 8.28 | 486313 | 11.27 | 455471 | 12.86 |
| MC22834-1     | 134821 | 4.28 | 505459 | 5.34 | 306846 | 6.87 | 554363 | 8.28 | 607975 | 11.27 | 565837 | 12.86 |
| MC22834-2     | 137492 | 4.28 | 516374 | 5.34 | 307472 | 6.87 | 565701 | 8.28 | 620830 | 11.27 | 563315 | 12.86 |
| MC22834-3     | 152575 | 4.28 | 574901 | 5.34 | 344601 | 6.87 | 628034 | 8.28 | 687167 | 11.27 | 623147 | 12.86 |
| MC22834-4     | 131571 | 4.28 | 505676 | 5.34 | 301519 | 6.87 | 559524 | 8.28 | 620510 | 11.27 | 564160 | 12.86 |
| ZZZZZZ        | 133936 | 4.28 | 497940 | 5.34 | 296350 | 6.87 | 513730 | 8.28 | 522924 | 11.27 | 467871 | 12.86 |
| ZZZZZZ        | 132700 | 4.28 | 487120 | 5.34 | 291473 | 6.87 | 513907 | 8.28 | 511318 | 11.27 | 461321 | 12.85 |
| MC22834-5     | 143347 | 4.28 | 545832 | 5.34 | 326185 | 6.87 | 605138 | 8.28 | 669875 | 11.27 | 630530 | 12.87 |
| ZZZZZZ        | 136804 | 4.28 | 521222 | 5.34 | 320969 | 6.87 | 590704 | 8.28 | 662384 | 11.27 | 602980 | 12.86 |
| ZZZZZZ        | 142223 | 4.28 | 545744 | 5.34 | 323588 | 6.87 | 589940 | 8.28 | 629987 | 11.27 | 580979 | 12.86 |
| ZZZZZZ        | 143455 | 4.28 | 539842 | 5.34 | 320303 | 6.87 | 577981 | 8.28 | 631612 | 11.27 | 570970 | 12.86 |
| ZZZZZZ        | 145096 | 4.28 | 546997 | 5.34 | 330173 | 6.87 | 598919 | 8.28 | 645910 | 11.27 | 589729 | 12.86 |
| ZZZZZZ        | 151573 | 4.28 | 563084 | 5.34 | 341577 | 6.87 | 623717 | 8.28 | 681205 | 11.27 | 615538 | 12.86 |
| OP34178-MS    | 125639 | 4.28 | 467834 | 5.34 | 282517 | 6.87 | 505064 | 8.28 | 536961 | 11.28 | 496962 | 12.88 |
| OP34178-MSD   | 122510 | 4.28 | 463408 | 5.34 | 277668 | 6.87 | 491361 | 8.29 | 526941 | 11.28 | 487475 | 12.88 |
| MC22839-1     | 119001 | 4.28 | 451162 | 5.34 | 272656 | 6.87 | 487891 | 8.29 | 530815 | 11.28 | 486471 | 12.88 |

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

7.4.2  
7

# Semivolatile Internal Standard Area Summary

Job Number: MC22834  
Account: SHELLWIC Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |                |                 |             |
|----------------|----------------|-----------------|-------------|
| Check Std:     | MSR1186-CC1159 | Injection Date: | 07/31/13    |
| Lab File ID:   | R32530.D       | Injection Time: | 08:10       |
| Instrument ID: | GCMSR          | 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.

7.4.2

7

# Semivolatile Internal Standard Area Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |                    |
|----------------|--------------|-----------------|--------------------|
| Check Std:     | MSW642-CC633 | Injection Date: | 07/29/13           |
| Lab File ID:   | W14186.D     | Injection Time: | 09:03              |
| Instrument ID: | GCMSW        | 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                | 221067 | 3.60 | 593849  | 4.58 | 296109 | 6.01 | 480124 | 7.28 | 327425 | 10.06 | 771998  | 11.49 |
| Upper Limit <sup>a</sup> | 442134 | 4.10 | 1187698 | 5.08 | 592218 | 6.51 | 960248 | 7.78 | 654850 | 10.56 | 1543996 | 11.99 |
| Lower Limit <sup>b</sup> | 110534 | 3.10 | 296925  | 4.08 | 148055 | 5.51 | 240062 | 6.78 | 163713 | 9.56  | 385999  | 10.99 |

| 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    |
| OP34112-MB    | 207968 | 3.60 | 562459 | 4.58 | 279520 | 6.01 | 449721 | 7.28 | 301922 | 10.06 | 713579 | 11.48 |
| OP34112-BS    | 201503 | 3.60 | 541478 | 4.58 | 267075 | 6.01 | 434210 | 7.28 | 287068 | 10.06 | 677409 | 11.48 |
| OP34112-MS    | 203060 | 3.60 | 550010 | 4.58 | 269796 | 6.01 | 436873 | 7.28 | 288549 | 10.06 | 680733 | 11.49 |
| OP34112-MSD   | 186726 | 3.60 | 496789 | 4.58 | 244444 | 6.01 | 397160 | 7.28 | 263470 | 10.06 | 619327 | 11.49 |
| MC22900-15    | 172258 | 3.60 | 463653 | 4.58 | 227572 | 6.01 | 366633 | 7.28 | 244900 | 10.05 | 580137 | 11.48 |
| MC22834-1     | 167833 | 3.60 | 447768 | 4.58 | 220055 | 6.01 | 354147 | 7.28 | 237740 | 10.05 | 564197 | 11.48 |
| MC22834-2     | 166992 | 3.60 | 449572 | 4.58 | 220847 | 6.01 | 352765 | 7.28 | 237425 | 10.05 | 561353 | 11.48 |
| MC22834-3     | 193184 | 3.60 | 511351 | 4.58 | 253763 | 6.01 | 400424 | 7.28 | 269526 | 10.06 | 643741 | 11.48 |
| MC22834-4     | 177466 | 3.60 | 470663 | 4.58 | 232509 | 6.01 | 368792 | 7.28 | 250533 | 10.06 | 600012 | 11.48 |
| MC22834-5     | 197935 | 3.60 | 530722 | 4.58 | 261600 | 6.01 | 414693 | 7.28 | 278979 | 10.06 | 668013 | 11.49 |
| ZZZZZZ        | 175951 | 3.60 | 470739 | 4.58 | 232571 | 6.01 | 374541 | 7.28 | 250419 | 10.05 | 596960 | 11.48 |
| ZZZZZZ        | 174176 | 3.60 | 465674 | 4.58 | 230541 | 6.01 | 368615 | 7.28 | 246967 | 10.05 | 588907 | 11.48 |
| ZZZZZZ        | 171200 | 3.60 | 457784 | 4.58 | 226027 | 6.01 | 361852 | 7.28 | 244001 | 10.05 | 577348 | 11.48 |
| ZZZZZZ        | 163201 | 3.60 | 434690 | 4.58 | 216227 | 6.01 | 342048 | 7.28 | 233671 | 10.05 | 556171 | 11.48 |
| ZZZZZZ        | 162376 | 3.60 | 428726 | 4.58 | 214669 | 6.01 | 344535 | 7.28 | 237762 | 10.05 | 562704 | 11.48 |
| ZZZZZZ        | 160377 | 3.60 | 426587 | 4.58 | 211813 | 6.01 | 337162 | 7.28 | 228267 | 10.05 | 549286 | 11.48 |
| ZZZZZZ        | 168678 | 3.60 | 437955 | 4.58 | 218073 | 6.01 | 350327 | 7.28 | 238123 | 10.05 | 574776 | 11.48 |

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.4.3  
7

# Semivolatile Surrogate Recovery Summary

Job Number: MC22834

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 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 |
|---------------|-------------|----|----|-----|----|-----|----|
| MC22834-1     | R32544.D    | 54 | 23 | 99  | 87 | 103 | 95 |
| MC22834-2     | R32545.D    | 40 | 18 | 89  | 79 | 93  | 85 |
| MC22834-3     | R32546.D    | 50 | 23 | 96  | 78 | 93  | 82 |
| MC22834-4     | R32547.D    | 43 | 17 | 87  | 72 | 84  | 79 |
| MC22834-5     | R32550.D    | 46 | 20 | 96  | 77 | 93  | 86 |
| OP34111-BS    | R32491.D    | 48 | 19 | 103 | 76 | 91  | 94 |
| OP34111-MB    | R32490.D    | 49 | 20 | 96  | 80 | 95  | 92 |
| OP34111-MS    | R32485.D    | 56 | 22 | 108 | 92 | 105 | 97 |
| OP34111-MSD   | R32486.D    | 50 | 19 | 106 | 85 | 100 | 94 |

**Surrogate Compounds**                      **Recovery Limits**

|                           |         |
|---------------------------|---------|
| S1 = 2-Fluorophenol       | 15-110% |
| S2 = Phenol-d5            | 15-110% |
| S3 = 2,4,6-Tribromophenol | 15-110% |
| S4 = Nitrobenzene-d5      | 30-130% |
| S5 = 2-Fluorobiphenyl     | 30-130% |
| S6 = Terphenyl-d14        | 30-130% |

7.5.1

7

# Semivolatile Surrogate Recovery Summary

Job Number: MC22834

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 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  |
|---------------|-------------|-----|----|-----|
| MC22834-1     | W14192.D    | 97  | 97 | 95  |
| MC22834-2     | W14193.D    | 88  | 87 | 86  |
| MC22834-3     | W14194.D    | 86  | 84 | 83  |
| MC22834-4     | W14195.D    | 80  | 80 | 81  |
| MC22834-5     | W14196.D    | 86  | 85 | 88  |
| OP34112-BS    | W14188.D    | 85  | 85 | 96  |
| OP34112-MB    | W14187.D    | 89  | 87 | 96  |
| OP34112-MS    | W14189.D    | 100 | 97 | 101 |
| OP34112-MSD   | W14190.D    | 96  | 94 | 97  |

**Surrogate Compounds**                      **Recovery Limits**

|                       |         |
|-----------------------|---------|
| S1 = Nitrobenzene-d5  | 30-130% |
| S2 = 2-Fluorobiphenyl | 30-130% |
| S3 = Terphenyl-d14    | 30-130% |

7.5.2  
7



## GC Volatiles

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## QC Data Summaries



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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

# Method Blank Summary

Job Number: MC22834  
Account: SHELLWIC Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| OP34095-MB | BK27122.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |

The QC reported here applies to the following samples: Method: SW846 8011

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-7

| CAS No.  | Compound                    | Result | RL    | MDL    | Units | Q |
|----------|-----------------------------|--------|-------|--------|-------|---|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND     | 0.015 | 0.0045 | ug/l  |   |
| 106-93-4 | 1,2-Dibromoethane           | ND     | 0.015 | 0.0097 | ug/l  |   |

| CAS No.  | Surrogate Recoveries   | Limits |         |
|----------|------------------------|--------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 138%   | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 123%   | 36-173% |

8.1.1

8

# Blank Spike Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| OP34095-BS | BK27123.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |

The QC reported here applies to the following samples:

Method: SW846 8011

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-7

| CAS No.  | Compound                    | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | Limits |
|----------|-----------------------------|---------------|-------------|----------|--------|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | 0.071         | 0.085       | 120      | 60-140 |
| 106-93-4 | 1,2-Dibromoethane           | 0.071         | 0.077       | 108      | 60-140 |

| CAS No.  | Surrogate Recoveries   | BSP  | Limits  |
|----------|------------------------|------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 125% | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 107% | 36-173% |

8.2.1  
8

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample      | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|-----------|----|----------|----|-----------|------------|------------------|
| OP34095-MS  | BK27124.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |
| OP34095-MSD | BK27125.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |
| MC22692-3   | BK27129.D | 1  | 07/25/13 | NK | 07/23/13  | OP34095    | GBK930           |

The QC reported here applies to the following samples: Method: SW846 8011

MC22834-1, MC22834-2, MC22834-3, MC22834-4, MC22834-5, MC22834-7

| CAS No.  | Compound                    | MC22692-3<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|----------|-----------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 96-12-8  | 1,2-Dibromo-3-chloropropane | ND                | 0.0677     | 0.060      | 89      | 0.0675        | 0.057       | 84       | 5   | 64-141/29         |
| 106-93-4 | 1,2-Dibromoethane           | ND                | 0.0677     | 0.071      | 105     | 0.0675        | 0.073       | 108      | 3   | 63-163/27         |

| CAS No.  | Surrogate Recoveries   | MS  | MSD | MC22692-3 | Limits  |
|----------|------------------------|-----|-----|-----------|---------|
| 460-00-4 | Bromofluorobenzene (S) | 89% | 87% | 123%      | 36-173% |
| 460-00-4 | Bromofluorobenzene (S) | 76% | 64% | 91%       | 36-173% |

8.3.1

8

\* = Outside of Control Limits.

# Volatile Surrogate Recovery Summary

Job Number: MC22834

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

Method: SW846 8011

Matrix: AQ

Samples and QC shown here apply to the above method

| Lab Sample ID | Lab File ID | S1 <sup>a</sup> | S1 <sup>b</sup> |
|---------------|-------------|-----------------|-----------------|
| MC22834-1     | BK27141.D   | 108             | 110             |
| MC22834-2     | BK27142.D   | 120             | 93              |
| MC22834-3     | BK27143.D   | 133             | 118             |
| MC22834-4     | BK27144.D   | 88              | 58              |
| MC22834-5     | BK27146.D   | 91              | 56              |
| MC22834-7     | BK27145.D   | 74              | 65              |
| OP34095-BS    | BK27123.D   | 125             | 107             |
| OP34095-MB    | BK27122.D   | 138             | 123             |
| OP34095-MS    | BK27124.D   | 89              | 76              |
| OP34095-MSD   | BK27125.D   | 87              | 64              |

**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: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |            |
|----------------|--------------|-----------------|------------|
| Check Std:     | GBK930-CC929 | Injection Date: | 07/25/13   |
| Lab File ID:   | BK27116A.D   | Injection Time: | 05:10      |
| Instrument ID: | GCBK         | Method:         | SW846 8011 |

S1<sup>a</sup>    S1<sup>b</sup>  
 RT      RT

|           |      |      |
|-----------|------|------|
| Check Std | 4.58 | 4.94 |
|-----------|------|------|

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 <sup>a</sup> RT | S1 <sup>b</sup> RT |
|---------------|-------------|---------------|---------------|--------------------|--------------------|
| ZZZZZZ        | BK27117.D   | 07/25/13      | 05:36         | 4.58               | 4.94               |
| ZZZZZZ        | BK27118.D   | 07/25/13      | 06:00         | 4.58               | 4.94               |
| ZZZZZZ        | BK27119.D   | 07/25/13      | 06:24         | 4.58               | 4.94               |
| ZZZZZZ        | BK27120.D   | 07/25/13      | 06:48         | 4.58               | 4.94               |
| ZZZZZZ        | BK27121.D   | 07/25/13      | 07:12         | 4.58               | 4.94               |
| OP34095-MB    | BK27122.D   | 07/25/13      | 07:35         | 4.58               | 4.94               |
| OP34095-BS    | BK27123.D   | 07/25/13      | 07:59         | 4.58               | 4.94               |
| OP34095-MS    | BK27124.D   | 07/25/13      | 08:23         | 4.58               | 4.94               |
| OP34095-MSD   | BK27125.D   | 07/25/13      | 08:47         | 4.58               | 4.94               |
| ZZZZZZ        | BK27126.D   | 07/25/13      | 09:11         | 4.58               | 4.94               |

## Surrogate Compounds

S1 = Bromofluorobenzene (S)

- (a) Retention time from GC signal #2
- (b) Retention time from GC signal #1

8.5.1  
8

# GC Surrogate Retention Time Summary

Job Number: MC22834  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |            |
|----------------|--------------|-----------------|------------|
| Check Std:     | GBK930-CC929 | Injection Date: | 07/25/13   |
| Lab File ID:   | BK27138.D    | Injection Time: | 14:02      |
| Instrument ID: | GCBK         | Method:         | SW846 8011 |

S1<sup>a</sup>    S1<sup>b</sup>  
 RT      RT

|           |      |      |
|-----------|------|------|
| Check Std | 4.58 | 4.94 |
|-----------|------|------|

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 <sup>a</sup> RT | S1 <sup>b</sup> RT |
|---------------|-------------|---------------|---------------|--------------------|--------------------|
| ZZZZZZ        | BK27139.D   | 07/25/13      | 14:26         | 4.58               | 4.94               |
| ZZZZZZ        | BK27140.D   | 07/25/13      | 14:51         | 4.58               | 4.94               |
| MC22834-1     | BK27141.D   | 07/25/13      | 15:15         | 4.58               | 4.94               |
| MC22834-2     | BK27142.D   | 07/25/13      | 15:39         | 4.58               | 4.94               |
| MC22834-3     | BK27143.D   | 07/25/13      | 16:04         | 4.58               | 4.94               |
| MC22834-4     | BK27144.D   | 07/25/13      | 16:28         | 4.58               | 4.94               |
| MC22834-7     | BK27145.D   | 07/25/13      | 16:52         | 4.58               | 4.94               |
| MC22834-5     | BK27146.D   | 07/25/13      | 17:16         | 4.58               | 4.94               |
| GBK930-ECC929 | BK27147.D   | 07/25/13      | 17:41         | 4.58               | 4.94               |

## Surrogate Compounds

S1 = Bromofluorobenzene (S)

- (a) Retention time from GC signal #2
- (b) Retention time from GC signal #1

8.5.2  
8

SGS ACCUTEST IS PART OF SGS, THE WORLD'S LEADING INSPECTION,  
VERIFICATION, TESTING AND CERTIFICATION COMPANY.



*e-Hardcopy 2.0*  
*Automated Report*

### Technical Report for

## Shell Oil

URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana,

SGS Accutest Job Number: MC23430

Sampling Date: 08/08/13

### Report to:

AECOM, INC.

Melissa.mansker@aecom.com

ATTN: Melissa Mansker

Total number of pages in report: 40



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.

H. (Brad) Madadian  
Lab Director

Client Service contact: Jeremy Vienneau 508-481-6200

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

This report shall not be reproduced, except in its entirety, without the written approval of SGS Accutest.  
Test results relate only to samples analyzed.





ACCUTEST

October 25, 2016

AECOM  
1001 Highlands Plaza Drive West Suite 300  
St. Louis, MO 63110

RE: SGS Accutest Job # MC23430

Dear Elizabeth Kunkel

As you are aware, SGS Accutest Inc. - Marlborough has been conducting an extensive review of data associated with some historical Gas Chromatography-Mass Spectroscopy volatiles analyses. As a result of this review it was determined that some revisions of the original test report for this job were needed. These corrections have been incorporated into the revised report.

Please be assured that corrective actions have been put in place to address this matter and prevent a recurrence.

We apologize for any inconvenience that this issue may have caused. Please don't hesitate to contact us if we can be of further assistance.

Sincerely,

**H. (Brad) Madadian**

Regional Laboratory Director  
SGS Accutest Inc. - Marlborough

SGS ACCUTEST IS PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION,  
TESTING AND CERTIFICATION COMPANY.

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## Sample Summary

Shell Oil

Job No: MC23430  
URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample Number | Collected Date | Time By | Received      | Matrix Code | Type         | Client Sample ID  |
|---------------|----------------|---------|---------------|-------------|--------------|-------------------|
| MC23430-1     | 08/08/13       | 11:05   | EADC 08/09/13 | AQ          | Ground Water | P93C-ROX-080813   |
| MC23430-2     | 08/08/13       | 00:00   | EADC 08/09/13 | AQ          | Ground Water | TB-ROX-080813-HCL |

# SAMPLE DELIVERY GROUP CASE NARRATIVE



**Client:** She O

**Job No** MC23430

**Site:** URSMOSTL:Roxana 3Q 3 GW/ 2 562850 03003 900 South Centra **Report Date** 0/25/20 6 : 5:42 P

2 Samp e(s), 0 Tr p B ank(s) and 0 F e d B ank(s) were co ected on 08/08/20 3 and were rece ved at SGS Accutest New Eng and on 08/09/20 3 proper y preserved, at 0 8 Deg C and n tact These Samp es rece ved a job number of MC23430 A st ng of the Laboratory Samp e ID, C ent Samp e ID and dates of co ect on are presented n the Resu ts Summary Sect on of th s repo t - Ch orohexane was searched n the brary search and reported on y f detect ons were found

Except as noted be ow, a method spec f ed ca brat ons and qua ty contro performance cr ter a were met for th s job For more nformat on, p ease refer to QC summary pages

## Volatiles by GCMS By Method SW846 8260B

|                   |                         |
|-------------------|-------------------------|
| <b>Matrix:</b> AQ | <b>Batch ID:</b> MSV845 |
|-------------------|-------------------------|

- A samp es were ana yzed w th n the recommended method ho d ng t me
- Samp e(s) MC23378-2MS, MC23378-2MSD were used as the QC samp es nd cated
- A method b anks for th s batch meet method spec f c cr ter a
- B ank Sp ke Recove y(s) for 2-Ch oroethy v ny ether are outs de contro m ts
- Matr x Sp ke Recovery(s) for 2,2-D ch oropropane, 2-Ch oroethy v ny ether, Bromod ch oromethane, Bromomethane, Carbon tetrach or de, Ch oroethane, Methy ene brom de, Styrene, Acro e n are outs de contro m ts Outs de contro m ts due to poss b e matr x nterference Refer to B ank Sp ke
- Matr x Sp ke Dup cate Recovery(s) for 2,2-D ch oropropane, 2-Butanone (MEK), Acetone, Acro e n, Bromomethane, Ch oroethane, 2-Ch oroethy v ny ether are outs de contro m ts H gh RPD due to poss b e matr x nterference and/or samp e non-homogene ty
- Matr x Sp ke Recovery(s) for c s- ,2-D ch oroethene are outs de contro m ts Outs de contro m ts due to h gh eve n samp e re at ve to sp ke amount
- RPD(s) for MSD for 2-Ch oroethy v ny ether are outs de contro m ts for samp e MC23378-2MSD H gh RPD due to poss b e matr x nterference and/or samp e non-homogene ty
- 2-Ch oroethy v ny ether: In t a Ca brat on Ver f cat on outs de of acceptance cr ter a Samp e resu t may be b ased ow
- ,2-D ch oroethane: Cont nu ng Ca brat on outs de of acceptance cr ter a Samp e resu t may be b ased ow
- MSV845-BS for Acro e n: Outs de contro m ts Assoc ated samp es are non-detect for th s compound
- MC23378-2MS for Acro e n: Outs de contro m ts Assoc ated samp es are non-detect for th s compound

|                   |                         |
|-------------------|-------------------------|
| <b>Matrix:</b> AQ | <b>Batch ID:</b> MSV846 |
|-------------------|-------------------------|

- A samp es were ana yzed w th n the recommended method ho d ng t me
- A method b anks for th s batch meet method spec f c cr ter a
- Samp e(s) MC23458-4MS, MC23458-4MSD were used as the QC samp es nd cated
- B ank Sp ke Recove y(s) for 2,2-D ch oropropane, 2-Ch oroethy v ny ether are outs de contro m ts
- Matr x Sp ke/Matr x Sp ke Dup cate Recovery(s) for 2-Ch oroethy v ny ether, are outs de contro m ts Outs de contro m ts due to poss b e matr x nterference
- MSV846-BS for Acro e n: Outs de contro m ts Assoc ated samp es are non-detect for th s compound
- MC23430- for 2-Ch oroethy v ny ether: In t a Ca brat on Ver f cat on outs de of acceptance cr ter a Samp e resu t may be b ased ow
- MC23458-4MS for Acro e n: Outs de contro m ts Assoc ated samp es are non-detect for th s compound

SGS Accutest New Eng and ce t f es that a ana ys s were performed w th n method spec f cat on It s further recommended that th s report to be used n ts ent rety The Laborato y D rector for SGS Accutest New Eng and or ass gnee as ver f ed by the s gnature on the cover page has author zed the re ease of th s report(MC23430)

Tuesday, October 25, 2016

Page 1 of 1

## Summary of Hits

Job Number: MC23430  
Account: Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
Collected: 08/08/13



| Lab Sample ID | Client Sample ID | Result/<br>Qual | RL | MDL | Units | Method |
|---------------|------------------|-----------------|----|-----|-------|--------|
|---------------|------------------|-----------------|----|-----|-------|--------|

|           |                 |       |    |    |      |             |
|-----------|-----------------|-------|----|----|------|-------------|
| MC23430-1 | P93C-ROX-080813 |       |    |    |      |             |
| Benzene   |                 | 19100 | 25 | 23 | ug/l | SW846 8260B |

MC23430-2 TB-ROX-080813-HCL

No hits reported in this sample.

Sample Results

---

Report of Analysis

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## Report of Analysis

|                   |                   |   |          |
|-------------------|-------------------|---|----------|
| Client Sample ID: | P93C-ROX-080813   | Date Sampled:   | 08/08/13 |
| Lab Sample ID:    | MC23430-1         | Date Received:  | 08/09/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|-----|-----------|------------|------------------|
| Run #1 | V21902.D | 50 | 08/14/13 | AMY | n/a       | n/a        | MSV846           |
| Run #2 |          |    |          |     |           |            |                  |

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

## VOA Special List

| CAS No.  | Compound                               | Result | RL   | MDL | Units | Q |
|----------|--|--------|------|-----|-------|---|
| 67-64-1  | Acetone                                | ND     | 500  | 140 | ug/l  |   |
| 107-02-8 | Acrolein                               | ND     | 1300 | 310 | ug/l  |   |
| 107-13-1 | Acrylonitrile                          | ND     | 250  | 180 | ug/l  |   |
| 71-43-2  | Benzene                                | 19100  | 25   | 23  | ug/l  |   |
| 108-86-1 | Bromobenzene                           | ND     | 250  | 22  | ug/l  |   |
| 74-97-5  | Bromochloromethane                     | ND     | 250  | 32  | ug/l  |   |
| 75-27-4  | Bromodichloromethane                   | ND     | 50   | 17  | ug/l  |   |
| 75-25-2  | Bromoform                              | ND     | 50   | 21  | ug/l  |   |
| 74-83-9  | Bromomethane                           | ND     | 100  | 76  | ug/l  |   |
| 78-93-3  | 2-Butanone (MEK)                       | ND     | 250  | 80  | ug/l  |   |
| 104-51-8 | n-Butylbenzene                         | ND     | 250  | 27  | ug/l  |   |
| 135-98-8 | sec-Butylbenzene                       | ND     | 250  | 29  | ug/l  |   |
| 98-06-6  | tert-Butylbenzene                      | ND     | 250  | 44  | ug/l  |   |
| 75-15-0  | Carbon disulfide                       | ND     | 250  | 30  | ug/l  |   |
| 56-23-5  | Carbon tetrachloride                   | ND     | 50   | 31  | ug/l  |   |
| 108-90-7 | Chlorobenzene                          | ND     | 50   | 24  | ug/l  |   |
| 75-00-3  | Chloroethane                           | ND     | 100  | 42  | ug/l  |   |
| 110-75-8 | 2-Chloroethyl vinyl ether <sup>a</sup> | ND     | 250  | 56  | ug/l  |   |
| 67-66-3  | Chloroform                             | ND     | 50   | 25  | ug/l  |   |
| 74-87-3  | Chloromethane                          | ND     | 100  | 72  | ug/l  |   |
| 95-49-8  | o-Chlorotoluene                        | ND     | 250  | 27  | ug/l  |   |
| 106-43-4 | p-Chlorotoluene                        | ND     | 250  | 24  | ug/l  |   |
| 124-48-1 | Dibromochloromethane                   | ND     | 50   | 16  | ug/l  |   |
| 95-50-1  | 1,2-Dichlorobenzene                    | ND     | 50   | 17  | ug/l  |   |
| 541-73-1 | 1,3-Dichlorobenzene                    | ND     | 50   | 15  | ug/l  |   |
| 106-46-7 | 1,4-Dichlorobenzene                    | ND     | 50   | 13  | ug/l  |   |
| 75-71-8  | Dichlorodifluoromethane                | ND     | 100  | 60  | ug/l  |   |
| 75-34-3  | 1,1-Dichloroethane                     | ND     | 50   | 19  | ug/l  |   |
| 107-06-2 | 1,2-Dichloroethane                     | ND     | 50   | 18  | ug/l  |   |
| 75-35-4  | 1,1-Dichloroethene                     | ND     | 50   | 33  | ug/l  |   |
| 156-59-2 | cis-1,2-Dichloroethene                 | ND     | 50   | 27  | ug/l  |   |
| 156-60-5 | trans-1,2-Dichloroethene               | ND     | 50   | 27  | ug/l  |   |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates 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-080813   | Date Sampled:   | 08/08/13 |
| Lab Sample ID:    | MC23430-1         | Date Received:  | 08/09/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL | Units | Q |
|------------|-----------------------------|--------|------|-----|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 100  | 23  | ug/l  |   |
| 142-28-9   | 1,3-Dichloropropane         | ND     | 250  | 48  | ug/l  |   |
| 594-20-7   | 2,2-Dichloropropane         | ND     | 250  | 63  | ug/l  |   |
| 563-58-6   | 1,1-Dichloropropene         | ND     | 250  | 32  | ug/l  |   |
| 10061-01-5 | cis-1,3-Dichloropropene     | ND     | 25   | 11  | ug/l  |   |
| 10061-02-6 | trans-1,3-Dichloropropene   | ND     | 25   | 14  | ug/l  |   |
| 123-91-1   | 1,4-Dioxane                 | ND     | 1300 | 780 | ug/l  |   |
| 97-63-2    | Ethyl methacrylate          | ND     | 250  | 40  | ug/l  |   |
| 100-41-4   | Ethylbenzene                | ND     | 50   | 19  | ug/l  |   |
| 87-68-3    | Hexachlorobutadiene         | ND     | 250  | 63  | ug/l  |   |
| 591-78-6   | 2-Hexanone                  | ND     | 250  | 110 | ug/l  |   |
| 98-82-8    | Isopropylbenzene            | ND     | 250  | 32  | ug/l  |   |
| 99-87-6    | p-Isopropyltoluene          | ND     | 250  | 27  | ug/l  |   |
| 1634-04-4  | Methyl Tert Butyl Ether     | ND     | 50   | 22  | ug/l  |   |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | ND     | 250  | 64  | ug/l  |   |
| 74-95-3    | Methylene bromide           | ND     | 250  | 21  | ug/l  |   |
| 75-09-2    | Methylene chloride          | ND     | 100  | 20  | ug/l  |   |
| 91-20-3    | Naphthalene                 | ND     | 250  | 39  | ug/l  |   |
| 103-65-1   | n-Propylbenzene             | ND     | 250  | 29  | ug/l  |   |
| 100-42-5   | Styrene                     | ND     | 250  | 24  | ug/l  |   |
| 630-20-6   | 1,1,1,2-Tetrachloroethane   | ND     | 50   | 23  | ug/l  |   |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | ND     | 25   | 21  | ug/l  |   |
| 127-18-4   | Tetrachloroethene           | ND     | 50   | 31  | ug/l  |   |
| 108-88-3   | Toluene                     | ND     | 50   | 23  | ug/l  |   |
| 87-61-6    | 1,2,3-Trichlorobenzene      | ND     | 250  | 38  | ug/l  |   |
| 120-82-1   | 1,2,4-Trichlorobenzene      | ND     | 250  | 23  | ug/l  |   |
| 71-55-6    | 1,1,1-Trichloroethane       | ND     | 50   | 47  | ug/l  |   |
| 79-00-5    | 1,1,2-Trichloroethane       | ND     | 50   | 25  | ug/l  |   |
| 79-01-6    | Trichloroethene             | ND     | 50   | 22  | ug/l  |   |
| 75-69-4    | Trichlorofluoromethane      | ND     | 50   | 31  | ug/l  |   |
| 96-18-4    | 1,2,3-Trichloropropane      | ND     | 250  | 35  | ug/l  |   |
| 95-63-6    | 1,2,4-Trimethylbenzene      | ND     | 250  | 23  | ug/l  |   |
| 108-67-8   | 1,3,5-Trimethylbenzene      | ND     | 250  | 54  | ug/l  |   |
| 108-05-4   | Vinyl Acetate               | ND     | 250  | 66  | ug/l  |   |
| 75-01-4    | Vinyl chloride              | ND     | 50   | 30  | ug/l  |   |
|            | m,p-Xylene                  | ND     | 50   | 35  | ug/l  |   |
| 95-47-6    | o-Xylene                    | ND     | 50   | 20  | ug/l  |   |
| 1330-20-7  | Xylene (total)              | ND     | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> P93C-ROX-080813   |  | <b>Date Sampled:</b> 08/08/13  |
| <b>Lab Sample ID:</b> MC23430-1  |  | <b>Date Received:</b> 08/09/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

4.1  
4

**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 100%   |        | 70-130% |
| 2037-26-5 | Toluene-D8           | 100%   |        | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 94%    |        | 70-130% |

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

(a) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low.

---

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

## Report of Analysis

|                   |                   |   |          |
|-------------------|-------------------|---|----------|
| Client Sample ID: | TB-ROX-080813-HCL | Date Sampled:   | 08/08/13 |
| Lab Sample ID:    | MC23430-2         | Date Received:  | 08/09/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

| Run #  | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|--------|----------|----|----------|-----|-----------|------------|------------------|
| Run #1 | V21880.D | 1  | 08/13/13 | AMY | n/a       | n/a        | MSV845           |
| Run #2 |          |    |          |     |           |            |                  |

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

## VOA Special List

| CAS No.  | Compound                               | Result | RL   | MDL  | Units | Q |
|----------|--|--------|------|------|-------|---|
| 67-64-1  | Acetone                                | ND     | 10   | 2.8  | 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 <sup>a</sup> | ND     | 5.0  | 1.1  | 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 <sup>b</sup>        | 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-080813-HCL | Date Sampled:   | 08/08/13 |
| Lab Sample ID:    | MC23430-2         | Date Received:  | 08/09/13 |
| Matrix:           | AQ - Ground Water | Percent Solids:   | n/a      |
| Method:           | SW846 8260B       | Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |          |

## VOA Special List

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 78-87-5    | 1,2-Dichloropropane         | ND     | 2.0  | 0.45 | 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

|  |  |                                |
|--|--|--------------------------------|
| <b>Client Sample ID:</b> TB-ROX-080813-HCL   |  | <b>Date Sampled:</b> 08/08/13  |
| <b>Lab Sample ID:</b> MC23430-2  |  | <b>Date Received:</b> 08/09/13 |
| <b>Matrix:</b> AQ - Ground Water   |  | <b>Percent Solids:</b> n/a     |
| <b>Method:</b> SW846 8260B   |  |                                |
| <b>Project:</b> URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL |  |                                |

4.2  
4

**VOA Special List**

| CAS No.   | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |
|-----------|----------------------|--------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 105%   |        | 70-130% |
| 2037-26-5 | Toluene-D8           | 93%    |        | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 111%   |        | 70-130% |

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

- (a) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased low.
- (b) Continuing Calibration outside of acceptance criteria. Sample result may be biased low.

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

**Misc. Forms****Custody Documents and Other Forms**

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Includes the following where applicable:

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

LAB (LOCATION)

- XENCO
- CALSCEINCE
- OTHER (Must Be Registered, MA 01792 (508-491-6200))
- SPL



Shell Oil Products Chain Of Custody Record



Please Check Appropriate Box:

|   |  |                                       |
|---|--|---------------------------------------|
| <input checked="" type="checkbox"/> ENV. SERVICES | <input type="checkbox"/> MOTIVA RETAIL | <input type="checkbox"/> SHELL RETAIL |
| <input type="checkbox"/> MOTIVA SDCAM             | <input type="checkbox"/> CONSULTANT    | <input type="checkbox"/> LUBES        |
| <input type="checkbox"/> SHELL PIPELINE           | <input type="checkbox"/> OTHER         |                                       |

Print Bill To Contact Name: Bob Billman

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

PO # SAP #

DATE: 8-8-13

PAGE: 1 of 1

SAMPLING COMPANY: URS CORPORATION

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

PROJECT CONTACT (Print Name or PDF Report to): Elizabeth Kunkel, Wendy Pennington, Bob Billman

TELEPHONE: 314-429-0100 FAX: 314-429-0482

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.

\*\*\*5 DAY TURNAROUND TIME\*\*\*

FIELD ADDRESS: Street and City: 900 South Central Ave; ROXANA, IL

STATE: IL GENERAL NO.:

CONSULTANT PROJECT NO.: Roxana Quarterly GW / 21562850.03003

SAMPLER NAME(S) (Print): E Arthur / D Chase

LAB USE ONLY: MC23430

| LAB USE ONLY | Field Sample Identification |                   | SAMPLING |       | MATRIX | PRESERVATIVE |      |       |      |       |                           | NO. OF CONT. | VOC 8260B SL-TICS | VOC 8011 SL | PID (ppm) | FIELD NOTES: |
|--------------|-----------------------------|-------------------|----------|-------|--------|--------------|------|-------|------|-------|---------------------------|--------------|-------------------|-------------|-----------|--------------|
|              | DATE                        | TIME              | DATE     | TIME  |        | HCL          | HNO3 | H2SO4 | NONE | OTHER | TEMPERATURE ON RECEIPT °C |              |                   |             |           |              |
|              | 1                           | P93C-ROX-080813   | 8/8/13   | 11:05 | H2O    | J            |      |       |      |       |                           | J            | X                 |             | 0.0       |              |
|              | 2                           | TB-ROX-080813-HCL | 8/8/13   |       | H2O    | Z            |      |       |      |       |                           | Z            | X                 |             |           | 2L1          |

Relinquished by (Signature): [Signature]

Received by (Signature): [Signature]

Date: 8/8/13 Time: 1700

Relinquished by (Signature): [Signature]

Received by (Signature): [Signature]

Date: 8/9/13 Time: 9:30

Relinquished by (Signature): [Signature]

Received by (Signature): [Signature]

Date: Time:

KOC 0.84

5.1  
5

## Accutest Laboratories Sample Receipt Summary

**Accutest Job Number:** MC23430      **Client:** URS      **Immediate Client Services Action Required:** No  
**Date / Time Received:** 8/9/2013      **Delivery Method:** \_\_\_\_\_      **Client Service Action Required at Login:** No  
**Project:** 900 SO 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. Smp'l Dates/Time OK:

**Cooler Temperature**      Y or N  
 1. Temp criteria achieved:    
 2. Cooler temp verification: Infrared gun  
 3. Cooler media: Ice (bag)

**Quality Control Preservation**      Y or N      N/A  
 1. Trip Blank present / cooler:     
 2. Trip Blank listed on COC:     
 3. Samples preserved properly:    
 4. VOCs headspace free:

**Sample Integrity - Documentation**      Y or N  
 1. Sample labels present on bottles:    
 2. Container labeling complete:    
 3. Sample container label / COC agree:

**Sample Integrity - Condition**      Y or N  
 1. Sample recvd within HT:    
 2. All containers accounted for:    
 3. Condition of sample: Intact

**Sample Integrity - Instructions**      Y or N      N/A  
 1. Analysis requested is clear:    
 2. Bottles received for unspecified tests:    
 3. Sufficient volume recvd for analysis:    
 4. Compositing instructions clear:     
 5. Filtering instructions clear:

Comments

5.1  
**5**

### Internal Sample Tracking Chronicle

Shell Oil

Job No: MC23430

URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

5.2  
5

| Sample Number   | Method      | Analyzed        | By  | Prepped | By | Test Codes |
|---|-------------|-----------------|-----|---------|----|------------|
| MC23430-1 Collected: 08-AUG-13 11:05 By: EADC Received: 09-AUG-13 By: P93C-ROX-080813   |             |                 |     |         |    |            |
| MC23430-1   | SW846 8260B | 14-AUG-13 14:33 | AMY |         |    | V8260SL +  |
| MC23430-2 Collected: 08-AUG-13 00:00 By: EADC Received: 09-AUG-13 By: TB-ROX-080813-HCL |             |                 |     |         |    |            |
| MC23430-2   | SW846 8260B | 13-AUG-13 16:06 | AMY |         |    | V8260SL +  |



# SGS Accutest Internal Chain of Custody

**Job Number:** MC23430  
**Account:** SHELLWIC Shell Oil  
**Project:** URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL  
**Received:** 08/09/13

| Sample.Bottle Number | Transfer FROM | Transfer TO  | Date/Time      | Reason                 |
|----------------------|---------------|--------------|----------------|------------------------|
| MC23430-1.1          | VOC Ref #2    | Amy Min Yang | 08/13/13 14:44 | Retrieve from Storage  |
| MC23430-1.1          | Amy Min Yang  | GCMSV        | 08/13/13 14:44 | Load on Instrument     |
| MC23430-1.1          | GCMSV         | Amy Min Yang | 08/15/13 11:38 | Unload from Instrument |
| MC23430-1.1          | Amy Min Yang  | VOC Ref #2   | 08/15/13 11:38 | Return to Storage      |
| MC23430-1.1          | Scott Parsick |              | 10/04/13 13:50 | Disposed               |
| MC23430-2.1          | VOC Ref #2    | Amy Min Yang | 08/13/13 14:44 | Retrieve from Storage  |
| MC23430-2.1          | Amy Min Yang  | GCMSV        | 08/13/13 14:44 | Load on Instrument     |
| MC23430-2.1          | GCMSV         | Amy Min Yang | 08/15/13 11:38 | Unload from Instrument |
| MC23430-2.1          | Amy Min Yang  | VOC Ref #2   | 08/15/13 11:38 | Return to Storage      |
| MC23430-2.1          | Scott Parsick |              | 10/04/13 13:50 | Disposed               |

5.3  
5

**GC/MS Volatiles**

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**9****QC Data Summaries**

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

# Method Blank Summary

Job Number: MC23430  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample    | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|-----------|----------|----|----------|-----|-----------|------------|------------------|
| MSV845-MB | V21871.D | 1  | 08/13/13 | AMY | n/a       | n/a        | MSV845           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC23430-2

| 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  | 1.1  | 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  
6

# Method Blank Summary

Job Number: MC23430  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample    | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|-----------|----------|----|----------|-----|-----------|------------|------------------|
| MSV845-MB | V21871.D | 1  | 08/13/13 | AMY | n/a       | n/a        | MSV845           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC23430-2

| 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  |   |

6.1.1  
6

# Method Blank Summary

Job Number: MC23430  
Account: SHELLWIC Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample    | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|-----------|----------|----|----------|-----|-----------|------------|------------------|
| MSV845-MB | V21871.D | 1  | 08/13/13 | AMY | n/a       | n/a        | MSV845           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC23430-2

| CAS No.   | Surrogate Recoveries | Limits       |
|-----------|----------------------|--------------|
| 1868-53-7 | Dibromofluoromethane | 95% 70-130%  |
| 2037-26-5 | Toluene-D8           | 102% 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 95% 70-130%  |

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

6.1.1  
6

# Method Blank Summary

Job Number: MC23430  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample    | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|-----------|----------|----|----------|-----|-----------|------------|------------------|
| MSV846-MB | V21893.D | 1  | 08/14/13 | AMY | n/a       | n/a        | MSV846           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC23430-1

| CAS No.  | Compound                  | Result | RL   | MDL  | Units | Q |
|----------|---------------------------|--------|------|------|-------|---|
| 67-64-1  | Acetone                   | ND     | 10   | 2.8  | ug/l  |   |
| 107-02-8 | Acrolein                  | ND     | 25   | 6.3  | ug/l  |   |
| 107-13-1 | Acrylonitrile             | ND     | 5.0  | 3.5  | ug/l  |   |
| 71-43-2  | Benzene                   | ND     | 0.50 | 0.45 | ug/l  |   |
| 108-86-1 | Bromobenzene              | ND     | 5.0  | 0.44 | ug/l  |   |
| 74-97-5  | Bromochloromethane        | ND     | 5.0  | 0.64 | ug/l  |   |
| 75-27-4  | Bromodichloromethane      | ND     | 1.0  | 0.33 | ug/l  |   |
| 75-25-2  | Bromoform                 | ND     | 1.0  | 0.42 | ug/l  |   |
| 74-83-9  | Bromomethane              | ND     | 2.0  | 1.5  | ug/l  |   |
| 78-93-3  | 2-Butanone (MEK)          | ND     | 5.0  | 1.6  | ug/l  |   |
| 104-51-8 | n-Butylbenzene            | ND     | 5.0  | 0.54 | ug/l  |   |
| 135-98-8 | sec-Butylbenzene          | ND     | 5.0  | 0.58 | ug/l  |   |
| 98-06-6  | tert-Butylbenzene         | ND     | 5.0  | 0.87 | ug/l  |   |
| 75-15-0  | Carbon disulfide          | ND     | 5.0  | 0.59 | ug/l  |   |
| 56-23-5  | Carbon tetrachloride      | ND     | 1.0  | 0.62 | ug/l  |   |
| 108-90-7 | Chlorobenzene             | ND     | 1.0  | 0.48 | ug/l  |   |
| 75-00-3  | Chloroethane              | ND     | 2.0  | 0.84 | ug/l  |   |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND     | 5.0  | 1.1  | 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: MC23430  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample    | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|-----------|----------|----|----------|-----|-----------|------------|------------------|
| MSV846-MB | V21893.D | 1  | 08/14/13 | AMY | n/a       | n/a        | MSV846           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC23430-1

| CAS No.    | Compound                    | Result | RL   | MDL  | Units | Q |
|------------|-----------------------------|--------|------|------|-------|---|
| 10061-01-5 | cis-1,3-Dichloropropene     | ND     | 0.50 | 0.22 | ug/l  |   |
| 10061-02-6 | trans-1,3-Dichloropropene   | ND     | 0.50 | 0.29 | ug/l  |   |
| 123-91-1   | 1,4-Dioxane                 | ND     | 25   | 16   | ug/l  |   |
| 97-63-2    | Ethyl methacrylate          | ND     | 5.0  | 0.81 | ug/l  |   |
| 100-41-4   | Ethylbenzene                | ND     | 1.0  | 0.38 | ug/l  |   |
| 87-68-3    | Hexachlorobutadiene         | ND     | 5.0  | 1.3  | ug/l  |   |
| 591-78-6   | 2-Hexanone                  | ND     | 5.0  | 2.3  | ug/l  |   |
| 98-82-8    | Isopropylbenzene            | ND     | 5.0  | 0.64 | ug/l  |   |
| 99-87-6    | p-Isopropyltoluene          | ND     | 5.0  | 0.55 | ug/l  |   |
| 1634-04-4  | Methyl Tert Butyl Ether     | ND     | 1.0  | 0.43 | ug/l  |   |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | ND     | 5.0  | 1.3  | ug/l  |   |
| 74-95-3    | Methylene bromide           | ND     | 5.0  | 0.43 | ug/l  |   |
| 75-09-2    | Methylene chloride          | ND     | 2.0  | 0.41 | ug/l  |   |
| 91-20-3    | Naphthalene                 | ND     | 5.0  | 0.79 | ug/l  |   |
| 103-65-1   | n-Propylbenzene             | ND     | 5.0  | 0.59 | ug/l  |   |
| 100-42-5   | Styrene                     | ND     | 5.0  | 0.49 | ug/l  |   |
| 630-20-6   | 1,1,1,2-Tetrachloroethane   | ND     | 1.0  | 0.46 | ug/l  |   |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | ND     | 0.50 | 0.42 | ug/l  |   |
| 127-18-4   | Tetrachloroethene           | ND     | 1.0  | 0.61 | ug/l  |   |
| 108-88-3   | Toluene                     | ND     | 1.0  | 0.46 | ug/l  |   |
| 87-61-6    | 1,2,3-Trichlorobenzene      | ND     | 5.0  | 0.76 | ug/l  |   |
| 120-82-1   | 1,2,4-Trichlorobenzene      | ND     | 5.0  | 0.45 | ug/l  |   |
| 71-55-6    | 1,1,1-Trichloroethane       | ND     | 1.0  | 0.94 | ug/l  |   |
| 79-00-5    | 1,1,2-Trichloroethane       | ND     | 1.0  | 0.49 | ug/l  |   |
| 79-01-6    | Trichloroethene             | ND     | 1.0  | 0.45 | ug/l  |   |
| 75-69-4    | Trichlorofluoromethane      | ND     | 1.0  | 0.61 | ug/l  |   |
| 96-18-4    | 1,2,3-Trichloropropane      | ND     | 5.0  | 0.70 | ug/l  |   |
| 95-63-6    | 1,2,4-Trimethylbenzene      | ND     | 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  | 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: MC23430  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample    | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|-----------|----------|----|----------|-----|-----------|------------|------------------|
| MSV846-MB | V21893.D | 1  | 08/14/13 | AMY | n/a       | n/a        | MSV846           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC23430-1

| CAS No.   | Surrogate Recoveries | Limits |         |
|-----------|----------------------|--------|---------|
| 1868-53-7 | Dibromofluoromethane | 100%   | 70-130% |
| 2037-26-5 | Toluene-D8           | 102%   | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 94%    | 70-130% |

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



# Blank Spike Summary

Job Number: MC23430  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample    | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|-----------|----------|----|----------|-----|-----------|------------|------------------|
| MSV845-BS | V21868.D | 1  | 08/13/13 | AMY | n/a       | n/a        | MSV845           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC23430-2

| CAS No.  | Compound                  | Spike ug/l | BSP ug/l | BSP %  | Limits |
|----------|---------------------------|------------|----------|--------|--------|
| 67-64-1  | Acetone                   | 50         | 49.3     | 99     | 70-130 |
| 107-02-8 | Acrolein                  | 250        | 444      | 178* a | 70-130 |
| 107-13-1 | Acrylonitrile             | 50         | 53.5     | 107    | 70-130 |
| 71-43-2  | Benzene                   | 50         | 46.3     | 93     | 70-130 |
| 108-86-1 | Bromobenzene              | 50         | 51.0     | 102    | 70-130 |
| 74-97-5  | Bromochloromethane        | 50         | 59.8     | 120    | 70-130 |
| 75-27-4  | Bromodichloromethane      | 50         | 51.8     | 104    | 70-130 |
| 75-25-2  | Bromoform                 | 50         | 47.7     | 95     | 70-130 |
| 74-83-9  | Bromomethane              | 50         | 61.2     | 122    | 70-130 |
| 78-93-3  | 2-Butanone (MEK)          | 50         | 50.1     | 100    | 70-130 |
| 104-51-8 | n-Butylbenzene            | 50         | 51.1     | 102    | 70-130 |
| 135-98-8 | sec-Butylbenzene          | 50         | 53.4     | 107    | 70-130 |
| 98-06-6  | tert-Butylbenzene         | 50         | 50.7     | 101    | 70-130 |
| 75-15-0  | Carbon disulfide          | 50         | 57.5     | 115    | 70-130 |
| 56-23-5  | Carbon tetrachloride      | 50         | 47.7     | 95     | 70-130 |
| 108-90-7 | Chlorobenzene             | 50         | 47.0     | 94     | 70-130 |
| 75-00-3  | Chloroethane              | 50         | 61.5     | 123    | 70-130 |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50         | 33.3     | 67* b  | 70-130 |
| 67-66-3  | Chloroform                | 50         | 53.6     | 107    | 70-130 |
| 74-87-3  | Chloromethane             | 50         | 54.3     | 109    | 70-130 |
| 95-49-8  | o-Chlorotoluene           | 50         | 46.9     | 94     | 70-130 |
| 106-43-4 | p-Chlorotoluene           | 50         | 47.7     | 95     | 70-130 |
| 124-48-1 | Dibromochloromethane      | 50         | 47.2     | 94     | 70-130 |
| 95-50-1  | 1,2-Dichlorobenzene       | 50         | 43.9     | 88     | 70-130 |
| 541-73-1 | 1,3-Dichlorobenzene       | 50         | 45.9     | 92     | 70-130 |
| 106-46-7 | 1,4-Dichlorobenzene       | 50         | 44.8     | 90     | 70-130 |
| 75-71-8  | Dichlorodifluoromethane   | 50         | 43.5     | 87     | 70-130 |
| 75-34-3  | 1,1-Dichloroethane        | 50         | 57.4     | 115    | 70-130 |
| 107-06-2 | 1,2-Dichloroethane        | 50         | 40.6     | 81     | 70-130 |
| 75-35-4  | 1,1-Dichloroethene        | 50         | 59.0     | 118    | 70-130 |
| 156-59-2 | cis-1,2-Dichloroethene    | 50         | 53.8     | 108    | 70-130 |
| 156-60-5 | trans-1,2-Dichloroethene  | 50         | 53.5     | 107    | 70-130 |
| 78-87-5  | 1,2-Dichloropropane       | 50         | 54.4     | 109    | 70-130 |
| 142-28-9 | 1,3-Dichloropropane       | 50         | 49.8     | 100    | 70-130 |
| 594-20-7 | 2,2-Dichloropropane       | 50         | 64.0     | 128    | 70-130 |
| 563-58-6 | 1,1-Dichloropropene       | 50         | 42.4     | 85     | 70-130 |

\* = Outside of Control Limits.

6.2.1  
6

# Blank Spike Summary

Job Number: MC23430  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample    | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|-----------|----------|----|----------|-----|-----------|------------|------------------|
| MSV845-BS | V21868.D | 1  | 08/13/13 | AMY | n/a       | n/a        | MSV845           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC23430-2

| CAS No.    | Compound                    | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | Limits |
|------------|-----------------------------|---------------|-------------|----------|--------|
| 10061-01-5 | cis-1,3-Dichloropropene     | 50            | 47.6        | 95       | 70-130 |
| 10061-02-6 | trans-1,3-Dichloropropene   | 50            | 48.5        | 97       | 70-130 |
| 123-91-1   | 1,4-Dioxane                 | 250           | 260         | 104      | 70-130 |
| 97-63-2    | Ethyl methacrylate          | 50            | 50.7        | 101      | 77-137 |
| 100-41-4   | Ethylbenzene                | 50            | 50.1        | 100      | 70-130 |
| 87-68-3    | Hexachlorobutadiene         | 50            | 47.9        | 96       | 70-130 |
| 591-78-6   | 2-Hexanone                  | 50            | 51.8        | 104      | 70-130 |
| 98-82-8    | Isopropylbenzene            | 50            | 52.9        | 106      | 70-130 |
| 99-87-6    | p-Isopropyltoluene          | 50            | 54.8        | 110      | 70-130 |
| 1634-04-4  | Methyl Tert Butyl Ether     | 50            | 52.1        | 104      | 70-130 |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | 50            | 54.2        | 108      | 70-130 |
| 74-95-3    | Methylene bromide           | 50            | 55.7        | 111      | 70-130 |
| 75-09-2    | Methylene chloride          | 50            | 53.7        | 107      | 70-130 |
| 91-20-3    | Naphthalene                 | 50            | 45.5        | 91       | 70-130 |
| 103-65-1   | n-Propylbenzene             | 50            | 52.2        | 104      | 70-130 |
| 100-42-5   | Styrene                     | 50            | 55.5        | 111      | 70-130 |
| 630-20-6   | 1,1,1,2-Tetrachloroethane   | 50            | 50.5        | 101      | 70-130 |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | 50            | 51.6        | 103      | 70-130 |
| 127-18-4   | Tetrachloroethene           | 50            | 55.8        | 112      | 70-130 |
| 108-88-3   | Toluene                     | 50            | 53.4        | 107      | 70-130 |
| 87-61-6    | 1,2,3-Trichlorobenzene      | 50            | 47.8        | 96       | 70-130 |
| 120-82-1   | 1,2,4-Trichlorobenzene      | 50            | 48.1        | 96       | 70-130 |
| 71-55-6    | 1,1,1-Trichloroethane       | 50            | 59.0        | 118      | 70-130 |
| 79-00-5    | 1,1,2-Trichloroethane       | 50            | 52.1        | 104      | 70-130 |
| 79-01-6    | Trichloroethene             | 50            | 49.3        | 99       | 70-130 |
| 75-69-4    | Trichlorofluoromethane      | 50            | 55.0        | 110      | 70-130 |
| 96-18-4    | 1,2,3-Trichloropropane      | 50            | 50.8        | 102      | 70-130 |
| 95-63-6    | 1,2,4-Trimethylbenzene      | 50            | 50.3        | 101      | 70-130 |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 50            | 51.0        | 102      | 70-130 |
| 108-05-4   | Vinyl Acetate               | 50            | 46.4        | 93       | 70-130 |
| 75-01-4    | Vinyl chloride              | 50            | 43.3        | 87       | 70-130 |
|            | m,p-Xylene                  | 100           | 99.3        | 99       | 70-130 |
| 95-47-6    | o-Xylene                    | 50            | 50.9        | 102      | 70-130 |
| 1330-20-7  | Xylene (total)              | 150           | 150         | 100      | 70-130 |

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: MC23430  
Account: SHELLWIC Shell Oil  
Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample    | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|-----------|----------|----|----------|-----|-----------|------------|------------------|
| MSV845-BS | V21868.D | 1  | 08/13/13 | AMY | n/a       | n/a        | MSV845           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC23430-2

| CAS No.   | Surrogate Recoveries | BSP  | Limits  |
|-----------|----------------------|------|---------|
| 1868-53-7 | Dibromofluoromethane | 94%  | 70-130% |
| 2037-26-5 | Toluene-D8           | 102% | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 98%  | 70-130% |

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

\* = Outside of Control Limits.

# Blank Spike/Blank Spike Duplicate Summary

Job Number: MC23430  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|-----|-----------|------------|------------------|
| MSV846-BS  | V21889.D | 1  | 08/14/13 | AMY | n/a       | n/a        | MSV846           |
| MSV846-BSD | V21890.D | 1  | 08/14/13 | AMY | n/a       | n/a        | MSV846           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC23430-1

| CAS No.  | Compound                  | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | BSD<br>ug/l | BSD<br>% | RPD | Limits<br>Rec/RPD |
|----------|---------------------------|---------------|-------------|----------|-------------|----------|-----|-------------------|
| 67-64-1  | Acetone                   | 50            | 65.1        | 130      | 64.3        | 129      | 1   | 70-130/25         |
| 107-02-8 | Acrolein                  | 250           | 467         | 187* a   | 479         | 192* a   | 3   | 70-130/25         |
| 107-13-1 | Acrylonitrile             | 50            | 55.0        | 110      | 56.5        | 113      | 3   | 70-130/25         |
| 71-43-2  | Benzene                   | 50            | 51.2        | 102      | 50.9        | 102      | 1   | 70-130/25         |
| 108-86-1 | Bromobenzene              | 50            | 48.1        | 96       | 47.8        | 96       | 1   | 70-130/25         |
| 74-97-5  | Bromochloromethane        | 50            | 58.5        | 117      | 58.3        | 117      | 0   | 70-130/25         |
| 75-27-4  | Bromodichloromethane      | 50            | 52.1        | 104      | 51.6        | 103      | 1   | 70-130/25         |
| 75-25-2  | Bromoform                 | 50            | 47.1        | 94       | 47.7        | 95       | 1   | 70-130/25         |
| 74-83-9  | Bromomethane              | 50            | 50.6        | 101      | 48.5        | 97       | 4   | 70-130/25         |
| 78-93-3  | 2-Butanone (MEK)          | 50            | 56.0        | 112      | 57.6        | 115      | 3   | 70-130/25         |
| 104-51-8 | n-Butylbenzene            | 50            | 53.9        | 108      | 53.1        | 106      | 1   | 70-130/25         |
| 135-98-8 | sec-Butylbenzene          | 50            | 51.2        | 102      | 50.7        | 101      | 1   | 70-130/25         |
| 98-06-6  | tert-Butylbenzene         | 50            | 48.0        | 96       | 47.5        | 95       | 1   | 70-130/25         |
| 75-15-0  | Carbon disulfide          | 50            | 59.4        | 119      | 57.4        | 115      | 3   | 70-130/25         |
| 56-23-5  | Carbon tetrachloride      | 50            | 57.1        | 114      | 55.4        | 111      | 3   | 70-130/25         |
| 108-90-7 | Chlorobenzene             | 50            | 45.7        | 91       | 45.0        | 90       | 2   | 70-130/25         |
| 75-00-3  | Chloroethane              | 50            | 50.4        | 101      | 48.7        | 97       | 3   | 70-130/25         |
| 110-75-8 | 2-Chloroethyl vinyl ether | 50            | 29.1        | 58* b    | 30.2        | 60* b    | 4   | 70-130/25         |
| 67-66-3  | Chloroform                | 50            | 53.5        | 107      | 52.2        | 104      | 2   | 70-130/25         |
| 74-87-3  | Chloromethane             | 50            | 52.4        | 105      | 51.1        | 102      | 3   | 70-130/25         |
| 95-49-8  | o-Chlorotoluene           | 50            | 45.5        | 91       | 45.1        | 90       | 1   | 70-130/25         |
| 106-43-4 | p-Chlorotoluene           | 50            | 47.7        | 95       | 47.3        | 95       | 1   | 70-130/25         |
| 124-48-1 | Dibromochloromethane      | 50            | 46.2        | 92       | 46.2        | 92       | 0   | 70-130/25         |
| 95-50-1  | 1,2-Dichlorobenzene       | 50            | 44.8        | 90       | 45.1        | 90       | 1   | 70-130/25         |
| 541-73-1 | 1,3-Dichlorobenzene       | 50            | 45.4        | 91       | 45.2        | 90       | 0   | 70-130/25         |
| 106-46-7 | 1,4-Dichlorobenzene       | 50            | 45.2        | 90       | 45.6        | 91       | 1   | 70-130/25         |
| 75-71-8  | Dichlorodifluoromethane   | 50            | 39.8        | 80       | 39.8        | 80       | 0   | 70-130/25         |
| 75-34-3  | 1,1-Dichloroethane        | 50            | 58.9        | 118      | 58.2        | 116      | 1   | 70-130/25         |
| 107-06-2 | 1,2-Dichloroethane        | 50            | 45.7        | 91       | 45.3        | 91       | 1   | 70-130/25         |
| 75-35-4  | 1,1-Dichloroethene        | 50            | 60.2        | 120      | 58.1        | 116      | 4   | 70-130/25         |
| 156-59-2 | cis-1,2-Dichloroethene    | 50            | 54.2        | 108      | 53.7        | 107      | 1   | 70-130/25         |
| 156-60-5 | trans-1,2-Dichloroethene  | 50            | 54.0        | 108      | 53.1        | 106      | 2   | 70-130/25         |
| 78-87-5  | 1,2-Dichloropropane       | 50            | 53.7        | 107      | 54.0        | 108      | 1   | 70-130/25         |
| 142-28-9 | 1,3-Dichloropropane       | 50            | 47.8        | 96       | 48.3        | 97       | 1   | 70-130/25         |
| 594-20-7 | 2,2-Dichloropropane       | 50            | 67.3        | 135* b   | 64.8        | 130      | 4   | 70-130/25         |
| 563-58-6 | 1,1-Dichloropropene       | 50            | 51.7        | 103      | 50.7        | 101      | 2   | 70-130/25         |

\* = Outside of Control Limits.

# Blank Spike/Blank Spike Duplicate Summary

Job Number: MC23430  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|-----|-----------|------------|------------------|
| MSV846-BS  | V21889.D | 1  | 08/14/13 | AMY | n/a       | n/a        | MSV846           |
| MSV846-BSD | V21890.D | 1  | 08/14/13 | AMY | n/a       | n/a        | MSV846           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC23430-1

| CAS No.    | Compound                    | Spike<br>ug/l | BSP<br>ug/l | BSP<br>% | BSD<br>ug/l | BSD<br>% | RPD | Limits<br>Rec/RPD |
|------------|-----------------------------|---------------|-------------|----------|-------------|----------|-----|-------------------|
| 10061-01-5 | cis-1,3-Dichloropropene     | 50            | 47.7        | 95       | 47.4        | 95       | 1   | 70-130/25         |
| 10061-02-6 | trans-1,3-Dichloropropene   | 50            | 48.7        | 97       | 48.6        | 97       | 0   | 70-130/25         |
| 123-91-1   | 1,4-Dioxane                 | 250           | 247         | 99       | 261         | 104      | 6   | 70-130/25         |
| 97-63-2    | Ethyl methacrylate          | 50            | 48.0        | 96       | 49.9        | 100      | 4   | 77-137/25         |
| 100-41-4   | Ethylbenzene                | 50            | 49.5        | 99       | 48.7        | 97       | 2   | 70-130/25         |
| 87-68-3    | Hexachlorobutadiene         | 50            | 48.9        | 98       | 47.7        | 95       | 2   | 70-130/25         |
| 591-78-6   | 2-Hexanone                  | 50            | 55.7        | 111      | 57.0        | 114      | 2   | 70-130/25         |
| 98-82-8    | Isopropylbenzene            | 50            | 49.1        | 98       | 49.0        | 98       | 0   | 70-130/25         |
| 99-87-6    | p-Isopropyltoluene          | 50            | 55.2        | 110      | 54.6        | 109      | 1   | 70-130/25         |
| 1634-04-4  | Methyl Tert Butyl Ether     | 50            | 49.1        | 98       | 50.4        | 101      | 3   | 70-130/25         |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | 50            | 52.5        | 105      | 55.1        | 110      | 5   | 70-130/25         |
| 74-95-3    | Methylene bromide           | 50            | 55.2        | 110      | 55.5        | 111      | 1   | 70-130/25         |
| 75-09-2    | Methylene chloride          | 50            | 54.7        | 109      | 54.6        | 109      | 0   | 70-130/25         |
| 91-20-3    | Naphthalene                 | 50            | 46.7        | 93       | 49.1        | 98       | 5   | 70-130/25         |
| 103-65-1   | n-Propylbenzene             | 50            | 50.3        | 101      | 50.2        | 100      | 0   | 70-130/25         |
| 100-42-5   | Styrene                     | 50            | 54.5        | 109      | 54.3        | 109      | 0   | 70-130/25         |
| 630-20-6   | 1,1,1,2-Tetrachloroethane   | 50            | 49.6        | 99       | 49.3        | 99       | 1   | 70-130/25         |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | 50            | 48.3        | 97       | 50.3        | 101      | 4   | 70-130/25         |
| 127-18-4   | Tetrachloroethene           | 50            | 54.6        | 109      | 53.5        | 107      | 2   | 70-130/25         |
| 108-88-3   | Toluene                     | 50            | 53.2        | 106      | 52.5        | 105      | 1   | 70-130/25         |
| 87-61-6    | 1,2,3-Trichlorobenzene      | 50            | 49.0        | 98       | 51.0        | 102      | 4   | 70-130/25         |
| 120-82-1   | 1,2,4-Trichlorobenzene      | 50            | 48.8        | 98       | 50.0        | 100      | 2   | 70-130/25         |
| 71-55-6    | 1,1,1-Trichloroethane       | 50            | 58.4        | 117      | 56.9        | 114      | 3   | 70-130/25         |
| 79-00-5    | 1,1,2-Trichloroethane       | 50            | 51.1        | 102      | 52.1        | 104      | 2   | 70-130/25         |
| 79-01-6    | Trichloroethene             | 50            | 48.6        | 97       | 48.0        | 96       | 1   | 70-130/25         |
| 75-69-4    | Trichlorofluoromethane      | 50            | 48.1        | 96       | 45.9        | 92       | 5   | 70-130/25         |
| 96-18-4    | 1,2,3-Trichloropropane      | 50            | 49.6        | 99       | 51.7        | 103      | 4   | 70-130/25         |
| 95-63-6    | 1,2,4-Trimethylbenzene      | 50            | 47.8        | 96       | 47.2        | 94       | 1   | 70-130/25         |
| 108-67-8   | 1,3,5-Trimethylbenzene      | 50            | 49.4        | 99       | 48.7        | 97       | 1   | 70-130/25         |
| 108-05-4   | Vinyl Acetate               | 50            | 46.7        | 93       | 47.2        | 94       | 1   | 70-130/25         |
| 75-01-4    | Vinyl chloride              | 50            | 38.7        | 77       | 37.2        | 74       | 4   | 70-130/25         |
|            | m,p-Xylene                  | 100           | 97.9        | 98       | 96.2        | 96       | 2   | 70-130/25         |
| 95-47-6    | o-Xylene                    | 50            | 50.2        | 100      | 49.4        | 99       | 2   | 70-130/25         |
| 1330-20-7  | Xylene (total)              | 150           | 148         | 99       | 146         | 97       | 1   | 70-130/25         |

\* = Outside of Control Limits.

# Blank Spike/Blank Spike Duplicate Summary

Job Number: MC23430  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample     | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|------------|----------|----|----------|-----|-----------|------------|------------------|
| MSV846-BS  | V21889.D | 1  | 08/14/13 | AMY | n/a       | n/a        | MSV846           |
| MSV846-BSD | V21890.D | 1  | 08/14/13 | AMY | n/a       | n/a        | MSV846           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC23430-1

| CAS No.   | Surrogate Recoveries | BSP  | BSD  | Limits  |
|-----------|----------------------|------|------|---------|
| 1868-53-7 | Dibromofluoromethane | 96%  | 95%  | 70-130% |
| 2037-26-5 | Toluene-D8           | 102% | 102% | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 95%  | 96%  | 70-130% |

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

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23430

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|-----|-----------|------------|------------------|
| MC23378-2MS  | V21883.D | 10 | 08/13/13 | AMY | n/a       | n/a        | MSV845           |
| MC23378-2MSD | V21884.D | 10 | 08/13/13 | AMY | n/a       | n/a        | MSV845           |
| MC23378-2    | V21881.D | 1  | 08/13/13 | AMY | n/a       | n/a        | MSV845           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC23430-2

| CAS No.  | Compound                  | MC23378-2<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD   | Limits<br>Rec/RPD |           |
|----------|---------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-------|-------------------|-----------|
| 67-64-1  | Acetone                   | ND                | 500        | 352        | 70      | 500           | 341         | 68* a    | 3     | 70-130/30         |           |
| 107-02-8 | Acrolein                  | ND                | 2500       | 4410       | 176* b  | 2500          | 4650        | 186* b   | 5     | 70-130/30         |           |
| 107-13-1 | Acrylonitrile             | ND                | 500        | 519        | 104     | 500           | 548         | 110      | 5     | 70-130/30         |           |
| 71-43-2  | Benzene                   | 1.6               | 500        | 516        | 103     | 500           | 614         | 122      | 17    | 70-130/30         |           |
| 108-86-1 | Bromobenzene              | ND                | 500        | 492        | 98      | 500           | 498         | 100      | 1     | 70-130/30         |           |
| 74-97-5  | Bromochloromethane        | ND                | 500        | 578        | 116     | 500           | 628         | 126      | 8     | 70-130/30         |           |
| 75-27-4  | Bromodichloromethane      | ND                | 500        | 681        | 136* a  | 500           | 547         | 109      | 22    | 70-130/30         |           |
| 75-25-2  | Bromoform                 | ND                | 500        | 529        | 106     | 500           | 484         | 97       | 9     | 70-130/30         |           |
| 74-83-9  | Bromomethane              | ND                | 500        | 676        | 135* a  | 500           | 694         | 139* a   | 3     | 70-130/30         |           |
| 78-93-3  | 2-Butanone (MEK)          | ND                | 500        | 650        | 130     | 500           | 670         | 134* a   | 3     | 70-130/30         |           |
| 104-51-8 | n-Butylbenzene            | ND                | 500        | 587        | 117     | 500           | 556         | 111      | 5     | 70-130/30         |           |
| 135-98-8 | sec-Butylbenzene          | ND                | 500        | 555        | 111     | 500           | 534         | 107      | 4     | 70-130/30         |           |
| 98-06-6  | tert-Butylbenzene         | ND                | 500        | 506        | 101     | 500           | 500         | 100      | 1     | 70-130/30         |           |
| 75-15-0  | Carbon disulfide          | ND                | 500        | 561        | 112     | 500           | 571         | 114      | 2     | 70-130/30         |           |
| 56-23-5  | Carbon tetrachloride      | ND                | 500        | 665        | 133* a  | 500           | 580         | 116      | 14    | 70-130/30         |           |
| 108-90-7 | Chlorobenzene             | ND                | 500        | 459        | 92      | 500           | 472         | 94       | 3     | 70-130/30         |           |
| 75-00-3  | Chloroethane              | ND                | 500        | 675        | 135* a  | 500           | 692         | 138* a   | 2     | 70-130/30         |           |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND                | 500        | 231        | 46* a   | 500           | 97.7        | 20* a    | 81* c | 70-130/30         |           |
| 67-66-3  | Chloroform                | ND                | 500        | 559        | 112     | 500           | 571         | 114      | 2     | 70-130/30         |           |
| 74-87-3  | Chloromethane             | ND                | 500        | 624        | 125     | 500           | 625         | 125      | 0     | 70-130/30         |           |
| 95-49-8  | o-Chlorotoluene           | ND                | 500        | 442        | 88      | 500           | 477         | 95       | 8     | 70-130/30         |           |
| 106-43-4 | p-Chlorotoluene           | ND                | 500        | 525        | 105     | 500           | 496         | 99       | 6     | 70-130/30         |           |
| 124-48-1 | Dibromochloromethane      | ND                | 500        | 471        | 94      | 500           | 474         | 95       | 1     | 70-130/30         |           |
| 95-50-1  | 1,2-Dichlorobenzene       | ND                | 500        | 524        | 105     | 500           | 470         | 94       | 11    | 70-130/30         |           |
| 541-73-1 | 1,3-Dichlorobenzene       | ND                | 500        | 488        | 98      | 500           | 475         | 95       | 3     | 70-130/30         |           |
| 106-46-7 | 1,4-Dichlorobenzene       | ND                | 500        | 466        | 93      | 500           | 473         | 95       | 1     | 70-130/30         |           |
| 75-71-8  | Dichlorodifluoromethane   | ND                | 500        | 453        | 91      | 500           | 481         | 96       | 6     | 70-130/30         |           |
| 75-34-3  | 1,1-Dichloroethane        | ND                | 500        | 586        | 117     | 500           | 595         | 119      | 2     | 70-130/30         |           |
| 107-06-2 | 1,2-Dichloroethane        | ND                | 500        | 532        | 106     | 500           | 530         | 106      | 0     | 70-130/30         |           |
| 75-35-4  | 1,1-Dichloroethene        | 2.5               | 500        | 584        | 116     | 500           | 588         | 117      | 1     | 70-130/30         |           |
| 156-59-2 | cis-1,2-Dichloroethene    | 2280              | E          | 500        | 2470    | 38* d         | 500         | 2520     | 48* d | 2                 | 70-130/30 |
| 156-60-5 | trans-1,2-Dichloroethene  | 19.4              | 500        | 545        | 105     | 500           | 557         | 108      | 2     | 70-130/30         |           |
| 78-87-5  | 1,2-Dichloropropane       | ND                | 500        | 639        | 128     | 500           | 552         | 110      | 15    | 70-130/30         |           |
| 142-28-9 | 1,3-Dichloropropane       | ND                | 500        | 523        | 105     | 500           | 499         | 100      | 5     | 70-130/30         |           |
| 594-20-7 | 2,2-Dichloropropane       | ND                | 500        | 707        | 141* a  | 500           | 719         | 144* a   | 2     | 70-130/30         |           |
| 563-58-6 | 1,1-Dichloropropene       | ND                | 500        | 556        | 111     | 500           | 484         | 97       | 14    | 70-130/30         |           |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23430

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|-----|-----------|------------|------------------|
| MC23378-2MS  | V21883.D | 10 | 08/13/13 | AMY | n/a       | n/a        | MSV845           |
| MC23378-2MSD | V21884.D | 10 | 08/13/13 | AMY | n/a       | n/a        | MSV845           |
| MC23378-2    | V21881.D | 1  | 08/13/13 | AMY | n/a       | n/a        | MSV845           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC23430-2

| CAS No.    | Compound                    | MC23378-2<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |           |
|------------|-----------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|-----------|
| 10061-01-5 | cis-1,3-Dichloropropene     | ND                |            | 500        | 119     | 500           | 510         | 102      | 16  | 70-130/30         |           |
| 10061-02-6 | trans-1,3-Dichloropropene   | ND                |            | 500        | 117     | 500           | 592         | 118      | 1   | 70-130/30         |           |
| 123-91-1   | 1,4-Dioxane                 | ND                |            | 2500       | 2690    | 108           | 2500        | 2450     | 98  | 9                 | 70-130/30 |
| 97-63-2    | Ethyl methacrylate          | ND                |            | 500        | 560     | 112           | 500         | 606      | 121 | 8                 | 72-139/30 |
| 100-41-4   | Ethylbenzene                | ND                |            | 500        | 518     | 104           | 500         | 511      | 102 | 1                 | 70-130/30 |
| 87-68-3    | Hexachlorobutadiene         | ND                |            | 500        | 457     | 91            | 500         | 489      | 98  | 7                 | 70-130/30 |
| 591-78-6   | 2-Hexanone                  | ND                |            | 500        | 460     | 92            | 500         | 498      | 100 | 8                 | 70-130/30 |
| 98-82-8    | Isopropylbenzene            | ND                |            | 500        | 518     | 104           | 500         | 519      | 104 | 0                 | 70-130/30 |
| 99-87-6    | p-Isopropyltoluene          | ND                |            | 500        | 571     | 114           | 500         | 575      | 115 | 1                 | 70-130/30 |
| 1634-04-4  | Methyl Tert Butyl Ether     | ND                |            | 500        | 501     | 100           | 500         | 526      | 105 | 5                 | 70-130/30 |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | ND                |            | 500        | 646     | 129           | 500         | 560      | 112 | 14                | 70-130/30 |
| 74-95-3    | Methylene bromide           | ND                |            | 500        | 723     | 145* a        | 500         | 567      | 113 | 24                | 70-130/30 |
| 75-09-2    | Methylene chloride          | ND                |            | 500        | 526     | 105           | 500         | 545      | 109 | 4                 | 70-130/30 |
| 91-20-3    | Naphthalene                 | ND                |            | 500        | 379     | 76            | 500         | 473      | 95  | 22                | 70-130/30 |
| 103-65-1   | n-Propylbenzene             | ND                |            | 500        | 488     | 98            | 500         | 531      | 106 | 8                 | 70-130/30 |
| 100-42-5   | Styrene                     | ND                |            | 500        | 661     | 132* a        | 500         | 570      | 114 | 15                | 70-130/30 |
| 630-20-6   | 1,1,1,2-Tetrachloroethane   | ND                |            | 500        | 539     | 108           | 500         | 519      | 104 | 4                 | 70-130/30 |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | ND                |            | 500        | 491     | 98            | 500         | 519      | 104 | 6                 | 70-130/30 |
| 127-18-4   | Tetrachloroethene           | 0.81              | J          | 500        | 576     | 115           | 500         | 559      | 112 | 3                 | 70-130/30 |
| 108-88-3   | Toluene                     | ND                |            | 500        | 621     | 124           | 500         | 559      | 112 | 11                | 70-130/30 |
| 87-61-6    | 1,2,3-Trichlorobenzene      | ND                |            | 500        | 398     | 80            | 500         | 469      | 94  | 16                | 70-130/30 |
| 120-82-1   | 1,2,4-Trichlorobenzene      | ND                |            | 500        | 436     | 87            | 500         | 507      | 101 | 15                | 70-130/30 |
| 71-55-6    | 1,1,1-Trichloroethane       | ND                |            | 500        | 631     | 126           | 500         | 636      | 127 | 1                 | 70-130/30 |
| 79-00-5    | 1,1,2-Trichloroethane       | ND                |            | 500        | 649     | 130           | 500         | 636      | 127 | 2                 | 70-130/30 |
| 79-01-6    | Trichloroethene             | 1230              | E          | 500        | 1680    | 90            | 500         | 1840     | 122 | 9                 | 70-130/30 |
| 75-69-4    | Trichlorofluoromethane      | ND                |            | 500        | 645     | 129           | 500         | 645      | 129 | 0                 | 70-130/30 |
| 96-18-4    | 1,2,3-Trichloropropane      | ND                |            | 500        | 501     | 100           | 500         | 523      | 105 | 4                 | 70-130/30 |
| 95-63-6    | 1,2,4-Trimethylbenzene      | ND                |            | 500        | 465     | 93            | 500         | 494      | 99  | 6                 | 70-130/30 |
| 108-67-8   | 1,3,5-Trimethylbenzene      | ND                |            | 500        | 565     | 113           | 500         | 517      | 103 | 9                 | 70-130/30 |
| 108-05-4   | Vinyl Acetate               | ND                |            | 500        | 461     | 92            | 500         | 476      | 95  | 3                 | 70-130/30 |
| 75-01-4    | Vinyl chloride              | 157               |            | 500        | 611     | 91            | 500         | 630      | 95  | 3                 | 70-130/30 |
|            | m,p-Xylene                  | ND                |            | 1000       | 965     | 97            | 1000        | 1010     | 101 | 5                 | 70-130/30 |
| 95-47-6    | o-Xylene                    | ND                |            | 500        | 607     | 121           | 500         | 520      | 104 | 15                | 70-130/30 |
| 1330-20-7  | Xylene (total)              | ND                |            | 1500       | 1570    | 105           | 1500        | 1530     | 102 | 3                 | 70-130/30 |

\* = Outside of Control Limits.



# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23430  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|-----|-----------|------------|------------------|
| MC23378-2MS  | V21883.D | 10 | 08/13/13 | AMY | n/a       | n/a        | MSV845           |
| MC23378-2MSD | V21884.D | 10 | 08/13/13 | AMY | n/a       | n/a        | MSV845           |
| MC23378-2    | V21881.D | 1  | 08/13/13 | AMY | n/a       | n/a        | MSV845           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC23430-2

| CAS No.   | Surrogate Recoveries | MS   | MSD  | MC23378-2 | Limits  |
|-----------|----------------------|------|------|-----------|---------|
| 1868-53-7 | Dibromofluoromethane | 96%  | 97%  | 102%      | 70-130% |
| 2037-26-5 | Toluene-D8           | 124% | 112% | 108%      | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 92%  | 95%  | 93%       | 70-130% |

- (a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
- (b) Outside control limits. Associated samples are non-detect for this compound.
- (c) High RPD due to possible matrix interference and/or sample non-homogeneity.
- (d) 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: MC23430

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|-----|-----------|------------|------------------|
| MC23458-4MS  | V21899.D | 5  | 08/14/13 | AMY | n/a       | n/a        | MSV846           |
| MC23458-4MSD | V21900.D | 5  | 08/14/13 | AMY | n/a       | n/a        | MSV846           |
| MC23458-4    | V21894.D | 1  | 08/14/13 | AMY | n/a       | n/a        | MSV846           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC23430-1

| CAS No.  | Compound                  | MC23458-4<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|----------|---------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 67-64-1  | Acetone                   | ND                | 250        | 216        | 86      | 250           | 209         | 84       | 3   | 70-130/30         |
| 107-02-8 | Acrolein                  | ND                | 1250       | 2150       | 172* a  | 1250          | 2140        | 171* a   | 0   | 70-130/30         |
| 107-13-1 | Acrylonitrile             | ND                | 250        | 286        | 114     | 250           | 292         | 117      | 2   | 70-130/30         |
| 71-43-2  | Benzene                   | ND                | 250        | 268        | 107     | 250           | 263         | 105      | 2   | 70-130/30         |
| 108-86-1 | Bromobenzene              | ND                | 250        | 248        | 99      | 250           | 245         | 98       | 1   | 70-130/30         |
| 74-97-5  | Bromochloromethane        | ND                | 250        | 309        | 124     | 250           | 300         | 120      | 3   | 70-130/30         |
| 75-27-4  | Bromodichloromethane      | ND                | 250        | 269        | 108     | 250           | 266         | 106      | 1   | 70-130/30         |
| 75-25-2  | Bromoform                 | ND                | 250        | 246        | 98      | 250           | 248         | 99       | 1   | 70-130/30         |
| 74-83-9  | Bromomethane              | ND                | 250        | 253        | 101     | 250           | 244         | 98       | 4   | 70-130/30         |
| 78-93-3  | 2-Butanone (MEK)          | ND                | 250        | 230        | 92      | 250           | 237         | 95       | 3   | 70-130/30         |
| 104-51-8 | n-Butylbenzene            | ND                | 250        | 262        | 105     | 250           | 258         | 103      | 2   | 70-130/30         |
| 135-98-8 | sec-Butylbenzene          | ND                | 250        | 261        | 104     | 250           | 257         | 103      | 2   | 70-130/30         |
| 98-06-6  | tert-Butylbenzene         | ND                | 250        | 249        | 100     | 250           | 243         | 97       | 2   | 70-130/30         |
| 75-15-0  | Carbon disulfide          | ND                | 250        | 311        | 124     | 250           | 299         | 120      | 4   | 70-130/30         |
| 56-23-5  | Carbon tetrachloride      | ND                | 250        | 301        | 120     | 250           | 291         | 116      | 3   | 70-130/30         |
| 108-90-7 | Chlorobenzene             | ND                | 250        | 240        | 96      | 250           | 234         | 94       | 3   | 70-130/30         |
| 75-00-3  | Chloroethane              | ND                | 250        | 258        | 103     | 250           | 247         | 99       | 4   | 70-130/30         |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND                | 250        | ND         | 0* b    | 250           | ND          | 0* b     | nc  | 70-130/30         |
| 67-66-3  | Chloroform                | ND                | 250        | 279        | 112     | 250           | 269         | 108      | 4   | 70-130/30         |
| 74-87-3  | Chloromethane             | ND                | 250        | 265        | 106     | 250           | 251         | 100      | 5   | 70-130/30         |
| 95-49-8  | o-Chlorotoluene           | ND                | 250        | 237        | 95      | 250           | 232         | 93       | 2   | 70-130/30         |
| 106-43-4 | p-Chlorotoluene           | ND                | 250        | 246        | 98      | 250           | 240         | 96       | 2   | 70-130/30         |
| 124-48-1 | Dibromochloromethane      | ND                | 250        | 240        | 96      | 250           | 239         | 96       | 0   | 70-130/30         |
| 95-50-1  | 1,2-Dichlorobenzene       | ND                | 250        | 231        | 92      | 250           | 232         | 93       | 0   | 70-130/30         |
| 541-73-1 | 1,3-Dichlorobenzene       | ND                | 250        | 232        | 93      | 250           | 228         | 91       | 2   | 70-130/30         |
| 106-46-7 | 1,4-Dichlorobenzene       | ND                | 250        | 230        | 92      | 250           | 227         | 91       | 1   | 70-130/30         |
| 75-71-8  | Dichlorodifluoromethane   | ND                | 250        | 206        | 82      | 250           | 189         | 76       | 9   | 70-130/30         |
| 75-34-3  | 1,1-Dichloroethane        | ND                | 250        | 309        | 124     | 250           | 297         | 119      | 4   | 70-130/30         |
| 107-06-2 | 1,2-Dichloroethane        | ND                | 250        | 240        | 96      | 250           | 236         | 94       | 2   | 70-130/30         |
| 75-35-4  | 1,1-Dichloroethene        | ND                | 250        | 316        | 126     | 250           | 302         | 121      | 5   | 70-130/30         |
| 156-59-2 | cis-1,2-Dichloroethene    | ND                | 250        | 281        | 112     | 250           | 275         | 110      | 2   | 70-130/30         |
| 156-60-5 | trans-1,2-Dichloroethene  | ND                | 250        | 283        | 113     | 250           | 272         | 109      | 4   | 70-130/30         |
| 78-87-5  | 1,2-Dichloropropane       | ND                | 250        | 282        | 113     | 250           | 276         | 110      | 2   | 70-130/30         |
| 142-28-9 | 1,3-Dichloropropane       | ND                | 250        | 252        | 101     | 250           | 252         | 101      | 0   | 70-130/30         |
| 594-20-7 | 2,2-Dichloropropane       | ND                | 250        | 212        | 85      | 250           | 201         | 80       | 5   | 70-130/30         |
| 563-58-6 | 1,1-Dichloropropene       | ND                | 250        | 269        | 108     | 250           | 262         | 105      | 3   | 70-130/30         |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23430

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|-----|-----------|------------|------------------|
| MC23458-4MS  | V21899.D | 5  | 08/14/13 | AMY | n/a       | n/a        | MSV846           |
| MC23458-4MSD | V21900.D | 5  | 08/14/13 | AMY | n/a       | n/a        | MSV846           |
| MC23458-4    | V21894.D | 1  | 08/14/13 | AMY | n/a       | n/a        | MSV846           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC23430-1

| CAS No.    | Compound                    | MC23458-4<br>ug/l | Spike<br>Q | MS<br>ug/l | MS<br>% | Spike<br>ug/l | MSD<br>ug/l | MSD<br>% | RPD | Limits<br>Rec/RPD |
|------------|-----------------------------|-------------------|------------|------------|---------|---------------|-------------|----------|-----|-------------------|
| 10061-01-5 | cis-1,3-Dichloropropene     | ND                | 250        | 221        | 88      | 250           | 221         | 88       | 0   | 70-130/30         |
| 10061-02-6 | trans-1,3-Dichloropropene   | ND                | 250        | 232        | 93      | 250           | 231         | 92       | 0   | 70-130/30         |
| 123-91-1   | 1,4-Dioxane                 | ND                | 1250       | 1240       | 99      | 1250          | 1310        | 105      | 5   | 70-130/30         |
| 97-63-2    | Ethyl methacrylate          | ND                | 250        | 255        | 102     | 250           | 259         | 104      | 2   | 72-139/30         |
| 100-41-4   | Ethylbenzene                | ND                | 250        | 258        | 103     | 250           | 252         | 101      | 2   | 70-130/30         |
| 87-68-3    | Hexachlorobutadiene         | ND                | 250        | 227        | 91      | 250           | 230         | 92       | 1   | 70-130/30         |
| 591-78-6   | 2-Hexanone                  | ND                | 250        | 247        | 99      | 250           | 256         | 102      | 4   | 70-130/30         |
| 98-82-8    | Isopropylbenzene            | ND                | 250        | 256        | 102     | 250           | 252         | 101      | 2   | 70-130/30         |
| 99-87-6    | p-Isopropyltoluene          | ND                | 250        | 280        | 112     | 250           | 275         | 110      | 2   | 70-130/30         |
| 1634-04-4  | Methyl Tert Butyl Ether     | ND                | 250        | 259        | 104     | 250           | 259         | 104      | 0   | 70-130/30         |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK) | ND                | 250        | 278        | 111     | 250           | 287         | 115      | 3   | 70-130/30         |
| 74-95-3    | Methylene bromide           | ND                | 250        | 291        | 116     | 250           | 290         | 116      | 0   | 70-130/30         |
| 75-09-2    | Methylene chloride          | ND                | 250        | 286        | 114     | 250           | 281         | 112      | 2   | 70-130/30         |
| 91-20-3    | Naphthalene                 | ND                | 250        | 227        | 91      | 250           | 253         | 101      | 11  | 70-130/30         |
| 103-65-1   | n-Propylbenzene             | ND                | 250        | 258        | 103     | 250           | 253         | 101      | 2   | 70-130/30         |
| 100-42-5   | Styrene                     | ND                | 250        | 284        | 114     | 250           | 279         | 112      | 2   | 70-130/30         |
| 630-20-6   | 1,1,1,2-Tetrachloroethane   | ND                | 250        | 260        | 104     | 250           | 255         | 102      | 2   | 70-130/30         |
| 79-34-5    | 1,1,2,2-Tetrachloroethane   | ND                | 250        | 254        | 102     | 250           | 260         | 104      | 2   | 70-130/30         |
| 127-18-4   | Tetrachloroethene           | ND                | 250        | 280        | 112     | 250           | 272         | 109      | 3   | 70-130/30         |
| 108-88-3   | Toluene                     | ND                | 250        | 278        | 111     | 250           | 271         | 108      | 3   | 70-130/30         |
| 87-61-6    | 1,2,3-Trichlorobenzene      | ND                | 250        | 221        | 88      | 250           | 253         | 101      | 14  | 70-130/30         |
| 120-82-1   | 1,2,4-Trichlorobenzene      | ND                | 250        | 235        | 94      | 250           | 248         | 99       | 5   | 70-130/30         |
| 71-55-6    | 1,1,1-Trichloroethane       | ND                | 250        | 305        | 122     | 250           | 294         | 118      | 4   | 70-130/30         |
| 79-00-5    | 1,1,2-Trichloroethane       | ND                | 250        | 272        | 109     | 250           | 271         | 108      | 0   | 70-130/30         |
| 79-01-6    | Trichloroethene             | ND                | 250        | 254        | 102     | 250           | 248         | 99       | 2   | 70-130/30         |
| 75-69-4    | Trichlorofluoromethane      | ND                | 250        | 249        | 100     | 250           | 234         | 94       | 6   | 70-130/30         |
| 96-18-4    | 1,2,3-Trichloropropane      | ND                | 250        | 250        | 100     | 250           | 252         | 101      | 1   | 70-130/30         |
| 95-63-6    | 1,2,4-Trimethylbenzene      | ND                | 250        | 246        | 98      | 250           | 238         | 95       | 3   | 70-130/30         |
| 108-67-8   | 1,3,5-Trimethylbenzene      | ND                | 250        | 253        | 101     | 250           | 247         | 99       | 2   | 70-130/30         |
| 108-05-4   | Vinyl Acetate               | ND                | 250        | 236        | 94      | 250           | 232         | 93       | 2   | 70-130/30         |
| 75-01-4    | Vinyl chloride              | ND                | 250        | 199        | 80      | 250           | 189         | 76       | 5   | 70-130/30         |
|            | m,p-Xylene                  | ND                | 500        | 507        | 101     | 500           | 499         | 100      | 2   | 70-130/30         |
| 95-47-6    | o-Xylene                    | ND                | 250        | 261        | 104     | 250           | 257         | 103      | 2   | 70-130/30         |
| 1330-20-7  | Xylene (total)              | ND                | 750        | 768        | 102     | 750           | 755         | 101      | 2   | 70-130/30         |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23430  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

| Sample       | File ID  | DF | Analyzed | By  | Prep Date | Prep Batch | Analytical Batch |
|--------------|----------|----|----------|-----|-----------|------------|------------------|
| MC23458-4MS  | V21899.D | 5  | 08/14/13 | AMY | n/a       | n/a        | MSV846           |
| MC23458-4MSD | V21900.D | 5  | 08/14/13 | AMY | n/a       | n/a        | MSV846           |
| MC23458-4    | V21894.D | 1  | 08/14/13 | AMY | n/a       | n/a        | MSV846           |

The QC reported here applies to the following samples:

Method: SW846 8260B

MC23430-1

| CAS No.   | Surrogate Recoveries | MS   | MSD  | MC23458-4 | Limits  |
|-----------|----------------------|------|------|-----------|---------|
| 1868-53-7 | Dibromofluoromethane | 96%  | 95%  | 101%      | 70-130% |
| 2037-26-5 | Toluene-D8           | 103% | 103% | 102%      | 70-130% |
| 460-00-4  | 4-Bromofluorobenzene | 95%  | 95%  | 95%       | 70-130% |

- (a) Outside control limits. Associated samples are non-detect for this compound.
- (b) Outside control limits due to possible matrix interference. Refer to Blank Spike.

\* = Outside of Control Limits.

# Volatile Internal Standard Area Summary

Job Number: MC23430  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |             |
|----------------|--------------|-----------------|-------------|
| Check Std:     | MSV845-CC832 | Injection Date: | 08/13/13    |
| Lab File ID:   | V21867.D     | Injection Time: | 10:16       |
| Instrument ID: | GCMSV        | Method:         | SW846 8260B |

|                          | IS 1   |      | IS 2    |      | IS 3   |       | IS 4   |       | IS 5   |      |
|--------------------------|--------|------|---------|------|--------|-------|--------|-------|--------|------|
|                          | AREA   | RT   | AREA    | RT   | AREA   | RT    | AREA   | RT    | AREA   | RT   |
| Check Std                | 374056 | 6.58 | 648858  | 7.76 | 274720 | 11.09 | 337563 | 13.30 | 91071  | 3.52 |
| Upper Limit <sup>a</sup> | 748112 | 7.08 | 1297716 | 8.26 | 549440 | 11.59 | 675126 | 13.80 | 182142 | 4.02 |
| Lower Limit <sup>b</sup> | 187028 | 6.08 | 324429  | 7.26 | 137360 | 10.59 | 168782 | 12.80 | 45536  | 3.02 |

| Lab          | IS 1   |      | IS 2   |      | IS 3   |       | IS 4   |       | IS 5   |      |
|--------------|--------|------|--------|------|--------|-------|--------|-------|--------|------|
| Sample ID    | AREA   | RT   | AREA   | RT   | AREA   | RT    | AREA   | RT    | AREA   | RT   |
| MSV845-BS    | 375460 | 6.58 | 649953 | 7.76 | 328410 | 11.09 | 351782 | 13.30 | 91207  | 3.51 |
| MSV845-MB    | 372762 | 6.59 | 518226 | 7.77 | 264261 | 11.09 | 292057 | 13.30 | 87013  | 3.52 |
| ZZZZZZ       | 338040 | 6.58 | 586670 | 7.76 | 298003 | 11.09 | 324441 | 13.30 | 82190  | 3.52 |
| ZZZZZZ       | 381238 | 6.59 | 567068 | 7.77 | 293812 | 11.09 | 318495 | 13.30 | 100139 | 3.52 |
| ZZZZZZ       | 365215 | 6.59 | 518595 | 7.77 | 271553 | 11.09 | 288461 | 13.30 | 88766  | 3.52 |
| ZZZZZZ       | 351045 | 6.59 | 510902 | 7.77 | 274899 | 11.09 | 300309 | 13.30 | 81063  | 3.52 |
| ZZZZZZ       | 330557 | 6.59 | 487435 | 7.77 | 256572 | 11.09 | 284749 | 13.30 | 78100  | 3.53 |
| ZZZZZZ       | 325557 | 6.59 | 530032 | 7.77 | 265321 | 11.09 | 275939 | 13.30 | 73715  | 3.52 |
| ZZZZZZ       | 320780 | 6.59 | 462179 | 7.77 | 255446 | 11.09 | 264831 | 13.30 | 75345  | 3.52 |
| ZZZZZZ       | 298743 | 6.59 | 431987 | 7.77 | 254773 | 11.09 | 248307 | 13.30 | 71966  | 3.53 |
| MC23430-2    | 349076 | 6.60 | 546135 | 7.77 | 260236 | 11.10 | 270276 | 13.30 | 70757  | 3.53 |
| MC23378-2    | 296420 | 6.60 | 511757 | 7.77 | 255448 | 11.10 | 281675 | 13.31 | 70585  | 3.54 |
| MC23378-2MS  | 326432 | 6.59 | 440536 | 7.77 | 260814 | 11.10 | 303064 | 13.31 | 72153  | 3.53 |
| MC23378-2MSD | 327008 | 6.59 | 509390 | 7.77 | 312892 | 11.10 | 351598 | 13.30 | 78956  | 3.52 |
| ZZZZZZ       | 310154 | 6.60 | 446563 | 7.77 | 253784 | 11.10 | 344257 | 13.31 | 99529  | 3.53 |
| ZZZZZZ       | 325663 | 6.59 | 469659 | 7.77 | 269108 | 11.10 | 256942 | 13.31 | 72035  | 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.

6.5.1

6

# Volatile Internal Standard Area Summary

Job Number: MC23430  
 Account: SHELLWIC Shell Oil  
 Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 900 South Central Avenue, Roxana, IL

|                |              |                 |             |
|----------------|--------------|-----------------|-------------|
| Check Std:     | MSV846-CC832 | Injection Date: | 08/14/13    |
| Lab File ID:   | V21888.D     | Injection Time: | 08:24       |
| Instrument ID: | GCMSV        | Method:         | SW846 8260B |

|                          | IS 1   |      | IS 2    |      | IS 3   |       | IS 4   |       | IS 5   |      |
|--------------------------|--------|------|---------|------|--------|-------|--------|-------|--------|------|
|                          | AREA   | RT   | AREA    | RT   | AREA   | RT    | AREA   | RT    | AREA   | RT   |
| Check Std                | 337380 | 6.59 | 525391  | 7.77 | 328524 | 11.10 | 381652 | 13.30 | 76412  | 3.53 |
| Upper Limit <sup>a</sup> | 674760 | 7.09 | 1050782 | 8.27 | 657048 | 11.60 | 763304 | 13.80 | 152824 | 4.03 |
| Lower Limit <sup>b</sup> | 168690 | 6.09 | 262696  | 7.27 | 164262 | 10.60 | 190826 | 12.80 | 38206  | 3.03 |

| Lab          | IS 1   |      | IS 2   |      | IS 3   |       | IS 4   |       | IS 5   |      |
|--------------|--------|------|--------|------|--------|-------|--------|-------|--------|------|
| Sample ID    | AREA   | RT   | AREA   | RT   | AREA   | RT    | AREA   | RT    | AREA   | RT   |
| MSV846-BS    | 435992 | 6.58 | 623182 | 7.76 | 324109 | 11.09 | 370027 | 13.30 | 103265 | 3.51 |
| MSV846-BSD   | 436419 | 6.59 | 620905 | 7.77 | 324333 | 11.09 | 366322 | 13.30 | 108724 | 3.52 |
| MSV846-MB    | 388946 | 6.59 | 581990 | 7.77 | 306552 | 11.09 | 335196 | 13.30 | 106407 | 3.52 |
| MC23458-4    | 375681 | 6.59 | 566349 | 7.77 | 299127 | 11.09 | 325663 | 13.30 | 102053 | 3.53 |
| ZZZZZZ       | 376511 | 6.59 | 566153 | 7.77 | 299347 | 11.09 | 328693 | 13.30 | 99173  | 3.52 |
| ZZZZZZ       | 424579 | 6.59 | 621987 | 7.77 | 327929 | 11.09 | 369984 | 13.30 | 89439  | 3.52 |
| ZZZZZZ       | 364952 | 6.59 | 552454 | 7.77 | 294476 | 11.09 | 323127 | 13.30 | 87426  | 3.53 |
| ZZZZZZ       | 396359 | 6.59 | 564658 | 7.77 | 298860 | 11.09 | 343305 | 13.30 | 93966  | 3.52 |
| MC23458-4MS  | 423681 | 6.58 | 604661 | 7.76 | 315623 | 11.09 | 361116 | 13.30 | 100051 | 3.51 |
| MC23458-4MSD | 432098 | 6.59 | 611788 | 7.77 | 319552 | 11.09 | 365196 | 13.30 | 108240 | 3.52 |
| ZZZZZZ       | 402863 | 6.59 | 591891 | 7.77 | 307536 | 11.09 | 341017 | 13.30 | 98356  | 3.52 |
| MC23430-1    | 383743 | 6.59 | 583981 | 7.77 | 302852 | 11.09 | 329644 | 13.30 | 97536  | 3.53 |
| ZZZZZZ       | 385492 | 6.59 | 562558 | 7.77 | 295053 | 11.09 | 322581 | 13.30 | 96452  | 3.52 |
| ZZZZZZ       | 375086 | 6.59 | 548600 | 7.77 | 294254 | 11.09 | 330647 | 13.30 | 96115  | 3.54 |
| ZZZZZZ       | 382574 | 6.59 | 552145 | 7.77 | 290215 | 11.09 | 325231 | 13.30 | 80523  | 3.52 |
| ZZZZZZ       | 372541 | 6.58 | 540120 | 7.76 | 286416 | 11.09 | 318640 | 13.30 | 85864  | 3.52 |
| ZZZZZZ       | 361999 | 6.59 | 542727 | 7.77 | 287744 | 11.09 | 317781 | 13.30 | 86240  | 3.52 |
| ZZZZZZ       | 351756 | 6.58 | 527109 | 7.76 | 280341 | 11.09 | 304034 | 13.30 | 80178  | 3.52 |
| ZZZZZZ       | 355509 | 6.59 | 526381 | 7.77 | 280852 | 11.09 | 307847 | 13.30 | 81822  | 3.52 |
| ZZZZZZ       | 354045 | 6.59 | 522394 | 7.77 | 277744 | 11.09 | 302811 | 13.30 | 81903  | 3.52 |
| ZZZZZZ       | 334811 | 6.58 | 507494 | 7.76 | 275257 | 11.09 | 299853 | 13.30 | 83620  | 3.52 |
| ZZZZZZ       | 331030 | 6.58 | 505954 | 7.76 | 270356 | 11.09 | 294865 | 13.30 | 77552  | 3.51 |
| ZZZZZZ       | 331789 | 6.59 | 505917 | 7.76 | 272629 | 11.09 | 301581 | 13.30 | 85752  | 3.52 |
| ZZZZZZ       | 342744 | 6.58 | 515706 | 7.76 | 276125 | 11.09 | 307107 | 13.30 | 92226  | 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.

6.5.2  
6

# Volatile Surrogate Recovery Summary

Job Number: MC23430

Account: SHELLWIC Shell Oil

Project: URSMOSTL:Roxana 3Q13 GW/ 21562850.03003 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  |
|---------------|-------------|-----|-----|-----|
| MC23430-1     | V21902.D    | 100 | 100 | 94  |
| MC23430-2     | V21880.D    | 105 | 93  | 111 |
| MC23378-2MS   | V21883.D    | 96  | 124 | 92  |
| MC23378-2MSD  | V21884.D    | 97  | 112 | 95  |
| MC23458-4MS   | V21899.D    | 96  | 103 | 95  |
| MC23458-4MSD  | V21900.D    | 95  | 103 | 95  |
| MSV845-BS     | V21868.D    | 94  | 102 | 98  |
| MSV845-MB     | V21871.D    | 95  | 102 | 95  |
| MSV846-BS     | V21889.D    | 96  | 102 | 95  |
| MSV846-BSD    | V21890.D    | 95  | 102 | 96  |
| MSV846-MB     | V21893.D    | 100 | 102 | 94  |

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

6.6.1  
6